

Interactional competence of hard-of-hearing adolescents: Managing progressivity in integration classroom

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par

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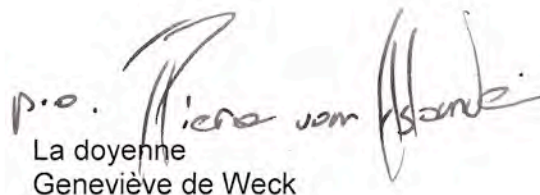
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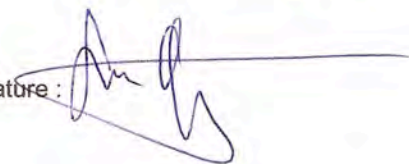
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Abstract: The present study investigates the interactional competence of hard-of-hearing adolescents who participate in an integration classroom. The peculiarity of the integration classroom is the presence of a hearing teaching assistant who mediates the students' participation in the hearing classroom. The examination draws on a framework of Conversation Analysis and takes a holistic approach to social interaction that emphasizes participants' use of a multisemiotic set of resources for the local construction of meaning in interaction. On the basis of 21 video-recorded lessons in two different classrooms, the study pursues two major aims, namely 1) a description of the different forms of participation that are collaboratively made possible by the participants, and 2) an analysis of how students deal with the temporal and sequential pressure for providing answers to questions (progressivity), with a special focus on those cases where a straightforward answer is lacking.

The results show that the hard-of-hearing students under study deal with competing constraints in the classroom, negotiating on the one hand their understanding and participation in the classroom, and on the other hand the progression of the overall classroom activity. Furthermore, the study unveils the systematic vocal and visual practices that the students draw on for displaying their understanding, their lack of understanding as well as their lack of knowledge in response to questions. The examination of the sequential and temporal embedding of these practices highlights that the students deal with interactional tasks in a manner that is contingent to the local circumstances at hand. Their competence is described as plurisemiotic, involving vocal and visual practices which combine with sequentiality and temporality as most fundamental resources.

The findings of this study add to current discussions on the education and assessment of hard-of-hearing students. Moreover, it contributes to recent theoretical discussions in the field of CA-SLA and Conversation Analysis more generally.

Keywords: interactional competence, progressivity, understanding, classroom interaction, hard-of-hearing interaction, participation, multimodality and sign language

Résumé: La présente étude examine la compétence d'interaction d'adolescents malentendants qui participent à une classe d'intégration. La particularité de la classe d'intégration réside dans la présence d'une assistante entendante qui soutient la participation des étudiants dans la salle de classe. L'investigation se fonde sur l'Analyse Conversationnelle et adopte une approche holistique de l'interaction sociale qui met l'accent sur le fait que les participants ont recours à un ensemble de ressources multisémiotiques pour la construction locale de l'interaction. Sur la base de 21 leçons enregistrées dans deux salles de classe (avec 2 caméras), l'étude poursuit deux objectifs principaux: 1) une description des différentes formes de participation qui sont rendues possibles par les collaborations des participants, et 2) une analyse des pratiques que les élèves mettent en œuvre pour gérer la pression séquentielle et temporelle pour fournir des réponses à des questions (progressivité). Une attention particulière est portée aux cas où une réponse immédiate de l'élève fait défaut.

Les résultats montrent que les élèves gèrent des contraintes concurrentes émergentes dans l'interaction, soit d'une part la négociation de leur compréhension et de leur participation à l'interaction en classe, et d'autre part la progression de l'activité globale de la classe. En outre, l'étude dévoile des pratiques vocales et visuelles systématiques que les élèves mettent en œuvre pour afficher leur compréhension, leur manque de compréhension ainsi que leur manque de connaissances en réponse à des questions. L'examen de l'imbrication séquentielle et temporelle de ces pratiques met en évidence que les élèves gèrent des tâches interactionnelles d'une manière qui est sensible aux circonstances locales de l'interaction. Leur compétence est ainsi décrite comme étant plurisémiotique, impliquant des pratiques vocales et visuelles qui s'imbriquent foncièrement avec les ressources interactionnelles telle que la séquentialité et la temporalité.

Les résultats de cette étude permettent d'alimenter les discussions actuelles sur l'éducation et l'évaluation des élèves malentendants. En outre, l'étude contribue à des discussions théoriques récentes dans le domaine de la CA-SLA et de l'Analyse Conversationnelle plus généralement.

Mots clé : compétence d'interaction, progressivité, compréhension, interaction en classe, interaction avec personnes malentendantes, participation, multimodalité et langue des signes

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Chapter I – Introduction

Participating in interaction with hearing peers and teachers is a prevalent issue for deaf and hard-of-hearing students, since an increasing number of them are mainstreamed in regular school. Such participation requires from the deaf and hard-of-hearing that they have access to the spoken language, in terms of perceptual access (hearing and/or lipreading) on the one hand, and in terms of knowledge of grammar and lexicon on the other hand. Perceiving speech, lexical and grammatical knowledge are basic but not sufficient conditions for the students' opportunities to participate in a hearing classroom. Beyond the necessity to perceive and to understand and produce the spoken language, students have to deal with a diversity of interactional tasks that make relevant their *interactional competence*.

In this thesis the focus is put on how four different hard-of-hearing adolescents participate in an integration classroom by describing select aspects of their interactional competence. It is important to highlight that this investigation is not primarily designed to reveal aspects that are specific to these participants as opposed to hearing interactants in general or to the hearing students in the classrooms. Rather, the major aim is to enlarge the perspective on how HH children's and adolescent's competence is approached by revealing some important interactional practices that they rely on for organizing their participation in the integration classroom interaction. Some of these practices have already been described for other populations or types of interaction, and other practices have not yet been described but they are not necessarily specific to the population of the hard-of-hearing.

This thesis is the result of a qualitative study carried out as an individual PhD project. The study has been conducted within the methodological and epistemological framework of Conversation Analysis. Conversation Analysis has as its aim "*to find rules, techniques, procedures, methods, maxims (a collection of terms that more or less relate to each other and that I use somewhat interchangeably) that can be used to generate the orderly features we find in the conversations we examine.*" (Sacks, 1984b:413). Hence, the current study is based on an approach to language that originally emerged out of sociological rather than linguistic concerns. This is reflected in the fact that this thesis is fundamentally concerned with questions relating to how participants design and organize social action as a means of contributing to the accomplishment of the social interaction rather than with questions of grammatical correctness. The main contribution of the thesis is that it provides an account of four hard-of-hearing students' interactional competence as it is deployed in a real-life setting, proposing a fine-grained micro-sequential analysis of the multimodal resources by means of which the students design their participation.

This chapter aims at introducing the reader to the topic and the major issues, as well as the objectives of this thesis. Section 1 frames the basic concern and contribution of this study in very general terms while

sketching the research background with some illustrative findings relating to language and communication of deaf and hard-of-hearing individuals. In section 2, I present the major issues on the basis of a first example. In section 3 the research objectives and the significance of the study are summarized. So as to provide the reader with a short overview of the thesis, this introduction ends with short abstracts of each of the further chapters (section 4).

1 The participation of deaf and hard-of-hearing adolescents in integration classroom interaction

The integration of deaf and hard-of-hearing (DHH) participants in mainstream classrooms is an educational method that is overwhelmingly applied in Switzerland. It is in line with current political endeavors emanating from European guidelines and legislations, calling for the inclusion of every child within regular classrooms and providing thereby *education for all* (EFA, Unesco). Additionally, the growing number of DHH children and adolescents who attend regular classrooms is to a great extent the result of an increasing use of modern technologies with regard to hearing loss: after a newborn hearing screening, deaf and hard-of-hearing children are regularly fitted with hearing aids or cochlear implants¹ from an early age, and later in life their auditory access may be optimized by means of the use of technical support systems. These technological advances provide the deaf and hard-of-hearing with new opportunities with regard to their (perceptual) access to the spoken language of the hearing majority population. This in turn is expected to enhance their chances to develop spoken language competence similar to that of hearing children. Consequently, a growing number of hearing parents of deaf and hard-of-hearing children (i.e. ca. 95% of the parents of DHH children, Mitchell & Karchmer, 2004) opt for the mainstreaming of their children in regular classrooms as well as for monolingual education in spoken language. While such integration and education in the spoken language appears successful in a great number of cases, still little is known about how deaf and hard-of-hearing children and adolescents actually participate in interaction and in classroom activities more generally.

To date, research has massively concentrated on the DHH children's and adolescents' development of spoken and/or signed language(s). Scholars have revealed the specific challenges that language development poses for DHH individuals due to their restricted access both to spoken and to signed language. This restriction pertains first to their perceptual hindrance, and second also to a lack of exposure to sign language. Though hearing aids and cochlear implants may enhance the perceptual access to language and potentially the development of spoken language, the findings suggest great interpersonal variation among the DHH young people and show that some of them are likely to acquire age-appropriate linguistic competence while others present significant delays. In this line of developmental research the focus is put on how well DHH participants perform on formal language tests that assess mainly grammar, vocabulary and sometimes pragmatics/speech acts. Moreover, within these studies, the competence is assessed in isolation from its natural site, i.e. social interaction. This implies

¹ A cochlear implant is an electronic device that is designed to restore hearing in severely and profoundly deaf persons who do not have enhanced hearing by means of conventional hearing aids. The cochlear implant consists of a processor, the external part of the device, and the receiver, which is surgically implanted into the bone. According to Braem & Rathmann (2010), around 80% of Swiss children born deaf received a cochlear implant in 2006.

that the DHH competence has not been assessed in naturally occurring interaction, where the interactional challenges or opportunities may be very different from those in (semi-) experimental settings. Additionally, the acoustic environment of experimental situations are usually more favorable for the DHH participant than the real-life setting in the ‘wild’, especially in classroom interaction where a multitude of participants may chat simultaneously.

Another strand of research has more thoroughly focused on DHH individuals’ communication in signed or spoken language and has provided interesting insight into how they actually use language for communicative purposes and participation in social interaction. The DHHs’ competence in communication and participation has for example been measured in terms of initiations of interactions, in initiations of repair (for addressing problems in understanding) or mean length of utterances. What is symptomatic of most of these studies is an underlying understanding of the DHHs’ communication as an individual and isolated act, often emphasizing how DHHs are struggling with interactional tasks at hand.

The investigation of how DHH students experience their integration in regular classroom is of fundamental importance. While a number of studies have already pointed to how these participants report experiencing their integration on the basis of interview studies, detailed examinations of their actual and real-life attendance to the regular classroom are still scarce. The current investigation addresses this issue by focusing on DHH students’ participation in integration classroom interaction.

2 Introducing the major issues

This thesis is concerned with four hard-of-hearing students, aged between 13 and 15 at the moment of recording. All of them have been diagnosed as prelingually deaf between 2 and 3 years of age. They have then been provided with hearing aids, and three of them received a cochlear implant (age of implantation varies between 5 and 10 years). All of the students use spoken language and sign language.

The participation in the integration classroom and the interactional competence that the students have to deploy in this setting can be examined on the basis of a multitude of different aspects. This thesis can account only for a small fraction of the students’ interactional competence. In this study, interactional competence is approached through the lens of progressivity. Progressivity is an interactional principle that becomes observable in the fact that interactants attempt to further the progress of interaction towards different types of completions (Schegloff, 1979, 2006; cf. chapter IV, section 4):

- the completion of a speaker’s turn
- the completion of a basic sequence (i.e. question-answer sequence) involving two participants
- the completion of a course of action that has been initiated by a specific action (i.e. seeking for the information x), involving two or more participants

In what follows I discuss a first excerpt and provide some insight in the issues that this thesis addresses. The excerpt comes from a lesson where the class has come together in a circle and discusses several topics relevant for the school business in general. Mr. Fritsche, (abbreviation Fri), the hearing main teacher of this class, invites the hard-of-hearing student, Pashali (abbreviation Pas), to tell him and the

rest of the class (abbreviation Cla) about his recent participation in a pentathlon. A hearing teaching assistant is present also, Mrs. Micheli (abbreviation Mic), who is part of the circle. The excerpt is represented with a transcription with the following conventions: the line with the abbreviation of the participant's name in capital and lower case letters represents the vocal speech of this participant (e.g. Pas). The line beginning with the participant's abbreviated name written in capital letters is reserved for manual resources, i.e. signs of Swiss German Sign Language as well as gestures (e.g. PAS). Gaze is annotated on a line with the suffixe *_gz*; in this line the beginning and the end of a gaze direction are marked with *. Other bodily actions such as body leans are annotated on the line *_nv*. Pauses are annotated in brackets (e.g. (0.3) indication in tenths of seconds or (.) for a micro-pause of a tenth of a second or less) and overlaps between participants with square brackets at the beginning of the overlapping talk or action. For more details on transcription conventions cf. chapter V, section 2.3.4. In what follows the whole excerpt is represented, basically showing a question – answer sequence: Fritsche addresses a question to Pashali at line 1, and this question is answered by Pashali a first time at line 12 (but not accepted by the teacher), and a second time at line 24. This long excerpt illustrates how the achievement of a single question-answer sequence can be extended over a multitude of turns.

Excerpt 1a

[PA_IN_100604_2eheure; #136-146]

01	Fri Cla Pas_gz	how many pashali how many people were there [wievie- pashali wieviele waren dabei? [(some applause; some whisperings) ->fri->*
02	Cla	*(0.7) *some whisperings
03	Fri Cla	third but out of how may [wa- (.) dritter von wieviel. [some whisperings
04	Pas Pas_nv	pardon "°wie bitte.° "leans forward
05	Fri FRI	how many how many other pupils or boys wieviele (0.4) wieviele andere "schüler oder knaben& "SAS_person
06	Fri FRI	did participate in the cont- in the pentathlon &haben mitgemacht bei dem "we- beim "fünfkampf "(X) "FUENF
07		(0.8)
08	Fri FRI_RH FRI_LH	you are third but out of how many du bist "dritter geworden aber von "wieviel "DREI->" "PNT(DREI)
09	Pas_gz	*(1.1) *>fri
10	Pas_gz	*(0.8) *>mic (?)

- 11 Fri hundr-
[hunder -
u-sixteen was the group (1.2) (x) and I was third and (0.8) u-eighteen (0.3) also (x) third
- 12 Pas [(xxxx) u u sechzehn isch gruppe, (1.2) (xxx) und ich dritter
°und° (0.8) u: achzehn (0.3) auch (xx) dritter.
- 13 (0.3)
- 14 Pas his name is lorenzo
heisst lorenzo.
- 15 Fri okay bu- but you were u-sixteen right
>okay ab- aber< du warst u sechzehn hä?
- 16 Ga1 [(°oha°)
Pas_gz [*>fri
you were u-sixteen
- 17 Fri "du warst u SECHzehn
FRI "PNT(pas)
- 18 (0.7)
- 19 Pas yes
[(°ja°)
how many (0.7) how many u-sixteen pupils (0.3) were there
Fri [WIEviele (0.7) WIEviele u sechzehn schüler (0.3) °hat es
gegeben.°
- 20 Pas_gz *(1.5)
->next to Fri->
- 21 Mic how many person were in the u-sixteen group all together
MIC wie*viel personen waren "in der u-sechzehn ALLE "zusammen.
Pas_gz "PNT(circle) "GRUPPE
->mic->
- 22 Pas_gz *(0.7)
*->next mic->
- 23 Fri approximately
[(etwa)
- 24 Pas (xx) thirty
Pas_gz [(xx) *dreissig.
*->fri->>
- 25 (0.3)
- 26 Fri so you ar- (..) you were third (..) out of thirty-three
aso du bi- (..) du warst DRITTER (..) von dreiunddreissig
- 27 Pas yes
ja.

[Fri main teacher, Pas HIS, Jon HS, Cla class, Mel HS]

The excerpt shows very clearly that once a course of action has been launched (through a question in this case), participants work hard in achieving completion of this course of action, which is related to the achievement of a local interactional goal (e.g. seek for a specific information, make someone

speak/participate). A basic condition for such an achievement is that the participants share a common understanding of what they are doing and how they are doing it. Practically, for responding to a question, this question has to be heard and understood. In the excerpt above it becomes evident that the progression towards the completion of the course of action is halted for a while due to a problem in understanding. A first indication of such an understanding problem occurs at line 4:

Excerpt 1b

[PA_IN_100604_2eheure; #136-146]

03	Fri Cla	how many pashali how many people were there [wa- (.) dritter von wieviel. [some whisperings
04	Pas Pas_nv	pardon "°wie bitte.° "leans forward
05	Fri FRI	how many how many other pupils or boys wieviele (0.4) wieviele andere "schüler oder knaben& "SAS_person

The student's lack of understanding is observable in his response at line 04, a repair initiation. A fundamental analytical principle in conversation analysis is that participants' actions are interpreted on the basis of how the participants themselves orient to them (emic perspective). In the case above, the use of *wie bitte* ('pardon') by Pashali is qualified as an indication of non-understanding because the co-participant Fritsche interprets it like that. Fritsche's interpretation that Pashali has an understanding problem is made observable in the way how Fritsche responds to the *wie bitte*, namely with a repetition of his question. Hence, as analysts we ground our arguments on how the participants themselves make observable what they are doing and how they are understanding each other. This turn-by-turn analysis grounds the analytical procedure in conversation analysis. Furthermore, and as the transcript reveals, special attention is paid to both language and other bodily conducts (as e.g. gaze and posture).

The student breaks progressivity by means of the repair initiation *wie bitte* because

- (1) he does not provide the answer that has been made relevant by the question ('third out of how many?')
- (2) he even initiates a new sequence: the repair initiation constitutes a new question that the teacher must answer before the student in turn can potentially answer the first question.

As the continuation of the excerpt shows, the final solution of the understanding problem and the re-installment of progressivity are substantially delayed: Two reformulations by the teacher (l.05-06, l.08) and a first candidate answer (l.12) are attempts to solve the problem but they are not successful. It is only when Pashali answers the question at line 24 that progressivity is re-installed and the course of actions comes to a closure. The final achievement of this course of action grounds in the intervention of the teaching assistant (l.21) who did not intervene during the first part of the course of action. The presence of the teaching assistant who can mediate the student's participation in the hearing classroom is one of the particularities of the classroom setting under study – it provides the student with special opportunities but also tasks regarding his participation in the classroom. In sum, this first perspective on the excerpt

sheds light on an important issue that this study addresses: the progression towards the completion of a sequence or a course of action can be hindered because of different types of problems – in this excerpt it is an understanding problem, maybe also a hearing problem, but also not knowing the answer is a prevalent reason in this pedagogical setting. It is the participant's task to deal with such breaks in progressivity by finding a solution as to how to complete the course of action anyway: negotiate understanding, providing the answer, choose another student to respond, involve the teaching assistant, or maybe also abandon the course of action.

A second view of the excerpt shall now sharpen the focus on some finer interactional details for illustrating the issue of progressivity. Interactional studies have shown that when participants are interacting, there is predominantly one speaker speaking at a time, and when the speaker changes, this occurs without a gap between the two speakers and without overlap. This is called *precision-timing* and can be seen for example in the speaker change from Fritsche to Pashali at line 04 and line 27 (absence of inter-turn pause). There is a preference for speaker change to occur within the transition space, defined as “(...) the environment of a turn's possible completion, at which possible transition to a next speaker becomes relevant.” (Schegloff, Jefferson & Sacks, 1977:366). This environment is not clearly defined and may stretch over the end of the previous and the beginning of the next turn. Schegloff and colleagues have stated that “for our purposes here it may be thought of as the ‘beat’ that potentially follows the possible completion point of a turn.” (Schegloff et al., 1977:366). When speaker change occurs without precision-timing, sequential progressivity is broken. The importance of progressivity lies in the fact that participants orient to it as a default unfolding of interaction and that they treat each departure from this default organization as being meaningful (e.g. as foreshadowing disagreement). The meaning of each pause however is situated and participants rely on their current understanding of the activity at hand, but also the identity of the co-participant, for interpreting such pauses. Consider the following example where a pause occurs at line 22 before the answer provided by Pashali at line 24.

Excerpt 1c

[PA_IN_100604_2eheure]

21	Mic MIC Pas_gz	how many person were in the u-sixteen group all together wie*viel personen waren “in der u-sechzehn ALLE “zusammen. “PNT(circle) “GRUPPE *->mic->*
22	Pas_gz	*(0.7) *->next mic->
23	Fri	approximately [(etwa)
24	Pas Pas_gz	(xx) thirty [(xx) *dreissig *->fri->>

In this fragment, the pause between the end of Micheli's question (l.21) and the beginning of Pashali's answer (l.24) is rather long. By contrast to the majority of the other pauses that became lacks of answers (l.2, l.7, l.9-10, l.20), Fritsche does not treat this pause as an indication of an understanding problem – at

line 23 he indicates that an approximate number is appropriate by expanding the question with *etwa* ('approximately'). This expansion is not revising his or Micheli's question but it is rather specifying it.

In sum, when a participant addresses a question to the student, there is a normative expectation that the response is provided with precision timing. When this is not the case, i.e. if a question remains (temporarily) unresponded, the following points become relevant:

- (1) the pause and the absence can have various sources, and the teacher can interpret the absence in different ways.
- (2) the teacher and the student have different options in solving the problem of the 'unresponded' question. For knowing how to solve the problem, an indication of what the problem is may be helpful.

In sum, the question arises, how pauses and absences are interpreted by co-participants, on the basis of what kind of resources they are interpreted, and what consequences arise from them for the continuation of the interaction.

All in all, given the longish sequence that results from one initial question (l.01), one could judge that the student's competence in participating in interaction is insufficient or limited, due to evidenced problems in hearing, and quite obviously also difficulty with German language. While these difficulties surely are a testimony of the participant's limited language expertise and hearing capacity, the focus can be shifted to interactional tasks that the student deals with successfully. This thesis aims at highlighting precisely these facets by describing some of the practices used by the participants as being part of their interactional competence. The notion of *interactional competence* (cf. chapter II, section 3) is not new but it is only in the last five years that scholars have more explicitly focused on this issue within the field of Conversation Analysis applied to the field of Second Language Acquisition (CA-SLA). Basically, interactional competence is at stake when participants to interaction are faced with interactional 'problems' or tasks such as taking turns at talk, or repairing some problem in understanding as well as for example displaying attentiveness and understanding as a recipient. A fundamental assumption of scholars concentrating on interactional competence is that knowledge of vocabulary, grammar or even pragmatic rules is not sufficient for an interactant to be able to participate in social interaction. Interactional competence comprises knowledge of linguistic resources but goes beyond it. It is further constituted by other resources that may become meaningful, as for instance manual movements (i.e. gestures), facial expression and postures, as well as artifacts (as exercise sheets). Moreover, also the passing of time and the sequential ordering of interaction (temporality and sequentiality) are used by the participants for creating meaning. The importance of these aspects is reflected in the transcriptions that include diverse semiotic resources.

3 Aims and significance of the study

The present study aims at investigating the *interactional competence* of plurilingual hard-of-hearing adolescents as it is deployed in *integration classroom interaction*. The examination draws on the framework of Conversation Analysis and it demonstrates how hard-of-hearing participants deploy a

multisemiotic set of resources that enables them to participate in classroom interaction in an organized and accountable manner. This overall aim is pursued through two major research objectives: The first major objective consists in demonstrating the hard-of-hearing students' forms of participation in the classroom interaction and how they deal with opportunities and constraints that are specific to the classroom under study (chapters VI). The second objective consists in *identifying and describing a set of practices* that the hard-of-hearing students deploy for *dealing with issues related to progressivity*. This analysis implies examining interaction with a focus on different levels of interactional organization: a focus on the transition space (chapters VII and VIII), a focus on sequence and course of action (chapter IX). I will study different interactional practices that the students (and their co-participants) deploy for addressing interactional tasks that are related to progressivity: practices that sustain progressivity, practices that minimize breaks or account for breaks of progressivity, and practices that contribute to re-establishing progressivity.

This thesis may be of particular importance for the ever-increasing number of hard-of-hearing participants whose competence in spoken language and in sign language and above all their participation in real-life social interaction remains to be investigated. Through the focus on how DHH students design their participation by making use of a multitude of semiotic resources, the study provides compelling evidence for their interactional competence though their linguistic competence seems to be delayed when compared with interactants of the same age².

By bringing into focus the interactional competence of hard-of-hearing persons who are bilingual in a signed and in a spoken language, the study can enrich current discussions in CA on behalf of the systematic and regular use of non-vocal resources in social interaction (multimodality, embodiment). Moreover, by focusing on aspects of temporality, sequentiality and non-vocal practices, this thesis adds to the current accounts of interactional competence in CA-SLA. Importantly, it proposes that interactional competence may not be related to one language but is best conceived as being plurisemiotic and integrating resources from all languages. Hence, the study may not only have an impact on how competence of DHH individuals is understood within the field of linguistics and education studies of the deaf and the hard-of-hearing, but more generally on the conception of interactional competence in SLA studies.

In the field of educational studies on DHH participants, the thesis will be helpful in sketching a more encompassing picture of the constraints and affordances that these DHH encounter when they are attending regular classroom interaction accompanied with a teaching assistant. Thereby it completes previous studies on the same issue that have focused on language choice and classroom opportunities, and those that are based on the students' self-report of how they experience regular classroom. On this behalf the thesis points out and illustrates important issues the DHH participants are dealing with in interaction that may sensitize the professionals concerned.

On the methodological level finally, the study reconsiders and adds some important elements to the CA transcription practice which are designed to account for phenomena not previously taken into account, pertaining especially to a multimodal analysis of interaction (i.e. visual prosody).

² This is not based on a systematic comparative evaluation but simply on the insights provided by the recordings of the plenary classroom interactions.

4 Abstracts of the thesis' chapters

Chapter II – Interactional competence of deaf and hard-of-hearing plurilinguals

The first theoretical chapter provides a review of the type of *competences* that have been studied within the field of deaf and hard-of-hearing population and in spoken language linguistics more generally. As a first step I point to some important work that has thoroughly examined the linguistic competence of DHH participants in spoken language and in signed language. Further on I discuss the notion of competence as it has emerged in linguistics and evolved in the field of second language acquisition. By resituating the notion of competence in a fundamentally social and situated perspective on language and social interaction, I propose a definition of interactional competence and discuss the challenges the notion poses for research within a participants' perspective.

Chapter III – A framework for studying hard-of-hearing plurilinguals: Conversation Analysis

This chapter presents the methodological and epistemological framework on which the current study is based. After having exposed the underlying assumptions on language and social interaction advocated by Conversation Analysis, the main part of the chapter is dedicated to an account of the basic organizations that are at the heart of interaction and of CA methodological apparatus. I review classical work on the organization of turn-taking, sequence and repair organization on the one hand, and extend these traditional discussions by contributions that have enriched or sometimes put into question traditional accounts on the basis of multimodal analyses.

Chapter IV – Participation of hard-of-hearing plurilinguals in a hearing classroom: the issue of progressivity

The last theoretical chapter prepares the reader for the upcoming analyses by means of two main topics. First, I discuss the specific form of bilingualism consisting of the use of a spoken and a signed language. I show the complexity and richness this bilingualism presents for the bilingual speakers, as well as the challenges it poses for the description of the participants' competence. Second, by means of a presentation of how classroom interaction is characterized and specific challenges that the participation in interaction more generally poses, I point out what the hard-of-hearing students are required to deal with when they are participating in hearing classroom interaction as integrated plurilingual students. In this section I provide a detailed overview of the issues of progressivity and intersubjectivity and its relation with classroom interaction.

Chapter V – Data and research design

Chapter V describes the research design and the data of the current study. The analyses are based on 21 video-recorded lessons of two different integration classrooms. The primary data has been transcribed and annotated in ELAN® and further in Word. After an initial inspection of the data, a first assemblage has been built that comprises all question-answer sequences addressed to a hard-of-hearing student by the teaching staff or by hearing classmates. On the basis of this, the research questions have been further elaborated and detailed. The chapter presents the different collections that have been built.

Chapter VI – Forms of participation in the integration classroom

Chapter VI sketches the basic organization of the integration classroom that includes the hard-of-hearing students, the teaching assistant, as well as the hearing students and a hearing main teacher. Section 1 provides an overview of the general features of the setting. It consists of an etic description of the participants involved, the spatial organization of the setting and main activities and participation frameworks at stake. In section 2, a preliminary analysis of the students' involvement in different participation frameworks demonstrates to what extent the participants' characteristics as well as the overall setting are consequential for the students' form of participation in the classroom. Based on a micro-sequential analysis, this section shows how participants co-construct context (integration classroom vs regular classroom). On the basis of the previous descriptions, section 3 demonstrates how the local classroom organization affords the students with a specific kind of participation, namely the engagement in a second strand of interaction with the teaching assistant that is unfolding simultaneously with the plenary activity. The analysis of several excerpts reveals the kinds of competences these engagements demand from the students as well as from the teaching assistants.

Chapter VII – Dealing with progressivity I: Displaying understanding in response to first pair parts

Chapter VII investigates the students' management of progressivity by concentrating on the practices they deploy for handling interactional pressure when they have been other-selected by a co-participant and are held responsible for the accomplishment of a (conditionally relevant) response. The analytical focus is put on the transition space between the co-participant's first pair part (e.g. a question) and the student's expected second pair part (e.g. an answer). Transition space after other-selection is considered a delicate sequential environment: when participants do not provide the second pair part straightforwardly (i.e. in the transition space or precisely timed), sequential progressivity is compromised and the co-participants engage in a diagnosis of the origins of this break. This diagnosis then shapes the further trajectory of the interaction because co-participants take it as a basis for their remedial actions that aim at managing the break in progressivity and at calling for the conditionally relevant response. In a collaborative endeavor, so as to help the co-participants' diagnosis, hard-of-hearing participants make observable the reasons for the break in progressivity. They do so by means of different practices, vocal and visual ones, which are deemed to be part of their interactional competence. The chapter first reveals that students are able to finely tune their turn-beginnings to the end of the previous speakers' turns. Then, the chapter demonstrates practices the students deploy for managing progressivity, displaying their epistemic and perceptual access to the previous turn (hearing and understanding the previous turn) when they have troubles in providing an answer or a requested action.

Chapter VIII – Dealing with progressivity II: Displaying lack of understanding in response to first pair parts

Chapter VIII examines how students display a lack of understanding in response to first pair parts by the teacher or teaching assistant means of unspecific repair initiations such as *was* ('what') as well as specific gaze conducts. Repair initiating actions by the students break the progressivity of interaction as they initiate a new sequence which is completed through the repair action of the teacher / teaching assistant. The analyses in this chapter show that beyond the vocal repair initiators, students rely on

specific gaze conducts that are displaying a lack of understanding and which are followed by the teacher's or teaching assistant's repairing actions. On the basis of these displays, the repair sequence appears to be minimized. All in all the chapter shows that students tend to use visual practices for displaying non-understanding which are minimally disruptive to the interaction to a greater extent than vocal repair initiators.

Chapter IX –Dealing with progressivity III: Formulating lack of understanding and of knowing

Chapter IX shows how the students manage progressivity by means of explicit formulations of restricted epistemic access (*I don't know, I didn't understand*) and perceptual access (*I didn't hear*) in responsive turns. The analysis focuses on instances that occur in response to a co-participants' first pair part (question, request for action). In this specific sequential environment, it was found that the deployment of formulations of restricted epistemic and perceptual access enables the hard-of-hearing participants to *technically complete adjacency pair sequences* but without providing a complying response. In other words, the major issue at stake in this examination is the hard-of-hearing participants' practices for accomplishing the sequential job of *adjacency pair completion* while at the same time either deferring or replacing the expected relevant next action. All in all the chapter shows on the one hand that formulations of non-understanding function as accounts for breaks of progressivity rather than as repair initiators, and that formulations of non-knowing are deployed as a resource for dealing with substantial breaks in progressivity.

Chapter II – Interactional competence of deaf and hard-of-hearing plurilinguals

Language development and language use by deaf and hard-of-hearing persons (DHH) is an extensively investigated issue whose findings have a bearing not only on linguistic but also on educational, political and ethical discussions. In a nutshell, most of these discussions relate to the adequate ways of designing medical and educational intervention on deaf and hard-of-hearing children so as to optimize their chances for age-appropriate cognitive and linguistic development and social integration. Studies from different lines of research have concentrated on linguistic competence, on language choice in communication and on strategies of DHH individuals to request for clarification in conversation.

The aim of this chapter is to provide a short overview of some of these studies and to further reveal that an investigation of deaf and hard-of-hearing participants' competence can be enriched through a conversation-analytic investigation that approaches the hard-of-hearing's competence as a plurilingual interactional competence. The chapter starts with a brief and non-exhaustive review of how deaf and hard-of-hearing persons' competence is most frequently described (section 1). I provide a concise account of how deaf and hard-of-hearing persons are commonly defined and what type of definition is adopted in the current study (section 1.1.). Then, I present some major issues relating to the deaf and hard-of-hearing individuals' competence in sign language (section 1.2.1.) and in spoken language (section 1.2.2.). The most important part of the chapter is then dedicated to a review of the notion of competence within the field of spoken language linguistics (section 2). I start with the notion of Hymes' communicative competence (section 2.1.), before discussing how competence is conceived in a holistic approach to bilingualism (section 2.2.) and within a socio-interactional approach inspired by sociocultural theory (section 2.3.). The critiques and discussions made by these different frameworks will provide a first sketch of some essential facets that a definition of competence must imply when adopting a socio-interactional framework. Then, in section 3, I propose a more technical definition of interactional competence. In this endeavor, I first report on some conversation-analytic studies that focused on interactional competence (section 3.1.), before I relate the notion of interactional competence to two different types of participation concepts (section 3.2.). The section 3 ends with a critical discussion of whether, and if so, to what extent the issue of norm is compatible with a notion of interactional competence that is based on a conversation-analytic framework (section 3.3.). The chapter is concluded with a short report of how interactional competence has been studied in hard-of-hearing bilinguals, revealing why further examination on this topic is necessary (section 4).

1 Defining deaf and hard-of-hearing persons

Persons with hearing loss present great differences according to their family background (hearing or deaf), their age at the onset of hearing loss, their precise hearing status, their language competencies,

their integration in the deaf or the hearing community and the type of education they receive (specialized or mainstream classes). A literature review of linguistic, educational and clinical studies on individuals with hearing loss reveals the absence of a commonly adopted definition of the deaf or the hard-of-hearing person. On the one hand there are different definitions of what constitutes a disability in general (section 1.1.), on the other hand there are different ways of categorizing the severity of the hearing loss (section 1.2.).

1.1 The notion of disability

Disability can be approached as a medical, as an interactional or as a biopsychosocial phenomenon (Gutjahr, 2007; WHO, 2002). A medical model defines disability in terms of dysfunction or anomaly that is a feature which makes inherently part of a person. The focus is on what the person is not able to do and medical intervention is seen as necessary so as “to ‘correct’ the problem with the individual” (WHO, 2002:8). By contrast, the interactional concept of disability proposed by a social model shifts the focus from the individual away to the social context, assuming that disability is the result of an environment that is ‘handicapping’ the person due to attitudes and structural limitations put on the individual by society. Deaf individuals can be understood disabled because of their hearing loss and their deviance from an established norm (medical model), or they can be seen as disabled because the surrounding community does not know sign language or does not systematically provide interpreters (social model; e.g. McKee, 2008). In this vein, deaf people themselves started to defend a cultural definition since the 1980s, defining deafness not as a deviance from the norm but as persons’ personal sense of belonging to the hearing or the deaf community, independently of their hearing status³. In 2002 the WHO proposed a third model of disability that assimilates aspects of both of the earlier models. This biopsychosocial model integrates both the medical and the social perspective on disability (ibid.:9). Very schematically speaking, the disability is approached on the basis of the individual’s health condition (disease, disorder or injury) and the contextual factors (e.g. legal and social structures, profession, coping styles, etc.), both being relevant for how the individual experiences a disability. On the basis of this, a person’s disability is understood as involving not only the impairment of body functions, but also as pertaining to activity limitations and participation restrictions. These three dimensions are assessed as a means of defining the individual’s disability, putting therefore to the foreground what the person is able to do and what competencies he has (Gutjahr, 2007).

1.2 The categorization of hearing loss

With respect to the categorization of hearing loss, the *World Health Organization* (WHO) proposes that a normal hearing implies that someone hears at least 25dB in both ears. When a person presents a hearing threshold higher than 25dB in the better ear, one speaks of a hearing loss. Commonly hearing loss is categorized into mild, moderate, severe and profound. While there is a widespread use of these four categories, the exact borders in terms of hearing thresholds delimitating them appear to be divergent according to different countries or organizations within the same country (Egbert, Groeber, Johansen, Lonka, Meis, Pajo, Ruusuvuori & Skelt, 2012; Mourtou & Meis, 2012). The WHO works with the

³ Within the community of deaf persons, the medical view on deafness has generated much criticism since the 1980s, when linguists began to provide evidence for sign languages being full-fledged languages.

following classification: 26-40 dB is mild hearing loss, 41-60 is moderate hearing loss, 61-80dB is severe hearing loss and more than 80dB is profound hearing loss.

According to a medical view, people are referred to as hard-of-hearing when they have mild to severe hearing loss, and deaf if they present a profound hearing loss (Blamey, 2003). Defining a person as being deaf or hard-of-hearing becomes even more complex when speaking of people with hearing aids or cochlear implants. Grosjean (2008) mentions that persons being fitted with hearing aids or cochlear implants may be faced with specific challenges in identification. On the one hand they may have difficulties in integrating into the Deaf community due to their observable effort to achieve a better hearing ability by means of hearing prostheses, which may be interpreted as an endeavor to become 'hearing' and a refusal of being 'Deaf'. On the other hand, they may also have difficulties in becoming part of the hearing community in spite of their augmented auditory access, individuals with hearing prostheses are visibly different from hearing persons. Moreover, despite technological progress, the hearing prostheses cannot restore audition as it is in hearing persons. Consequentially, the hearing aid or cochlear implant may become a double *stigma symbol* for the wearer (Goffman, 1963), as it makes visible the undesirable difference between him and the Deaf on the one hand, and him and the hearing community on the other hand (note that the same is not true for other prostheses as for example the use of glasses). It should be noted at this point that the ever-increasing number of persons with hearing aids and above all cochlear implants appears to give raise to a specific community, the hard-of-hearing community (Israelite, Ower & Goldstein, 2002; Punch, Hyde & Creed, 2004). With respect to the labeling of deaf individuals with hearing aids or cochlear implants (by researchers), the question arises whether they should be defined according to their natural hearing status or the hearing capacity they reach with the help of the prosthesis. According to Blamey (2003), cochlear implants can "*move a child from the 'deaf' group to the 'hard-of-hearing' group*" (ibid.:235). However, due to the several circumstances that can impede on the well-functioning of hearing aids or implants, as for example too much background noise, low batteries or communication while bathing, a deaf person with a hearing prosthesis to some extent remains basically deaf.

In line with Blamey (2003), within this thesis I use the term *hard-of-hearing adolescents* as a general term for the four students under study. By this labeling I make reference to the fact that despite an audiometric test that diagnosed the adolescents as having prelingually severe to profound hearing loss, the provision with hearing aids or a cochlear implant has moved them to a group of hard-of-hearing to some extent. However, it is crucial to keep in mind the following aspects:

- hearing aids and cochlear implants may not function (low battery), whereby the adolescents can be considered to be 'removed to the group of deaf' (Blamey, 2003);
- this labeling may be not convergent with the adolescents' felt identity or sense of belonging;
- this labeling is an etic description of the individuals by the researcher and does not take into consideration whether, when and how this identity or other identities are relevant for the adolescents or for the other co-participants to interaction (Widdicombe, 1998).

Deaf and hard-of-hearing persons have been thoroughly studied in the field of linguistics and education. Especially issues related to language acquisition of deaf and hard-of-hearing children are of paramount

importance and give still raise to much debate among researchers working within different theoretical and methodological frameworks. In the next sections I provide a short review of some major issues related to language acquisition and competence of deaf and hard-of-hearing individuals.

2 Language competence of deaf and hard-of-hearing persons

Scholars within linguistics, speech & language therapy as well as education have long been concerned with the development and the competence of deaf and hard-of-hearing children's language. In the following sections, I report on some issues by separating them into three categories. A first line of research focuses on the development of *sign language competence*, investigating primarily how deaf children acquire grammar, i.e. phonology, morpho-syntax, as well as non-manual linguistic components (e.g. eyebrows) or the linguistic use of space (section 2.1.). A second line of research concentrates specifically on how deaf and hard-of-hearing individuals develop *spoken language competence*, especially grammatical knowledge and skills in speaking and hearing (section 2.2.). A lot of studies within this field are related to issues of hearing aid and cochlear implant provision and they are embedded in speech & language, audiology and education research. Finally, there are studies that are interested in how DHH participants *use language* for communicative purposes, be it in natural or (semi-) experimental settings and be it signed or spoken language. Within these studies, the focus is rather on the deaf and hard-of-hearing individual than on the linguistic development *per se* (section 2.3.).

2.1 Competence in sign language

Signed languages became recognized as full-fledged languages, grounding in a proper linguistic system, since the early 1980s. This recognition was made possible through pioneering work dedicated to the description of sign language vocabulary and grammar (e.g. Klima & Bellugi, 1979). Signed languages are spatio-visual languages that make use of different articulators for simultaneously establishing meaning: hands, head, eyes (gaze direction, eye aperture) or eyebrows, as well as body posture can all carry linguistic meaning. Most basically, signs consist in a manual component that can be broken down and described by means of four basic parameters: specific handshape, hand location (e.g. before the torso or before the mouth), orientation (e.g. palm of the hand looking down or towards the torso of the signer) and movement (e.g. linear movement from left to right or circling movement). For each of these parameters, research has revealed minimally distinguishable units that make up the sign's meaning (e.g. Klima & Bellugi, 1979; for introductions to sign language linguistics cf. Boyes Braem, 1990 for Swiss German Sign Language; Johnston & Schembri, 2007). Moreover, signed languages make use of space as a linguistic resource, as for example for pronominal references – a referent can be introduced and assigned to a specific locus in space by means of a pointing (e.g. *FRAU*⁴ *PNT*(loc) 'woman there'), while later in discourse the sole pointing to this same locus functions as a co-reference, or the orientation of the directional verb *FRAGEN* ('to ask') towards this locus interpreted as 'ask the woman' (*FRAGEN_loc*). Additionally, non-manual components such as configuration of eyebrows, eye aperture or configurations of the cheeks or the mouth can bear linguistic meaning (prosodic or morphosyntactic or discursive). For

⁴ Manual signs are conventionally written as glosses, which are rendered in capital letters. See chapter V for more details on transcription and annotation.

instance, to the same manual component for *cake* can be added the adjective *big* or *small* only by relying on the non-manual components, namely puffed cheeks for *big* and cheeks in for *small* (Boyes Braem, 1990). Furthermore, some sign languages integrate a high amount of mouthings, i.e. *“the voiceless pronunciation of German-like words or word parts which accompany the production of manual signs”* (Boyes Braem, 2001:100). Thus, the annotation of sign language must be able to capture a range of simultaneously unfolding resources. As Boyes Braem (2012) notes, precisely this simultaneous unfolding of manual and non-manual components of signed languages make them *“a delight to watch, but, together with the linguistic use of 3-dimensional signing space, a devil to notate.”* (ibid.:414).

One line of research that is interested in the deaf and hard-of-hearing (DHH) participants' language competence and development focuses on how children acquire grammar and vocabulary of signed languages. A major issue within sign language acquisition research has been whether signed and spoken languages are acquired in a similar manner. Studies within this line of research have put forward that children exposed to signed and to spoken languages undergo the same developmental stages (e.g. Newport & Meier, 1985; Schick, 2003). For example, children exposed to sign language appear to produce a gestural babbling that is similar to the vocal babbling of hearing children with respect to the structure (syllabic, repetitive) as well as its timely appearance (from 6 months on; Petitto & Marentette, 1991). With respect to the development of vocabulary however, scholars provided early evidence that the first signs are acquired earlier than the first words (Bonvillian, Orlansky & Novack, 1983). One explanation that has been put forward in this regard was that the iconicity of a large part of signs was helping their early acquisition (Brown, 1979; cited by Bonvillian, Orlansky & Novack, 1983). The analysis of first signs by Bonvillian, Orlansky & Novack (1983) however did not prove to be in majority iconic. Other explanations provided for the early acquisition of signs were that the development of motor control of hands precedes that of the vocal tract, the earlier maturation of visual cortex than the auditory cortex, or the possibility of the mothers to mould the sign on the children's hands (ibid.). The advantage of sign language acquisition over spoken language acquisition has been tempered by Meier & Newport (1990) who observe that the first signs occur earlier than words, but that the advantage disappears for two-sign utterances. Other scholars however refuted both of these hypotheses by putting into question the methodology of these studies. They emphasize the importance of making a clear-cut differentiation between prelinguistic gestures and real first lexical items of sign language (Petitto, 1987), which results in an absence of difference in the onset of first signs/words. To date, scholars seem to converge on the idea that the first referential usage of language in signed language is not dependent on the modality of the language (Lepot-Froment & Clerebaut, 1996).

A description of how children acquire sign language lexicon and grammar entails the important methodological task of separating linguistic and non-linguistic elements occurring in sign language speech (Baker, Van den Bogaerde & Woll, 2009). To make such a distinction is challenging even for native adult signers' competence, and the difficulty is increased within child's sign production where the separation between non-linguistic gesture and linguistic sign is often not straightforward. Gestures are an integral part of hearing and of deaf children's communication (Estève, 2009 and Mahon, 2009 for deaf and Iverson, Capirci & Longobardi, 1999 for hearing children). Capirci, Iverson, Montanari & Volterra (2002) propose to distinguish between linguistic and non-linguistic elements on the basis of the following criterion: it counts as a sign when it is similar to the adult form, and it differs from what a child

who is monolingual in a spoken language would produce as a gesture (cf. also Millet & Estève, 2009). Likewise, the status of non-manual features such as head shakes or eyebrow movements is not straightforwardly either linguistic or non-linguistic. According to Baker et al. (2009) for example, the status of a head shake as linguistic is best proved when it occurs simultaneously with a sign (e.g. signing HUNGRY and abnegating with a head shake, resulting in the expression ‘I am not hungry’). When it occurs without a sign, its status as a common gesture or as a linguistic element of sign language remains ambiguous. A disadvantage of this type of strict categorization between linguistic and non-linguistic features is that it may in fact underestimate the child’s extent of vocabulary and more generally his ability to speak (cf. Capirci et al., 2002; Hänel-Faulhaber, 2012). The categorization between linguistic and non-linguistic status of phenomena is not only relevant in children’s production, but also within bilingual signers. This is further discussed in chapter IV, section 1.

As Lepot-Froment & Clerebaut (1996) report, most studies within sign language acquisition research are based on video recordings of spontaneous communication. While this type of data provides a rich basis for a description of how language is used, the literature review on sign language acquisition reveals that to date the major aim consisted in describing the acquisition of grammatical components rather than the development of competence in discourse, pragmatics or communication (but see e.g. Prinz & Prinz, 1985; Smith & Sutton-Spence, 2002). There are however some interesting studies that demonstrated how language is used beyond the sentence-level within adult signers. These studies concentrated for example on discourse markers that are used for highlighting a shift to a subtopic or for marking the shift between introductory, main and closing sequences within a reading (Roy, 1992; cf. also McKee & Wallingford, 2011), register variation (Zimmer, 1989; cited by Valli & Lucas, 1992), coherence and cohesion in signed discourse (Hansen, 2012) as well as general social rules such as for example whether one can pass between two signing persons (Valli & Lucas, 1992). The aspect that has received most attention on the conversational level has been sign language turn-taking (e.g. Baker, 1977; Baker & Van den Bogaerde, 2012), which I will detail in chapter III, section 4.3).

To summarize, previous studies on the competence in signed language by DHH individuals has pinpointed the developmental stages, often in comparison with those in spoken languages. Generally speaking, scholars interested in sign language acquisition adopt an approach to language that attempts to thoroughly distinguish between linguistic and non-linguistic components. In these studies, competence is understood as the implicit knowledge of language (Marschark, Schick & Spencer, 2006:4). It appears also that there are only few studies that concentrate on the discourse competence or communicative competence in signed language related to issues of acquisition. Insights on this behalf are rather provided by studies emanating from scholars that are interested more generally in interaction and communication of DHH children (focusing on sign and spoken language, cf. 2.3.)

2.2 Competence in spoken language

Deaf and hard-of-hearing persons always live in a society where the majority community is hearing. Thus, it is commonly assumed that developing spoken language skills is necessary to enhance the person’s chances to have access to “*educational, cultural, social, and career opportunities*” (Blamey, 2003:232). For a lot of hearing parents of DHH children, this goes along with providing their children with cochlear implants, raising hopes that the deaf child becomes a proficient spoken language user.

The development of spoken language skills by profoundly deaf children is regularly delayed. According to Geers (2006), they develop spoken language at about half of the rate of hearing children (citing Blamey, Sarant, Paatsch, Barry, Wales & Wright, 2001). Generally, the most important language delays in deaf children are seen in restricted vocabulary and difficulties in spoken language morphosyntax (Gale & Schick, 2009). It is assumed that neonatal hearing screening and technological advances pertaining especially to cochlear implantation have led to an increasing number of ‘success stories’ of deaf children who achieve spoken language competence on par with that of hearing normally developing children. Nevertheless, there is still great variation among individuals with respect to their success in acquiring spoken language skills. Tackling the underlying reasons for this variation is one of the most studied issues to date. According to Szagun & Stumper “*duration of implant use, age at implantation, quality of preimplant hearing, communication mode, and parents’ educational status*” have been shown to be factors that contribute to these inter-individual variations (2012:1640). Among these factors, especially age of implantation and education method are closely tied to ethical and moral issues, provoking much debate among researchers, practitioners as well as individuals with hearing loss themselves. In what follows I briefly report on the first issue by citing some important research in a non-exhaustive manner. The issue of education methods is detailed in chapter IV section 2.1.).

Studies on the age of implantation attempt to show whether children who are implanted early in childhood have better chances to develop age-appropriate spoken language skills. In Switzerland, while in the 1990s children were implanted between 3 and 12 years, since 2008 the majority of implantations are made on children below age 3 (cf. CI-Register, version 3.3.2011). The findings on the effect that age at implantation has on spoken language achievement are contradictory and not easily interpretable. Evidence of different hypotheses exist: receiving an implant before or after 5 results in significant differences; receiving an implant before or after 3 results in significant differences; or not differences. Geers, Nicholas & Sedey (2003) for example report that the age of implantation did not reveal itself as a factor explaining language outcome between children implanted at 2 or 3 years of age and children receiving an implant between 4 or 5 years (n=181). Later, and with different age groups, Nicholas & Geers (2007) did find an effect of age of implantation in combination with the residual hearing of the child before the implant. Their findings suggest that children implanted before 24 months achieved language performance that is comparable to that of hearing children, while children implanted after 24 months did not (n=76). The reason may be that after 24 months the language delay is too great to be caught up. Considered together, these two studies may suggest that age of implantation has a positive effect on language development when it concerns the lifespan up to two or three years. By contrast, passed 3 years of age, an earlier age of implantation may not have a significant effect on the language performance. While these results may suggest that the earlier an implantation occurs the better it is, there are also findings that counter this tendency. A case in point is Szagun & Stumper’s (2012) results of a study on 25 children, implanted between 6 and 42 months. They observe that early implantation was associated with marked progress early on, but that children who were implanted later caught up this difference later. Hence, they conclude that it is not the age of implantation but the duration of the implant use that is a determinant for language development. Additionally, the authors underline that specific patterns in child-directed speech (high mean length of utterance, MLU, and high amount of expansions, i.e. repetitions of a child’s erroneous utterance involving a correction) of the mothers had positive

influence on the child's linguistic progress (grammar and vocabulary). With respect to age of implantation, it is also reported that the effects of an earlier implantation are not straightforward in the sense that not all language skills seem to be directly affected (e.g. Geers, 2006 reports that age of implantation has an effect on receptive syntax and expressive vocabulary, but not on productive syntax and receptive vocabulary) and that the benefit of earlier implantation may have an influence on the linguistic growth pattern rather than the ultimate attainment of grammar and vocabulary.

Research on spoken language acquisition by deaf and hard-of-hearing children using hearing aids or cochlear implants is to a great extent concerned with the development of skills related to speech and hearing (production and perception of spoken language; Preisler, Tvingstedt & Ahlström, 2002) and their linguistic competence. On the methodological level, measurement of the children's speech and hearing skills as well as their linguistic competence in spoken language is mainly carried out in laboratory settings, which are necessarily different from "*the natural life of young children in their families or in their pre-school/school setting with many different adults and peers*" (Preisler, 2001:16). However, as e.g. Neuman, Wroblewski, Hajicek & Rubinstein (2012) highlight, the speech perception in real interactions in classrooms may differ greatly from how implanted children perceive speech in sound-treated test rooms where clinical evaluation is normally administered. Furthermore, the assessment of children's linguistic competence is a challenging endeavor because often it is not feasible to strictly differentiate between the child's physical speech and hearing skills and his cognitive language skills (Blamey, 2003). Thus, when children are assessed on language production or understanding, their ability of perceiving speech is necessarily involved as well. Furthermore, assessing the children on the basis of produced spoken language without taking into account any spatio-visual features entails that the test simulates a situation that is far from natural. Such tests penalize those children with more difficulty in hearing and speaking (the physical dimension of language); to prevent such a penalizing effect, some researchers propose including sign language into the assessment of those children educated in *total communication* frameworks⁵, as well as lipreading for those children educated in oral communication frameworks (cf. Geers, 2006). This is in line with Szagun (2007), suggesting that visual input of spoken language is a natural component of the spoken language and is important for the deaf and the hearing child's language development (this becomes evident in the delayed language development of blind children due to inaccess to the visual input of interaction).

Just as in signed language research (section 2.1.), a vast majority of acquisitional studies on spoken language is dedicated to the DHH children's knowledge of rules relating to phonology, morphology and syntax, while competence relating to discourse and conversation has attracted less attention. Moreover, the ability of DHH children to more generally participate in and manage interaction remains an under-explored area. Participation in interaction and therefore communication competence is however fundamental for the child's integration in society and formation of identity. In the next section I discuss some important work that has already been done in this area, and provide an overview of the most stated challenges and difficulties the DHH children are faced with.

⁵ Total communication refers to a method in deaf education that advocates for the use of all types of resources, including spoken and signed language as well as non-verbal resources. Initially, the notion was introduced by Mead (1964; cited by Hougaard & Hougaard, 2009).

2.3 Language use for communicative purposes

Studies that focused on the competence of participants to *use language* for communicative purposes can be divided into two groups. A first group of studies relates to the acquisition and/or assessment of competence related to discourse organization and pragmatics. For instance, in their study of the development of speech and language skills of two twins, one fitted with a cochlear implant, Bell, Hickson, Woodyatt & Dornan (2001) included a coding scheme of the children's speech acts (pragmatic competence) and considered their discourse competence in terms of complex syntax (subordination, pronominal reference). The authors found that while both twins acquired language competence comparable of that of hearing children, some difficulties in discourse and pragmatics remained present (e.g. problem with complex syntax and provision of inadequate or ambiguous information). That study represented an endeavor to sketch competence that goes beyond the grammatical knowledge, but it was not directly concerned with how the DHH actively engage in conversation. More recently, Lichtig, Couto, Mecca, Hartley, Wirz & Woll (2011), on the basis of semi-experimental interaction and assessment tasks, propose an assessment protocol that accounts for the children's communication regardless of the resource they use - sign, spoken language or gesture. The protocol consists of:

- Establishment of a pragmatic profile on the basis of a play-interaction and parents' reports. The measure consists in the coding of the presence/absence of pragmatic functions as e.g. requesting, providing information, request for clarification.
- The analysis of a mean length of longest utterances assessed within 20 minutes of play-interaction.
- Assessment of the child's communication. This measure is based on a naming task where children are asked to label objects on pictures (coded as correct/incorrect), a second task where they had to retell a story (coding of modality and presence/absence of the steps of the story), and finally on reports provided by parents and by the speech & language therapists on the child's functional communication.
- Assessment of style and efficacy of communication on the basis of an interaction task between the mother and the child, where the mother had to request specific actions from their children (e.g. "put the small block under the big one"; *ibid.*:226). The results were coded in terms of successful/unsuccessful.

Lichtig et al.'s (2011) protocol provides an assessment tool that fundamentally takes into the account the DHH children's overall competence by emphasizing the importance of assessing deaf children's competence independently of a communication modality. Hence, the authors consider sign language, spoken language and gestural participation on an equal level (cf. also below).

A second group of studies is concerned with looking more precisely at how DHH children actively participate in interaction. Most of these studies have been conducted within semi-experimental frameworks (e.g. Connor, 2006; Gaustad, 1988; Lloyd, Lieven & Arnold, 2001; Weisel, Most & Efron, 2005) and in a non-longitudinal perspective (but see Van den Bogaerde, 2000; Klatter-Folmer et al., 2006). Van den Bogaerde (2000) for example showed the interrelation between deaf mother's input and deaf and hearing children's output with regard to attention-getting and attention-giving, as well as sign and word combinations. Within a longitudinal investigation on six bilingual children's language

development, Klatter-Folmer et al. (2006) focused (among other things) on the children's development of participation in interaction. The children's participation in semi-structured conversations (in a room with toys and books) with either a hearing or a deaf adult was measured in terms of the total number of utterances of children compared to that of adults. Participation is therefore approached in strong relation to linguistic complexity. The findings suggest that there is a slight increase in the participation over 3 years, both in interaction with hearing and with deaf adults. Generally however, the participation is rather low. The authors hypothesize that this is due to the adults' estimation of low competence of the children, resulting in an increased verbosity of the adults. The result may also be related to the authors' measure of participation, as they took neither non-linguistic utterances nor 'passive' participation into account (by non-verbal displays of attention and engagement). It is noteworthy however that the authors measured the children's participation not only in one language but coded the utterances for spoken and sign language (Dutch and sign language of the Netherlands) as well as mixed contributions. This inclusion may provide a more encompassing picture of the children's competence to communicate than what would be found when one is constrained only to spoken (or signed) language. Because of their exclusion of non-linguistic utterances however, it may be assumed that the use of gesture has not been included neither. As mentioned in section 2.2. however, gesture is an integral part of deaf children's repertoire for engaging in interaction. Some studies advocate therefore accounting for children's competence by including also gestural resources. For instance, Lloyd, Lieven & Arnold (2001) compared how 8-years old DHH children participate in semi-experimental spoken interaction (play activities) with hearing peers and compared this participation with interactions between the DHH children and their teachers (on the same task). The children of Lloyd et al. (ibid.) are not reported to be bilingual and the interaction unfolds in spoken interaction; but the authors included nonverbal communicative acts. The same procedure has been advocated by several researches studying communication of bilingual participants (e.g. Lichtig et al. quoted above; cf. also chapter IV, section 1). A great number of studies concerned with participation of DHH persons in interaction have concentrated on their ability to request clarification when they encounter problems in understanding (Caissie & Wilson, 1995; Jeanes, Nienhuys & Rickards, 2000; Ibertsson et al., 2008). This line of research has been further explored by conversation analysts, concentrating however primarily on adults with acquired hearing loss⁶ (e.g. Lind et al., 2004, Skelt, 2006, Pajo, 2012). All in all, findings of studies on clarification requests converge towards the idea that DHH not only are confronted with a great number of understanding and communication problems, but that the resolution of these problems tends to be long and labourous. Studies pertaining to clarification requests are discussed in more detail in chapter III (section 4).

In contrast to extensive research on deaf and hard-of-hearing children's skills in a spoken language as well as their hearing, understanding and speaking performance in laboratory situations, only a small number of studies has examined how interaction with or among deaf and hard-of-hearing children or adolescents is organized in real-life settings (but see Keating & Mirus, 2003; Hjulstad & Kristoffersen, 2007; Hyde, Ohna & Hjulstadt, 2005; Vonen, 2007). Being able to (better) hear and speak (by means of hearing aids and cochlear implants as well as speech therapy) as well as knowing a spoken language in terms of its grammar and lexicon is not a sufficient condition for being able to participate in social

⁶ Adults with acquired hearing loss have learnt a spoken language as a first language. The problem they encounter in interaction are therefore tied to issues of hearing and not of language.

interaction (Hymes, 1972; Bell et al., 2001). For hard-of-hearing participants, this is basically tied to the following two characteristics of interaction in non-experimental situations. First, in naturally occurring interaction, participants have to deal with the situational dimensions as for example surrounding noise, reverberation effects or constrained visual access to co-participants. Whereas they may perform well in experimental situations, their auditory capacity may be reduced in real-life interaction. Second, interacting entails accomplishing social actions such as taking turns at talk, opening and closing interactional sequences, repairing problems in hearing and understanding as well as agreeing or disagreeing with co-participants. The accomplishment of these interactional tasks however is by no means guaranteed by advanced lexical and grammatical knowledge of spoken language.

As the previous overview suggests, a vast majority of studies on communication of DHH participants is based on semi-experimental interaction while real-life interaction remains largely under-explored. Some studies, looking at DHHs' real-life participation in classroom interaction, have provided preliminary insight into some important challenges the DHHs encounter. Their findings pertain essentially to language choice, to the initiation and maintenance of peer interaction, or the characteristics of the classroom environment. These studies constitute an important basis for further research on DHHs' competence for participation; they are detailed in chapter IV (section 2.2.). A better understanding of the DHH children's ability to communicate or more precisely to engage in interaction is crucial because it is in interaction that the children engage in learning, in building of relationships and finally identity building. However, on the one hand we still know very little of the DHH's communicative competence, and on the other hand results from questionnaires or qualitative interviews point to the fact that DHH students encounter much difficulty in interaction (Audeoud, 2012; Preisler, Tvingstedt & Ahlström, 2005; Kurschatke, 2001a, 2001b; Stinson & Antia, 1999 cited by Silvestre, Ramspott & Paretto, 2006). What appears to be still missing however is an approach to the DHH students' participation that (a) is focusing on how language unfolds in naturally occurring interaction, (b) adopts a more interactive and collaborative perspective on communication, (c) is taking into account linguistic and non-linguistic resources as well as engagement displays such as body and posture, and (d) is studying participation independently from linguistic assessments.

For improving our understanding of how interaction with or among hard-of-hearing participants is organized, in-depth studies of students' participation in authentic interaction are necessary. By means of this, scholars of linguistics, education and speech-and-hearing therapy may be able to sketch a detailed picture of the deaf and hard-of-hearing persons' ability of using spoken and signed language and other semiotic resources for participating in social interactions with hearing, hard-of-hearing or deaf co-participants. Such an understanding of hard-of-hearings' competence for participating in interaction is a significant undertaking because it is this participation that builds the basis for becoming a competent participant to interaction, and hence becoming a member of a specific social group (Atkinson & Heritage, 1984).

3 Facets of competence in social perspectives

This chapter is a review of how competence has been approached within different epistemological and methodological frameworks. It provides the reader with the necessary arguments for understanding how I understand competence and especially interactional competence in this study.

3.1 *The study of communicative competence*

In the rather young research field of linguistics, Chomsky's (1965) ascription of grammatical competence as the only valuable object of linguistic theory gave rise to lively reactions by those linguists who had a particular interest in sociological or ethnological aspects of language. First and foremost Dell Hymes - for example 1971, 1972, 1984, 1992. Chomsky's research program aimed at explaining the essence of human language and its difference from communication systems of other species. In this endeavor Chomsky differentiated between competence and performance (Chomsky, 1965). Competence refers to an abstract, innate knowledge, a universal grammar that enables individuals to recognize, produce and understand an unlimited number of grammatically correct phrases. Performance refers to actual language output, when a real-life speaker makes use of his competence but where psychological factors such as memory limitations or inattention interfere with the outcome. A fundamental issue for Chomsky has been how it is possible that children learn perfectly a language despite an incomplete and degenerative input (*Plato's Problem*; cf. for example Chomsky, 1988). For explaining this, Chomsky postulated the existence of an innate *language acquisition device* (LAD; 1965) that enables each child to learn a language perfectly and in record time. This language acquisition device has been described as an innate competence (later as universal grammar), which implies all rules that become operational in a language on the basis of a mere exposure to linguistic input in the child's environment.

Whereas Chomsky was interested in competence as the basis for a linguistic theory, other linguists such as Hymes as well as scholars from second language teaching, as for example Savignon (1972), assumed that the examination of language must take as a starting point 'language in use'. To a certain extent however, Hymes gives credit to Chomsky's conception of language acquisition as comparable to the growing of an organ (Chomsky, 1997) rather than something the child has laboriously to acquire. In Chomsky's view, acquisition is fundamentally made possible through an innate structure and not, as assumed from a behaviorist perspective on language acquisition that was predominating in the 1950s, by conditioning through the environment. Hence, in contrast to the prevailing behaviorist approach to language acquisition at that time, the nativist approach allowed for a renewed perspective on children as it conceived them as being on a par with each other at the beginning of their lives. The theory thereby "*does away with the notion of genetic racial inferiority of any particular group, or sub-group*" (Hymes, 1971:4). On the other hand however, Hymes criticizes Chomsky's theory of competence for the shortcoming of not being able to account for what children really produce when they use language. Hymes' criticism partially arose from his attempt to deal with language variations among children from different socio-economic backgrounds, or as he puts it "*language problems of disadvantaged children*" (1972:269). Based on the assumption that each child is endowed with the same faculty for learning a language, differences among the individual children's language can only be explained on the basis of studies that pay special attention to the sociocultural dimension as influencing language development and

language use (1972:271). Thus, Hymes defended the view that linguistic theories cannot limit themselves to the abstract modelling of an innate and cognitive competence but that systematic linguistic analyses should be broadened and include a *competence for use* (1971) or *communicative competence* (1972). Note that at first sight *competence for use* may be considered under the Chomskyan concept of performance. However, Hymes introduced a clear delimitation because Chomsky's notion of performance refers to psychological factors that influence the language production (such as memory limitations), but Hymes' interest laid in socio-cultural dimensions that can account for language use and variation (Hymes, 1971:5). The importance of treating this dimension also as 'competence' and of investigating *competence for use* are emphasized by the observation that knowledge of grammaticality is not sufficient for individuals to present themselves as competent speakers. Even more radically Hymes states:

Consider now a child with just that [grammatical] ability. A child, who might produce any sentence whatever - such a child would be likely to be institutionalized: even more so if not only sentences, but also speech or silence was random, unpredictable. For that matter, a person who chooses occasions and sentences suitably, but is master only of fully grammatical sentences, is at best a bit odd. Some occasions call for being appropriately ungrammatical. (Hymes, 1972:277)

Thus, knowledge of grammatical norms is not sufficient for being a competent speaker, as it is the knowledge of usage norms (Hymes, 1984:47) that enables individuals to speak not only correctly but also appropriately. In this sense, communicative competence consists essentially in knowing "*when to speak, when not, and as to what to talk about with whom, when, where, in what manner*" (1972:277). For example, knowing when to be silent or how to design a question appropriately is part of a person's communicative competence. A direct consequence from this definition of competence is that a piece of language must not only be judged with respect to its *grammaticality* (referring to competence) and *acceptability* (referring to performance). In contrast to this, Hymes (1971:12-16; 1972:281) proposes that four different judgments must be made:

- Whether and to what extent it is formally possible (judgement of grammaticality relating to the linguistic dimension of language)
- Whether and to what extent it is feasible (psycholinguistic dimension)
- Whether and to what extent it is appropriate⁷ (judgement of acceptability relating to the sociocultural dimension of language)
- Whether and to what extent it is actually performed (probabilistic dimension)

Hymes' ideas emerged from work within the field of L1 development and use, but it has been very well received and further elaborated in the field of second language acquisition and teaching. Further developments of the communicative approach aimed at a theorization of Hymes' ideas for L2 instruction and have been done by Canale & Swain (1980), Celce-Murcia, Dornyei & Thurrell (1995), Celce-Murcia (2007) as well as Savignon (1983) and for language assessment by Canale (1983) and Canale & Swain

⁷ Note at this point that a piece of language is considered *appropriate* if it is adequate, happy or successful within a specific context of appearance (Hymes, 1972:281).

(1980). These researchers attempt to theorize Hymes' ideas by proposing models that could serve as a basis for second language teaching syllabuses and assessments that would focus not only on the grammar and lexicon but also on communicative competence. These models were characterized by a conception of competence as being built of different subcompetences. Canale (1983), on the basis of Canale & Swain (1980), proposed a distinction between grammatical, sociolinguistic, strategic and discourse competence. Thereafter, Celce-Murcia et al. (1995) reconsidered these models and proposed splitting the sociolinguistic competence into a *sociocultural* and an *actional competence*. While the first refers to the competence of using language appropriate to socio-cultural context, hence to the knowledge of socio-cultural rules and norms, the second is more directly concerned with “*matching actional intent with linguistic form*” (Celce-Murcia et al., 1995:17) and relates to the knowledge of linguistic resources that can be used and combined for accomplishment of specific speech acts. It is also worth mentioning that the authors explicitly refer both to turn-taking and to repair as features of communicative competence; they attribute turn-taking to discourse competence and repair to strategic competence.

The insights from these developments in the field of second language research have also inspired the *American Council on the Teaching of Foreign Languages* (henceforth ACTFL), whose aim is to enable clients such as diplomats and officials to become ‘international communicators’. The ACTFL established official guidelines for the teaching and assessment of adult second language learners (ACTFL, 1986; *Oral Proficiency Interview*, OPI). These guidelines explicitly address language teachers and aim to support them in teaching and assessing the students’ ability to “*function effectively in the language in real-life contexts*” (Byrnes, 1984:197, cited by Kramsch, 1986:366). The European counterpart to these undertakings is represented by the common scales that categorize a speaker’s competence in second language use provided by the *Common European Framework of Reference for Languages*, or CEFR (Europract, 2001).

In sum, the conceptual shift from the study of grammatical to communicative competence, initiated by and large by Hymes in the early 1970s, has engendered much fruitful research on language use and competence as well as on the teaching and assessment of this competence. Nevertheless, Hymes’ notion of communicative competence and the subsequent modelling and operationalizing in the field of second language acquisition have also been subject to several critiques, emanating essentially from socio-cultural and interactionist approaches to learning. Scholars working within distinct frameworks have contributed to critical discussions of communicative competence and on possible reconsiderations of what a language learner’s competence for communicating in a second language entails. These critiques and the further reconsiderations of communicative competence are what I will turn to in the next sections.

3.2 Towards a holistic definition of bilingualism: plurilingual competence

A major critique that has been made of the notion of communicative competence and its further modelling is that this notion still conveys a picture of the second language speaker’s competence as being segmented, i.e. as consisting in a linguistic and a communicative competence in L1 to which is added a second competence in L2. This modelling of communicative competence based on Hymes’ notion involves essentially a *monolingual view of bilingualism*, in which learning a second language is assumed to be equal to adding the competence of a further language to the L1 (Coste, Moore & Zarate,

2009[1997]). Within such a perspective, competence is understood in terms of reaching specific developmental stages in one language (e.g. Pekarek Doehler, 2009). In contrast to this additive view of second language learning, work evolving from a rapprochement of studies in bilingualism, L2 acquisition and language contact started to advocate for a holistic approach to bilingualism since the 1980s. Scholars whose interest lay in the language development and use of languages by immigrants, demonstrate and emphasize the benefits of the bringing together of three strands of research: bilingualism, second language acquisition and language contact (Vasseur, 2005; Py, 2007; Moore & Gajo, 2009). Especially the work by Py and Lüdi (e.g. Lüdi & Py, 1986) calls into question the predominating view of bilinguals as being two perfect monolingual speakers in one person (within the structural framework advocated by Bloomfield, 1933). Contrary to this, according to Lüdi & Py (1986:70), the bilingual competence is a unique and original competence that is by no means reducible to the juxtaposition of an L2 to an extant L1. Basically, this conceptual shift from the bilingual as a perfectly competent ideal speaker towards a bilingual as a user of a language other than his L1, allowed considering every language learner as a bilingual (Py, 1991, 1997). This bilingual competence comprises also knowledge about code-switches, code-mixing and translations (cf. also Coste, 2002; Pekarek, 1999b).

Coste, Moore & Zarate (1997) have further elaborated this conception of bilingual competence with the notion of *plurilingual and pluricultural competence*. This term was proposed to circumvent the inherent view of *bi*-lingual competence as consisting of a balanced and perfect competence in two languages. The use of *pluri* has the advantage of referring to the fact that the competence is partial and perhaps unbalanced but functional and creative for the needs of communication. A plurilingual competence is a competence for communication and interaction, as expressed in the translation of a definition below:

Plurilingual and pluricultural competence refers to the ability to use languages for the purposes of communication and to take part in intercultural interaction, where a person, viewed as a social actor has proficiency, of varying degrees, in several languages and experience of several cultures. This is not seen as the superposition or juxtaposition of distinct competences, but rather as the existence of a complex or even composite competence on which the social actor may draw. (Coste, Moore & Zarate, English version, 1997:12)⁸

In contrast to the communicative competence, the plurilingual and pluricultural competence highlights that this competence is partial and unbalanced, but single and unique because it is the (momentary) result of a life-long individual experience of language and interaction in a diversity of contexts (e.g. Lüdi & Py, 2009). Additionally, while the communicative competence framework adopts a view on competence as consisting in the juxtaposition of two different competences in L1 and in L2, the plurilingual and pluricultural competence develops a holistic vision where resources that make up the social actors' competence are fundamentally intertwined and cannot be divided from each other (Moore & Gajo, 2009). The paradigmatic shift to plurilingual competence suggested by Coste and colleagues (1997) has provided an important basis for the CEFR, which explicitly adopts their definition of competence in its introduction (GER, 2001:12). CEFR is an empirically based description of diverse detailed scales that refer to learners' competence in terms of what they are able to do with a specific language (cf. for

⁸ See Moore & Gajo (2009) for a discussion on terminology; in French definition, the term 'plurilingual' refers sometimes to 'plurilingue' and sometimes to 'plurielle' (engl. plural). This difference is not taken into account in English versions.

example Schneider, 2005). The CEFR proposes an actional approach to language that conceives language competence as related to what a second language speaker can accomplish with language and consequently as going beyond the abstract knowledge of grammar and lexicon. According to the CEFR, communicative competence is composed of *linguistic competence* (phonological, lexical and grammatical competence), *sociolinguistic competence* (politeness conventions, register, varieties) and *pragmatic competence* (discourse competence as e.g. coherence or information structure; and functional competence such as e.g. knowledge of how to establish mutual attention or manage turn-taking) (GER, 2001:110-129). These competencies (as well as ‘general competencies’, involving for example knowledge of cultural eating habits or humour, or personal motivation, cognitive style or self confidence) are necessary for the accomplishment of diverse communicative activities within the following four subgroups:

- reception activities as e.g. understanding a conversation among natives or understanding a written instruction,
- production activities as e.g. speaking in front of an audience or writing a story,
- interaction activities as e.g. having an informal discussion or doing an interview,
- language mediation as e.g. translating a menu (GER, 2001:62-92).

For some of these activities the GER has provided scales that describe in short ‘can-do’ statements what a language learner is able to deal with at a particular level of competence. The scales do not include specification about what kind of specific means the second language speaker uses (e.g. specific morpho-syntactical constructions), nor how well he ‘does’ something. The quality assessment is worked out in separate scales of the three sub-competences of communicative competence (linguistic, sociolinguistic and pragmatic). In line with other scales in a communicative approach, the CEFR assesses for example range of resources, accuracy or fluency.

Despite the endeavour to adopt a holistic approach to bilingualism, the monolingual view of bilingual competence appears to be so deeply rooted in common representations on language learning, that the concrete operationalizing of plurilingual competence remains a challenge. In this regard, Lüdi (2006) draws our attention to the fact that, for example, current measures of the achievement of a plurilingual competence, as *The European Indicator of language competence* from the European Commission, still embodies an additive and monolingual view on plurilingualism⁹. A concrete implementation of a holistic conception of plurilingual competence is thus apparently still lacking. Such an implementation would first and foremost imply designing assessment that does not measure plurilingual competence in comparison to a unilingual competence (as it has been defended by several researchers, e.g. Butler & Hakuta, 2004; Valdes & Figueroa, 1994). Against the background of these difficulties, some scholars have proposed abandoning the notion of competence and replacing it with the concept of ‘repertoire’ in the sense of Gumperz or with the term ‘resources’ (e.g. Py, 2007; Lüdi & Py, 2009). Within such a perspective, resources would be seen as part of an “*indefinite and open set of grammatical and syntactic (and of course mimogestual) microsystems, partially stabilised and available to the speaker as well as the interlocutor.*” (Lüdi & Py, 2009:157).

⁹ Note also that interaction competence is not assessed within this assessment, but only reading, listening, writing and speaking (http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11083_en.htm; consulted 29 january 2013).

The next section provides an overview of the socio-interactional approach to (second) language learning that implies an understanding of competence as being fundamentally contextual and socioculturally shaped.

3.3 A socio-interactional approach to competence inspired by sociocultural theory

A decontextualized and individualistic stance on competence is put into question within socio-interactional approaches to language learning. Researchers working within a socio-interactional framework have been largely inspired by work emanating from sociocultural theory, but they have also adopted and combined ideas from interlanguage studies and ethnomethodological Conversation Analysis (discursive activities are situated and reciprocal) (cf. Pekarek Doehler, 2000 for an overview). To understand the import of sociocultural theory for the socio-interactional approach, the remainder of this section presents some fundamental ideas of sociocultural theory for the field of second language acquisition.

Sociocultural theory (henceforth SCT) is grounded in the Vygotskian body of thought that is concerned with the development of higher mental functions such as voluntary attention, calculating, planning, problem solving, as well as learning/memorizing. A most basic postulate is that “*human mental functioning is fundamentally a mediated process*” (Lantolf & Thorne, 2006:201). This mediation is basically accomplished by language as a most pervasive and most powerful semiotic system (Lantolf & Appel, 1994:22). Sociocultural theorists postulate that the developmental process is fundamentally built on interaction with the environment, either with material or with individuals. More concretely, development is made possible through mediation, this means through the use of physical or symbolic tools (abacus, pen or arithmetic system and language) that “*serve as a buffer between the person and the environment and act to mediate the relationship between the individual and the social-material world*” (Lantolf & Thorne, 2006:202-203) or between the individual and its mental activities (Lantolf, 2000). The development of cognitive processes is characterized by a change in the form of mediation or in the more or less sophisticated version of a same form of mediation (Wertsch, 1985). Such transformation of how the individuals’ mental and social activities are regulated can be examined by means of three stages of mediation: cognitive processes are first mediated in form of object-regulation; then in form of other-regulation and finally cognitive processes are self-regulated. The learning of arithmetic is a good example: for arithmetic procedures, the child first makes use of a physical mediational tool as for example the abacus (object-regulation), then he is able to calculate with help of an expert who functions as a ‘human mediator’ and who also introduces language as a mediational tool (Kozulin, 2003; other-regulation is also called scaffolding), and finally the child can do it individually and without any external tool (self-regulation; mediational tool is private speech or inner speech¹⁰). The development (of higher mental functions) is thus conceived as appearing twice: first on a social, interpersonal plane and only in a second step on a psychological, intrapersonal plane¹¹ (Lantolf, 2000).

¹⁰ Another example is the development of intentional memory, as shown in Leontev’s (1994) Forbidden Colour Task. The self-regulation consists in not using an external tool as a ‘pense-bête’, but to rely on the intentional memory, i.e. inner speech (cited in Lantolf & Poehner, 2008).

¹¹ cf. Rogoff (1998) on the terminology between plane and level.

In SCT, the development of higher mental functions is conceived as intrinsically rooted in social interaction and especially in the interactional process of other-regulation. The remainder of this section looks at the consequences this perspective has on the notion of competence. Mental functions and therefore cognition have evolved on the grounds of different types of mediation and the related use of symbolic tools. As these symbolic tools are shaped and reshaped by the members of a community (Hall, 1995), they are fundamentally social and leave in turn a sociocultural footprint on the mental functioning and cognition (Wertsch, 1985). Against the background of such a view on the origins of mental functioning, cognition cannot be understood as individual and isolated. To the contrary, mental activities and therefore cognition are viewed as being situated. They are situated within a sociocultural context that has shaped, by means of the mediational tools, the very nature of cognition. Thus, each (mental or social) activity is socio-culturally-loaded because the tools for mediation, be it a language or a physical tool like an abacus, are always tools that are themselves the result of socio-cultural development. Consequently, cognitive processes are always socio-historically shaped to some extent, or, as Mondada & Pekarek Doehler (2000) put it:

« in a Vygotskian approach, the inherent sociocultural situatedness of the mediational means used in interpsychological functioning entails that mental functioning in the individual is inherently tied to sociocultural settings as well. » (ibid.:156)

This sociocultural situatedness also means that competencies are not constant and transferable from one situation to the other, but are context-sensitive and locally constructed. Within psychological and sociocultural studies, this local and context-sensitive nature of mental activities has mainly been explained as pertaining to members' different understandings of a situation (its participants and interactional conventions) and the different goals they attribute to a situation (Wertsch, Minick & Arns, 1984; cited by Lantolf, 2000:9); Mondada & Pekarek Doehler, 2004; Pekarek Doehler, 2002; Perret-Clermont, Perret & Bell, 1991). This specific understanding will shape and co-define the activity and therefore also the cognitive processes that will be involved (Donato, 1994; Rogoff, 1995; Pekarek Doehler, 2005). The example given by Wertsch and colleagues (1984) reports the way that urban teachers or rural mothers understand a task (on the basis of their socio-cultural background) and thereby engage in two quite different activities. The dyads were asked to copy a depicted situation of a barnyard with figurines. It appeared that the rural mothers engage in a directive mediation style that aimed at an error-free performance activity, while the teachers were less directive, gave strategic hints and let the children make errors. This in turn implies that the higher mental functions related to these activities are different, and therefore cognitive processes are situated but not pre-given by the task (here, puzzle-copying) for example. This example shows how cognition is socially situated in terms of "*sociocultural definition of the situation*" (Mondada & Pekarek Doehler, 2004:504). The difference between the rural mothers and the urban caregivers has been explained by the divergent motives that guide their activities: while rural mothers are dependent on the sales of error-free manufactured objects and are therefore driven by economical considerations, urban caregivers' motives were solely educational. This example illustrates that the cognitive processes and the demonstrated competence are situated in the sense that they are emergent from the individuals' sociocultural background and their interpretation of the situation.

A further important dimension of cognition's situatedness refers to the fact that every cognitive process such as for example learning or planning is always situated either within a social interaction with other

members and/or within interaction with physical artifacts from the environment. This means that cognitive processes are also socially situated “*in the local contingencies of everyday actions*” (ibid.). Sociocultural scholars as for example Hall (1993, 1995), Rogoff (e.g. 1998; Rogoff, Moore, Najafi, Exter, Correa-Chavez & Solis, 2007) or Lave & Wenger (1991) as well as researchers who draw on a sociocultural and an ethnomethodological approach (Pekarek Doehler, 2002, 2005, 2006a; Mondada & Pekarek Doehler, 2004) have emphasized the “*dynamic nature of both individual participation and community traditions*” (Rogoff, Moore, Najafi, Dexter, Correa-Chavez & Solis, 2007:491). But while the analytical focus of sociocultural researchers has put more weight on the sociocultural situatedness and on the sociohistorical forces that influence the situated use of resources, conversation analysts and ethnomethodologists have concentrated to a greater extent on the very local construction of interaction and participation and the shared dimension of competence. The studies on plurilingual competence (section 3.2.) made an important contribution to the field of L2 acquisition by critically discussing the segmented view of competence. They have however perpetuated an understanding of competence as being basically an individual attribute of the speaker (Pekarek Doehler, 2005, 2006a), entailing a private knowledge of grammatical and sociolinguistic rules that participants can put to use in real-life settings. Intimately linked to this is the idea that this individual competence is decontextualized and equally available to the speaker across different situations. Such an individualistic and decontextualized approach to competence becomes also apparent in the CEFR scales of the interaction activities, for example in the fluency scale (GER, 2001:129), which defines different types of fluency for each language level. The descriptors preview for example that pauses bear testimony of a minor competence whereas an absence of hesitation and pauses relate to a high competence. Moreover, it is suggested that pauses for word searches are a sign of lower competence (A1), but at the same time pauses are not problematic in high-level competence when they are related to a search of ‘precise expression’ or an example (C2). Within these descriptors of temporality and fluency, the learner is viewed as a monological speaker who produces language in an interactional vacuum, i.e. that he actualizes a set of individual resources for conveying information without taking into account his co-participant. This sharply contrasts with the view of interaction as being fundamentally reciprocal and collaborative. Within this view, pauses and hesitations can be described as interactional resources that participants deploy for dealing with specific local interactional tasks. Goodwin (1980) for example showed that a speaker uses hesitation and pauses at turn beginnings as a means of establishing mutual gaze with the recipient (cf. also Goodwin, 1979, 1980; Lerner, 1993).

Against the background of this idea that learning and cognitive processes in general are not individual but collaboratively and co-responsibly elaborated within a specific moment of social interaction, interactionist scholars have raised the issue of the inappropriateness of attributing competence to one participant (e.g. De Pietro, 2002; Vasseur, 2002; cf. also Young, 2003). Competence is basically deployed in social interaction, characterized by collaboration and reciprocity, where it cannot be attributed to one individual because A’s competence is co-constructed by B’s competence (and B can be another peer or the examiner). This brings with it a specific two-folded problem for the assessment of competence. On the one hand, the assessment situation for communication or interactional competence is a social interaction (test, interview) where tester and tested person collaboratively construct the situation. As explained above, this collaboration means that competence can hardly be ascribed to one or the other

participant (cf. for example He & Young, 1998; Jacoby & McNamara, 1999; Maynard & Marlaire, 1992; Vasseur, 2002, de Pietro, 2002). On the other hand, the test situation is highly artificial in the sense that the tester will refrain from using supportive resources, which he would normally deploy in social interaction as a means of accomplishing with the learner what the learner is not able to do individually. To quell this mediational support is to put the tested person in a situation that is not commonly found in real-life interaction. In this context, one would have to expect from the learner the unexpected. In contrast to this, sociocultural scholars have worked out *dynamic assessment* where the teacher takes the role of a mediator (e.g. Poehner, 2008).

In Europe, the socio-interactional framework combining the research strands SLA, bilingualism and language contact has been facilitated by the analytical shift in SLA from the examination of *products* of acquisition towards the study of its *processes*. Within these studies, an understanding of interaction as the very place of acquisition has become apparent, based on the assumption that interaction constitutes the locus where cognitive and communicative processes converge (cf. Bange, 1992 for conditions of acquisition in communication; Pekarek, 1999a; Pekarek Doehler, 2000). Such convergence is observable in particular conversation schemas as for example in *potentially acquisitional sequences* ('séquences potentiellement acquisitionnelles', SPA by De Pietro, Matthey & Py, 1989; cf. also Vasseur, 1991), as well as in Bange's *bifocalisation* (1992). The common denominator of these concepts is that under specific conditions, interaction can become an opportunity for learning. Characteristic of these conversational schemas are reciprocal processes: interlocutors attempt to establish mutual understanding through a communicative process and thereby drive the interaction further, but also language acquisition can take place when lexical or grammatical aspects are negotiated in interaction, precisely for driving interaction further. Basically, these schemas are potential places of acquisition (Bange, 1992). For European interactionists interaction is conceived not as a mere trigger of acquisition based on input negotiation, but interaction is seen as a constituent of cognitive processes to the extent that these would not be possible outside interaction (Pekarek Doehler, 2000; Bange, 1992; Py, 1991, Krafft & Dausendschön-Gay 1994). This idea is found also in current studies on language learning within a CA approach, proposing that in fact the process of learning and the process of interacting are inextricably intertwined (Firth & Wagner, 1997). These studies will be discussed in the next section.

In sum, drawing on a sociocultural body of thought, socio-interactional approaches have highlighted the fact that competence is doubly situated, namely within the sociocultural context but also within the very local interactional context. Their focus on the latter has allowed emphasizing the non-individualistic and collective nature of competence. In what follows, I will investigate to what extent these characteristics and epistemological roots of competence resonate in the current conception of interactional competence as it is thought of within ethnomethodological Conversation Analysis.

4 Defining and studying interactional competence

The idea of a contextual and collective nature of competence has been further consolidated within a relatively recent strand of research that applies ethnomethodological conversation-analytic methods to the study of second language acquisition (SLA), and is known as CA-SLA (Pekarek Doehler, 2006b).

From its inception, ethnomethodological Conversation Analysis has been concerned with the study of interactional competence inasmuch as its aim has been to investigate the (ethno-) methods for establishing intersubjective meaning and interactional order (Sacks et al., 1974; Psathas, 1990a; cf. chapter III, section 1). Methods are observable as members' *accounting practices*, i.e. practices that are used to create social order and to make observable and describable, or accountable, for the co-participants (and for the analyst), what a member is currently doing (turns or formulations are understood as actions and not as information transmissions or referencing processes).

It is the members' methods that constitute their interactional competence (cf. e.g. Heritage, 1984a; Heritage & Atkinson, 1984; Mondada, 2006a; Pekarek Doehler, 2005, 2010; Garfinkel, 1967)¹². Heritage (1984a:241) puts it as follows:

« Conversation Analysis (...) is concerned with the analysis of the competences which underlie ordinary social activities. Specifically it is directed at describing and explicating the competences which ordinary speakers use and rely on when they engage in intelligible, conversational interaction. »

This competence implies the knowledge of the recurrent structural features that organize social action (ibid.), which enables participants not only to produce but also to interpret their co-participants' actions in the social encounter. Examples of such organizations have been provided in several seminal studies on the organization of conversation that have been published in Psathas' (1990a) edited volume *Interaction Competence*¹³. These studies have provided precursory descriptions of how conversationalists rely on (ethno-) methods for repairing problems in interaction or for closing down interactions and topics, thereby providing an initial sketch of interactional competence. Methods are common sets of procedures that members of a group rely on for accomplishing the social activities in which they are engaged. The fact that these methods are shared among members confers to them a conventional character, which in turn contributes to the possibility of accomplishing a shared understanding of the current situation/world¹⁴. Furthermore, the methods are both general and context-free, as well as adapted to the local contingencies of action, and therefore 'context-sensitive' (Ten Have, 1990). Consequently, the methods both shape the social interaction and are also reshaped by their instantiation in interaction. Most importantly, the notion of method pertains not only to the design of a contribution in terms of semiotic resources (verbal and non-verbal), but also to how this contribution relates to the dimensions of sequentiality and temporality. Brouwer & Wagner (2004) show for example that the ordered and competent accomplishment of a telephone opening does not depend on the use of the grammatically correct turns, but on the way that participants sequentially and temporally organize their actions. The authors' analyses demonstrate for example how a participant learns that as a means of accomplishing a smooth telephone opening with a particular respondent, he should provide his name and a greeting with one turn, before leaving a slot for the called person to greet. Thus, what is at stake is a reorganization of the sequential unfolding of interaction and not of linguistic choices.

¹² Emerging from the field of sociology and not linguistics however, the reference to communicative competence and Hymes is not very current.

¹³ E.g. Schegloff, Jefferson & Sacks on *The preference for self-correction in the organization of repair in conversation*; Jefferson's *List-Construction as task and resource*; Button with *On varieties of closings*; or Psathas on *The organization of talk, gaze, and activity in a medical interview*.

¹⁴ In a similar vein, Hall (1993, 1995) highlights the socio-historical dimension of resources "which helps explain how these resources come to assume a level of conventionality." (1993:151).

In the next sections I present a critical review of how a conversation-analytic understanding of interactional competence has been adopted within the field of SLA (4.1.) and how it relates to the notion(s) of participation (section 4.2.). I will conclude with an attempt to shed light on an important challenge that CA scholars have to deal with when studying interactional competence, namely how to reconcile CA's empirical and emic methodology with the issue of normative judgement which is inherent in the notion of competence, especially in the field of language learning.

4.1 *The advent of CA-SLA*

Interactional competence of second language learners has not yet been an explicit object of research until recently, with the major exceptions of Mehan (1979), Kramsch (1986) and later Hall (1993) and He & Young (1998). None of these studies, however, has adopted a strictly conversation-analytic perspective. Conversely, interactionist scholars within SLA who have worked partially with CA concepts for investigating the interrelation between acquisition and interaction have not explicitly focused on interactional competence (cf. section 2.4.; Krafft, & Dausendschön-Gay, 1993, 1994). It has only been since the turn of the millennium that researchers adopting CA methodology have begun to elaborate fine-grained descriptions of language learners' participation in interaction. This work has basically been launched by Firth & Wagner's (1997) influential call for a reconsideration of the predominantly cognitive approach to SLA. The object of current studies in CA-SLA can be grouped into three main lines of research. A first area of research relates to the description of how language learners participate in social interaction and how this interaction is organized (this research focuses mostly on classroom interaction; e.g. Pochon-Berger, 2010; Sahlström, 1999, Seedhouse, 2004). A second line of research more explicitly addresses the issue of learning and attempts to track the development of how learners engage in interaction (pioneering studies were e.g. Cekaite, 2007 and Hellermann, 2007; cf. also Pekarek Doehler & Pochon-Berger, 2011; and from a slightly different perspective Young & Miller, 2004). Basically, both lines share an interest in interactional competence as the object and tool of learning and hence of becoming a member of a given community of practice (Wenger, 1998). Third, and to some extent responding to specific methodological challenges (Pekarek Doehler, 2010) that put into question the possibility of combining CA with external theories of learning (cf. e.g. Rasmussen, 2009), CA researchers have more recently turned their attention specifically to the study of how participants orient themselves to learning (e.g. Lee, 2010; Sahlström, 2011).

The present study falls into the first area of research, as it sketches the students' interactional competence at one specific moment in time. To date, a clear-cut definition of interactional competence, involving a description of an ensemble of stable properties that are characteristics of it, is still lacking. This lack may stem from the methodological principles underlying the CA framework. Defining competence within CA requires that the concept of competence is compatible not only with 'conversation-analytic mentality' (Schenkein, 1978) but also with its underlying conceptions of language and social action (cf. Deppermann, 2004; Hartung, 2004; Mondada, 2006a; Pekarek Doehler, 2005, 2006a). This means bearing in mind the following assumptions when approaching the concept of competence (cf. also chapter III, section 1.3.):

- CA methodology adopts an emic investigation of cognition and is therefore not concerned with abstract knowledge or competence (Maynard, 2013). The focus is put on how knowledge is *made observable* in interaction.
- Interaction is accomplished in a methodic manner, which entails the systematic use of shared and expected procedures (Deppermann, 2004). Within CA, interactional competence is conceived as the *members' methods* for producing and understanding social action. The methodicity refers to a rule-governed dimension.
- Interaction is a collaborative accomplishment of two or more participants, which means that the observability of competence can never be constrained to one individual participant (cf. also section 2.4.; Young, 2003). Within CA, we conceive competence as *collaborative* and *shared*.
- Interaction is situated and sensitive to the contingencies of interaction (cf. section cf. also section 2.3. and 2.4.;). CA researcher advocate for a competence underlying the construction of social actions that is defined by devices that are *malleable to the local contingencies* of interaction (Maynard, 2013:24).
- Interaction is accomplished by means of a range of modalities. Interactional competence involves the methodic use of *linguistic resources (vocal or signed)* as well as meaningfully used resources from other modalities such as *gesture, mimics, posture* or use of *artifacts* (cf. Mondada & Schmitt, 2010:24-5).

On the basis of these underlying assumptions, we can sketch a broad initial working definition of interactional competence. Interactional competence is understood as the methodic use of semiotic resources for accomplishing social actions within the specific contingencies of an interactional event. This competence entails the ability to make social actions recognizable (understandable) by co-participants as well as to coordinate (with respect to temporality, sequentiality and meaning) ones' actions with the co-participants' contributions (contingencies of context) as well as to the more encompassing social context (Hall & Pekarek Doehler, 2011).

This interactional competence presents a diversity of facets that cannot all be addressed as an ensemble by one study. To date, a significant body of research has dealt with interactional competence of language learners from a longitudinal or a transversal perspective. The majority of studies has been done on classroom interaction (e.g. Cekaite, 2007; Hellermann, 2007; Hellermann & Cole, 2009; Pallotti, 2001; Pekarek Doehler & Pochon-Berger, 2011; Van Compernelle, 2011), but the number of studies relating to interactional competence in other contexts is also growing (cf. e.g. Achiba, 2012, Farina et al., 2012, Ishida, 2011; Pirainen-Marsh, 2011). These studies focus on different dimensions that shed light on a subset of methods upon which participants rely for accomplishing social actions in second language interaction. Particular attention has been paid to turn-taking practices (Cekaite, 2007; Mehan, 1979; Pallotti, 2001, Pochon-Berger, 2010) and the timing related to turn-taking (Carroll, 2000; Wong, 2000), to practices for repairing problems in hearing, understanding and acceptability (Hellermann, 2011), to practices for opening and closing tasks (Hellermann, 2007; Hellermann & Cole, 2009), and to preference organization (Pekarek Doehler & Pochon-Berger, 2011, Pochon-Berger, 2010, Ishida, 2011). These studies have looked at the ways that learners make use of multimodal resources for participating in

interaction and collaboratively establishing intersubjectivity, i.e. a shared understanding of what is going on.

A common denominator of CA-SLA studies is that they posit interactional competence as *participatory competence* (Goodwin & Goodwin, 2004). Whereas it seems generally accepted that interaction competence relates fundamentally to an ability to participate in social interaction, there appears to be much more variance in the importance attached to the notions of conventionality, accuracy, and consequently to possible assessment of interactional competence. In what follows I will concentrate on the following two issues: First, for understanding what it means to define interactional competence as a participatory competence, I will review the sources of the notion of participation (section 4.2.). Then, I will critically discuss whether or to what extent the notions of competence within a CA framework and within education and SLA are compatible (section 4.3.).

4.2 The study of participation

The term of participation is used in different scientific domains such as sociology, pedagogy and politics. For the purposes of this thesis, two different but not divergent conceptualizations of participation are important. The first conceptualization stems from a line of research that deals with participation as a metaphor for learning (Lave & Wenger, 1991; Rogoff, 1993, 1998) and is interested in the process of learning as a transformation of modes of participation. Researchers working within a sociocultural framework on learning represent this line of research. The second line of research is directly inspired by Goffman's work on participation and its further reconsiderations within Conversation Analysis and pragmatics, dealing with the precise resources by means of which interactants organize their participation in a dynamic and collaborative way. Without there being explicit collaboration, both lines of research emphasize that participants' competence is fundamentally situated and collective. In what follows, I briefly present the two conceptualizations and their importance for the current study.

The first conceptualization of participation has been proposed within a sociocultural approach to learning (cf. also section 3.3.). Interactionist linguists have put forward the reciprocal nature of interactive practices within which mediation and thus learning occur. This is in line with Rogoff's conception of *collaborative cognition* (1998), stressing that cognitive development and cognition are located within "*the participation in shared endeavors*" (ibid.:679-690). Drawing on sociocultural theory, Rogoff (e.g. 1998; cf. also Rogoff et al., 2007) as well as Lave & Wenger (1991) conceive learning not as the acquisition of new objects but as a transformation of the ways in which individuals participate in social activities. The "*transformations are qualitative developmental changes in particular directions*" (1998:691), and these directions are dependent on the personal needs or the cultural values. The emphasis of this conception is that competence is not either absent or present, and not evolving from an onset across stages of development towards an endpoint. In contrast to this, participation is always possible, from the very beginning, but it evolves and changes by means of the very engagement in it (cf. also Sfard, 1998 as well as Lave & Wenger's conception of a change from peripheral to full participation).

Rogoff's understanding of learning as transformations in the mode of participation in common endeavors (instead of an internalization or storing knowledge), has evidently a direct impact on her conception of

competence. Competence as different modes of participation always includes the situation with the co-participants, the goals and motives, and therefore it is neither located within the head of an individual, nor is it dissociable from a social encounter. Consequently, Rogoff states that knowledge or competence is not transferable from one activity to another because the support provided by the interlocutor or the goal fixed by the participant are inherently part of the specific activity (1998:692). Consequently, situational aspects such as symbolic artifacts as well as other social actors are part of the competence in doing something in this specific situation, while another situation would entail another competence. With an example of the development and assessment of children's reading competence, Rogoff concludes that "*The activity in which children reading is observed would be part of the evaluation of the child's progress, since no setting provides a context-free window on hard-to-see competence that the individual 'has'*" (1998:692).

The second conceptualization of participation used here draws on the work of the sociologist Goffman. Studies on interactional practices based on an ethnomethodological and conversation-analytic framework work with the notion of participation that traces back to Goffman's discussion (1981; cf. already 1964) of different participant roles that speaker and hearer can occupy in a social encounter. Although there have been further reconsiderations of Goffman's *Footing* by Levinson (1988), Irvine (1996) as well as the substantial work of Goodwin (e.g. Goodwin, 2004; Goodwin & Goodwin, 2004; Goodwin, 2010), Goffman made a fundamental contribution to the study of face-to-face interaction and its complexity.

Basically, Goffman (1981) proposes a reconsideration of the traditional dyadic 'speaker-hearer model' which is limited to the engagement of two parties and "*takes global folk categories (like speaker and hearer) for granted instead of decomposing them into smaller, analytically coherent elements.*" (Goffman, 1981:129). Thus, according to Goffman, participants who are gathered in a social encounter can assume much more differentiated participant roles than 'speaker' and 'hearer'. The author proposes a typology of different *participation statuses* for the hearer, and *production formats* for the speaker. At the base of his argument for more particularized participation roles lays a conceptualization of conversation as an event that does not unfold in a social vacuum but is embedded in a larger 'social situation'. Defining the 'social situation' as the "*full physical arena in which persons present are in sight and sound of one another*" (ibid.:136) makes evident a necessary decomposition of the 'hearer'. Hence, among the persons *in sight and sound of one other*, Goffman makes a first differentiation between *ratified* and *non-ratified* participants. Ratified participants are 'official hearers' (Sidnell, 2009) which can be either *addressed* (for example by gaze or address terms/vocatives) or *unaddressed*. In classroom interaction for example the whole class is a ratified participant, but when the teacher addresses a question to one specific student this student is addressed while the rest of the class is unaddressed but still ratified¹⁵. In contrast to this, *non-ratified* participants are hearers who are present in the 'physical arena', but who are not ratified. These participants are called *bystanders* and are characterized by auditory or visual access to the utterance of the speaker. The category of bystanders can be further divided into the class of *overhearers* (they hear without an effort to listen) and the class of *eavesdroppers* (they hear because they listen). By means of these categories, Goffman provides a more fine-grained account of the *participation*

¹⁵ This decomposition is later criticized by Sidnell (2009), suggesting that addressing a participant does not necessarily entail a direct address as a vocative or gaze. Participants can in fact implicitly address a person by making reference to him/her by means of 3rd person pronouns.

status that a hearer may have in interaction. In the second part of his discussion, Goffman decomposes the category of speaker into *animator* (for example the representative of a political party responsible for the physical production, sounding box), the *author* (the one who wrote the speech) and the *principal* (someone whose position is established by the words that are spoken, e.g. the party's ideas). These categories allow for a finer description of speakers' actions under the notion of *production format*. By means of this typology Goffman suggests that a specific participation status and production format can be assigned to each participant within a social situation. The *participation status* is the result of the relation between a participant and the utterance of the speaker, whereas the relation of all participants at a specific moment of interaction is called *participation framework* (involving a more holistic view of the situation and not just of one participant). This larger scope accounts for the fact that

“(...) an utterance does not carve up the world beyond the speaker into precisely two parts, recipients and non-recipients, but rather opens up an array of structurally differentiated possibilities, establishing the participation framework in which the speaker will be guiding his delivery.” (Goffman, 1981:137)

By means of the detailed picture that a description of participation frameworks is able to provide, the proposed typology allows grasping subtle changes in participation frameworks, which would escape from a perspective on participant roles with the notions of ‘speaker’ and ‘hearer’ alone. Goffman suggests that participants commonly induce changes in participation framework; this happens for example when a bystander becomes an addressed participant, or when a speaker (more precisely an animator) signals by change in dialect that he is quoting another participant (author) (1981:151).

While Goffman mentions that participation frameworks are constantly shifting through the participants' contribution to conversation, the detailed discussion is limited to the typology of participant roles but lacks a description of what participants are actually doing. In this regard, Irvine (1996) for example points out that it is not the categories in themselves but the way that participants construct the participation frameworks that should be focused upon. Similarly, Goodwin & Goodwin (2004) reconsider Goffman's discussion of participation and go beyond the static categories of participants. In this regard, the authors also point out that Goffman describes the participants by means of two different models and consequently fails to detail the very relation between speaker and hearer. Furthermore, the category of hearer is presented as a tributary of the speaker's category because it is the speaker who determines the status of the hearer by means of his choice of addressing or not addressing the co-participant (passive role of the potential hearer; cf. Fasel, Steinbach & Berger, 2008). In contrast to such a view, Goodwin & Goodwin advocate for analyzing the participants' “*reflexive orientation toward each other*” (2004:240). Within such a perspective, both participants are understood as inhabiting active roles and contributing to the reciprocal construction of the interactional event. This can be seen for example in the constant work of mutual *monitoring* (M. Goodwin, 1980; Schmitt & Deppermann, 2007) as well as in the collaborative construction of courses of action (Goodwin, 1979, 1987, 2010; Lerner, 2002). Drawing mainly on Goffman's proposition of a typology of participants, Goodwin & Goodwin proposed a study of participation that focuses on “*the description and analysis of the practices through which different kinds of parties build action together by participating in structured ways in the events that constitute a state of talk*” (2004:225). By means of this approach, the authors emphasized particularly the fundamentally collaborative nature of the social encounter and saw participation as ‘engagement in

unfolding action'. A participant's engagement can take the form of an active contribution to the event as a speaker, but it can also consist in taking the role of an unaddressed participant, i.e. someone who is co-present in an event but who is not supposed to actively listen to a conversation – also this participation status necessitates specific practices that help to co-construct the event. In sum, this conception of participation puts the focus on the shared and collaborative nature of action and participation in action. Most importantly, Goodwin & Goodwin's work underpins the role of embodied practices through which members organize their participation, using not only verbal resources but also gaze, posture and the material environment (cf. also Goodwin, 1981, 2000, 2007)¹⁶. In line with such reconsideration of participants' engagement in interaction, Deppermann & Schmitt (2007) emphasize the fact that when we consider social interaction as being inherently a collaborative and multimodal accomplishment, then the categories *speaker* and *hearer* are not usable as categories and *participants* must replace them.

In what precedes it has been shown that a participant can have a whole array of different statuses within an interactional event. When interactional competence is defined as a participatory competence, then it becomes clear that also interactional competence implies a multitude of different types of tasks that participants must handle. Thus, interactional competence is not only required from those who speak, but also from those who listen or who overhear. Hence, and as already put forward by Mondada (2006a), the collaborative and embodied nature of participation provides a considerably rich basis for establishing a link between the notion of participation and competence. Particularly, it allows demonstrating to what extent interactional competence goes beyond linguistic competence. Goodwin's studies on Gil, an aphasic man, convincingly demonstrate that a participant with a three-word vocabulary can be a competent participant by engaging in the unfolding action in a systematic manner, by means of a range of semiotic resources available at a specific moment (C. Goodwin, 2004, 2011; Goodwin & Goodwin, 2004; Goodwin, Goodwin & Olsher, 2002; also e.g. Cruz, 2006; Klippi, 2006).

This discussion of learning as participation and participation as engagement in interaction with embodied practices emphasizes the collective, situated and multimodal nature of participation. The question that can be raised on the basis of these assumptions is whether, and if so, how participation can be measured against some kind of 'norm'.

4.3 The issue of norm

The notion of competence commonly implies that there are more or less competent ways of accomplishing something, and that this quality can be assessed by reference to an established norm. Hence, within linguistics and education, competence relates to the underlying idea that learner's progress at the same time as they increase their competence. Such a conception becomes visible within the communicative competence as well as the plurilingual competence frameworks, where learners are categorized according to their progression from a lowest level A1 to the highest level of C2 of proficiency. In principle this conceptualization of competence conflicts with the sociocultural and interactionist approach (cf. sections 3.3. and 3.4.), in which competence is viewed as fundamentally situated and collaborative and where learning is conceived as change in participation. On the basis of

¹⁶ Without providing systematic analysis, Goffman already demonstrated that conversation is not limited to the vocal exchange but that visual or even the tactile channel as well as the physical environment in which actions are embedded are of crucial importance for participation.

these assumptions, competence cannot be measured according to a scale that defines an initial and final point of a developing competence. Different studies drawing on this idea however make apparent that a total exclusion of external normative judgment is most challenging.

According to Rogoff, the development is not defined in terms of a growth from an initial to an end point, but as “*qualitative developmental changes in particular directions*” (1998:681). These directions vary according to “*cultural values, interpersonal needs, and specific circumstances*” (ibid.) and there is not a standard and predetermined direction that someone has to follow for becoming more competent. Even to the contrary, the directions can be not ‘desirable by experts’ but still considered to be development of a competence as long as they imply a change in participation in a specific sociocultural activity. A most important idea within Rogoff’s perspective is that development is not characterized by absence, growth and presence of competence. Rather, it is assumed that participation is feasible as soon as a participant is exposed to a social practice and that there is not an addition of knowledge but a change in the type of participation. In a similar vein, the empirical and emic methodology within Conversation Analysis requires that competence be defined in the absence of externally defined normative scales. The objective of a conversation-analytic study is to provide an account of interactional competence and to demonstrate how participants establish social order in a procedurally methodic way. This means that the focus of interest is on *how* participants establish order and not on *how well* or *how efficiently* they do this. In line with this analytic mentality, classical conversation-analytic studies (Psathas, 1990a) approached each interaction as the result of a competent accomplishment. The idea implies that when social order is accomplished, it is the result of a competent accomplishment.

Strictly speaking, both Rogoff’s and CA’s conception of competence appears to be in some conflict with the conceptualizations of and expectations from the notion of competence by scholars working within education (p.ex. Dolz, 2002; Bronckart, 2002), second language acquisition frameworks as well as the Germanophone applied Conversation Analysis (*Angewandte Gesprächsforschung*; cf. e.g. Brünner, Fiehler & Kindt, 2002; Hartung, 2004; Bendel, 2004). Scholars within these frameworks share the goal of teaching and assessing interactional competence. Hence, the issue of a norm surfaces as a sticking point and brings up the question of whether and, if so, how conversation analysts can tackle the notion of a normative competence and guarantee the adoption of an emic approach to interaction. In his critical discussion of the possibility of studying and using the term of ‘Gesprächskompetenz’ in a CA approach, Deppermann (2004) points out that CA argues in terms of *normalities* rather than in terms of norms referring to more or less desirable conducts. The author suggests that CA scholars should address the question whether competence in a CA perspective can legitimately imply the dimension of a ‘normative judgment’, otherwise the discussion of ‘competence’ would be in vain (ibid.:19). Garfinkel & Sacks (1970) suggest that “*external judgements of the ‘adequacy, value, importance, necessity, practicality, success or consequentiality’ of methods should be excluded*” (ibid.:32). In contrast to this, a turn is *adequate-for-all-practical-purposes* if the speaker and hearer of a formulation come to a common and situated understanding of a description (a reference, a turn)¹⁷. The authors further propose that the definitory feature of member’s competence is the mastery of natural language, which involves producing

¹⁷ According to Garfinkel, language does not exist in a nomenclature of descriptions and entities in the world. To the contrary, the sense of descriptions is indexical, i.e. depending on the very local context of occurrence (Heritage, 1984a).

and understanding social action, based on the vehicle of verbal descriptions, within its local context. Heritage (1984a) puts it as follows:

“‘Mastery of natural language’ thus involves the speaker-hearer’s capacity to use common-sense knowledge so as to make a for all practical purpose determination of the sense of a description as a phase in a contexted social activity. It similarly involves the speaker’s capacity to design descriptions with a view to the kinds of determinations which a hearer will accountably make.” (ibid.:156).

Heritage (1984a) notes that Garfinkel’s conception of socialization implies that members are treated as being progressively aware of the normative organizations within a community, and hence they can increasingly be held accountable of potential breaches of these organizations (ibid.:120). This assumption clearly reflects the fact that competence is not an individual attribute but collaborative and shared (cf. section 3.). With regards to the appreciation of the aphasic man as a competent participant (cf. section 4.2.), this implies first that he and his co-participants can collaboratively accomplish an intersubjective understanding, and secondly, that the aphasic participant is not held accountable for example for accomplishing a diversity of actions by means of the same three words. This shows that the way that participants’ understand and categorize their co-participants determines to an important extent in how the participant’s competence will be assessed.

While drawing on the assumptions above, conversation analysts who have focused on second language learning have not completely refrained from applying a normative lens to interaction. Scholars using conversation-analytic, interactionist and sociocultural frameworks refer to interactional competence and its development by means of terms like ‘more effective’ (Pallotti, 2001; Yagi, 2007) or ‘more adequate’ (e.g. Cekaite, 2007; Ishida, 2001; Mondada & Pekarek Doehler, 2000:167; Mondada, 2006a) or ‘fuller’ participation (Young & Miller, 2004). Sometimes development is also seen in the multiplication of methods for the same action (Brouwer & Wagner, 2004; Hellermann, 2007; 2009, 2011; Hellermann & Cole, 2009), in the diversification of resources (Farina et al., 2012; Fasel Lauzon, Pekarek Doehler & Pochon-Berger, 2009; Pochon-Berger & Pekarek Doehler, 2011) or in more smooth and fluent interaction (Brouwer & Wagner, 2004; Yagi, 2007). Moreover, Hellermann (2009, 2011) suggests that a growing competence is observed not only in the way of doing repair but also the type of unit that constitutes the repairable. In contrast to these qualitative measures, grammatical accuracy has been largely banned from evaluations of interactional competence as it refers to a norm that has been etically established. From a very critical point of view however, also the description of participation as appropriate, effective, or successful cannot always be done without the conception of something like a norm (cf. also Bendel, 2004). In fact, it is not always clear-cut whether the qualitative assessment of ‘more effective’ or ‘more fluent’ is an etically or emically established measure. Following the concepts of CA, the norm should be approached as a participants’ phenomenon, which implies that the assessment of competence must be inherent to the interaction and accomplished by the participants themselves (e.g. Mondada & Pekarek Doehler, 2003). This assessment can be explicit by means of sanctions, as shown e.g. by Cekaite (2007), where a kindergarten pupil’s resources for taking turns at talk turn is talked into being by the teacher. More complicated are the cases where the conduct appears to be assessed in a more tacit manner, e.g. by non-response. Mondada (2006a) for example shows that the competence of addressing questions during a videoconference is locally established. When a co-participant does not

respond to a question or more explicitly transfers it to a later point in time, this can be interpreted as a sign of an incompetent way of asking the question.

The sticking point in the assessment of competence in a participants' perspective is the following: within the same interaction, conducts can be regarded as competent from the perspective of one participant but not by the other. For example, call-center agents can deploy strategies for shortening the conversations, which is probably not positively assessed by the clients nor by the employer, but it responds to the time constraint put on the agents by the enterprise (Bendel, 2004). In this case, the agents can be said to competently deal with the structural constraints that are put on them for interacting with the clients, but the clients may treat this as an incompetent conduct as it does not align with their own attempts. Likewise, Deppermann (2004) reports that the ways that mediators promote conciliation between disputing parties is often minimal in the sense that the problem is discussed on the surface and a hasty solution is proposed. This is explicitly in conflict with the deontology of mediation where free expression should be enabled, but it allows for coming to a conciliation that prevents the party from going to the court (saving money and time for the court). It appears therefore that the assessment of competence in a purely emic manner is not always possible but depends on whether we adopt a perspective on interaction as a fundamentally symmetric and collaborative undertaking (where participants have a common view of competent conduct), or rather as an activity where individuals pursue conflicting interests (where participants may have a divergent view of competent conduct; Deppermann, 2004). According to Deppermann (2004:26) again, what counts as competent cannot be accounted for only in CA terms but must also be based on social, economical, ethical or political considerations.

A generally valid description of a norm for qualifying interactional competence is impossible because of the situation-specificity of these normative expectations (e.g. long and explicit work on intersubjective meaning within learning contexts vs establishment of intersubjective meaning *en passant*; Deppermann, 2010a). As the normative expectations are situated and specific to context, the findings of the abovementioned studies cannot be generalized to any context or to any other activity. This means for example that the way of repairing a problem in interaction is sensitive to context; therefore the preference for self-repair may be loosened in asymmetric interaction as with parent and child or in classroom interaction, where the more expert participant regularly other-repairs actions from the less competent participant (e.g. Markee, 2000). This idea of situation-specific competence resonates with Hall's conceptualization of interactional competence (1999; cf. also 1995 as well as 1993 in terms of oral practices). According to Hall, interactional competence of an individual can be described, learned and assessed solely for specific *interactive practices*, defined as “*goal-oriented, recurring moments of face-to-face interaction, through which we manage our family relationships, engage in a variety of community- and work-related tasks, and nurture our social networks*” (1999:138). Interactional competence requires the member's use of the interactive resources that prototypically shape an interactive practice, as lexical and syntactic choices, participation structures (floors and turn-taking organization), act-sequence (organizational development of the practice), as well as prosodic elements or formulas (ibid.). In line with this are He & Young's (1998) and Young's (2003) conceptualization of interactional competence as relating to the participant's knowledge of six resources for the management of specific different discursive practices: the rhetorical script, the register, turn-taking, topic management and boundaries and transitions (further modified to seven resources, Young, 2011).

Against the background of the discussions above, I conceive competence as the methodic accomplishment of interaction, made observable through the fact that intersubjective meaning is established between participants. This implies that participants use methods for accomplishing actions and that they adapt these methods to the specific contingencies of interaction. In this sense, competence has a context-free dimension in the sense that methods are shared and normatively expected, and a context-dependent fold in the sense that they must be adapted to the interactional contingencies (situation, co-participant). The use of this definition implies that incompetent conducts involve the accomplishment of social action by participants without the use of normatively expected methods. The fact that the methods are not expected can be observed in two ways: co-participants' orient to the participant's conduct as being unexpected or inappropriate (by sanctioning them), or a specific method may engender problems in intersubjectivity that become evident at the surface of the interaction¹⁸. For this latter case, the methodological issue is however whether one can effectively single out one element as being the source of a trouble.

5 Summary: Plurilingual interactional competence

The aim of this chapter was to provide an overview of some fundamental issues that pertain to language development and competence of deaf and hard-of-hearing individuals and to argue to what extent the current state of research can be enriched through a conversation-analytic investigation that emphasizes and describes the DHH individuals' competence as a *plurilingual interactional competence*.

First, after having discussed the different possible definitions of DHH persons, I have shown that DHH persons' competence has been thoroughly described in terms of linguistic competence in sign language (section 2.1.) and in spoken language (section 2.2.). Investigations that focus on how DHH individuals actively participate in real-life settings are still under-represented. Thus, when studies concentrate on DHH persons' interaction, then it is without making an explicit link to interactional competence.

Second, I provided an overview of how *competence* has been approached within linguistics since its conception by Chomsky in the 1960ies (section 2). I shed light on how the notion of competence has been fundamentally reconsidered as a *competence for use* by Hymes (section 3.1.). Within social approaches to bilingualism and language contact, scholars advocated for conceiving bilingualism in a fundamentally holistic approach, i.e. to consider bilingual persons as detaining an original and partial competence which is not the result of a mere addition of an L1 and an L2 (section 3.2.). Furthermore, within socio-cultural and socio-interactionist approaches to language, the notion of competence is understood as being collective (i.e. not individual), as being socio-historically and locally situated (i.e. forged by the socio-historical nature of the tools, and not transportable from one context to the other; section 3.3).

Third, I have shown the advent of the notion of interactional competence as it has been proposed within conversation-analytic and within second language studies. Interactional competence builds the core

¹⁸ An unresolved issue is how we treat instances where participants do not negatively assess a conduct but one feels that something is not competent and induces misunderstanding. In this case, we must refrain from judging something as incompetent.

object of Conversation Analysis. The objective of conversation-analytic research consists in revealing and describing the methods that members of a community rely upon for producing social order in interaction. Interactional competence is conceived as a participatory competence that goes beyond grammar and vocabulary as necessary building-blocks of competence. By contrast, participants are conceived as interactionally competent when it allows for the local achievement of the meaningful interaction, and when co-participants do not hold them accountable on their ways of participating.

To summarize, the present investigation is based on an understanding of interactional competence as being fundamentally situated and contextual as well as being collective and shared (Pekarek Doehler, 2005). Moreover, I adopt a holistic approach to hard-of-hearing adolescents' interactional competence, implying that I do not consider that the participants rely on an interactional competence in spoken German and an interactional competence in Swiss German Sign Language. In contrast to this, I view the hard-of-hearing adolescents as being fundamentally plurilingual, making use of vocal and spatio-visual semiotic resources. The status of these resources as being linguistic or non-linguistic (i.e. verbal or non-verbal) is out of the scope of the present undertaking. In sum, I understand interactional competence as a participatory competence that is better described as 'multimodal competence' than 'bilingual' or 'bimodal' competence.

The current study proposes to bridge the gap between the current state of research pertaining to competence of DHH individuals and interactional competence in second language. It is necessary to have a close look at how DHHs organize interaction, going beyond examinations that pay attention to communicative failure. A framework that allows for such an approach, looking at how interaction is organized, and also how all this is embodied in a spatio-visual world, is the framework of Conversation Analysis and multimodality.

Chapter III – A framework for studying hard-of-hearing plurilinguists: Conversation Analysis

The present investigation of interactional competence in hard-of-hearing plurilinguists relies fundamentally on Conversation Analysis (henceforth CA) as a theoretical and methodological framework. More specifically, it is based on a growing body of CA researchers that understands and approaches social interaction as a fundamentally multimodal accomplishment. Choosing CA and multimodality as theoretical and methodological framework allows providing an empirically grounded account for hard-of-hearing plurilingual adolescents' interactional competence. It enables me to develop an understanding of the hard-of-hearing persons' competence that is directly grounded in the participants' perspective. This contrasts with assessments of their competence within normative frameworks, putting the focus on grammatically correct language productions. By contrast, by adopting an emic perspective and describing what the hard-of-hearing participants really do in social interaction will put in the foreground what they are able to do and not only what they are struggling with.

Hence, the concern of this chapter is to introduce some basic notions of Conversation Analysis as well as a selection of some major findings pertaining to social interaction as a multimodal accomplishment. I begin the chapter with some fundamentals of Conversation Analysis (section 1), relating to the aims as well as its methodological and epistemological dimensions. Then I present the basic organizations that have been described in the classical CA studies (section 2). The description of the classic CA work on the basic organizations in this section prepares the reader for research findings pertaining to the same organizations within the more recent reconsiderations of multimodality (section 3). Finally I present some basic findings from studies on DHHs' participation in interaction (section 4).

1 Basic assumptions of Conversation Analysis

This section sets out the basic aims of Conversation Analysis as well as its theoretical and methodological underpinnings. Additionally, I attempt to clarify the use of some ubiquitous terms in CA research and make explicit how I use them in this thesis. Comprehensive and detailed introductions to CA are provided in English by Heritage (1984a; 1995), Hutchby & Wooffitt (2008), Ten Have (1999), Sidnell (2010), or Sidnell & Stivers (2012). For German introductions the reader may be referred especially to Bergmann (1981), Deppermann (2007, 2008[1999]) as well as Gülich & Mondada (2008).

1.1 Aims of Conversation Analysis

The aim of a Conversation Analysis is to identify and describe *interactional practices* (Heritage, 1995; *Gesprächspraktiken* according to Deppermann, 2007) or ethno-methods (Ten Have, 1999) that members of a group rely upon when they collaboratively accomplish social interaction. At its inception, CA has developed as a paradigm for the study of social action (Heritage, 1995) by the sociologists Harvey Sacks and Emanuel Schegloff who were heavily inspired by Garfinkel's ethnomethodology and Goffman's

interaction order (1983). A most basic assumption of ethnomethodology has been that social order does not pre-exist the conducts of group members, i.e. members do not act within a pre-established mould, following previously internalized rules dictated by higher-order instance (as proposed by Parson). Ethnomethodologists assume, by contrast, that social order results from the local and collaborative accomplishment of the members themselves. Garfinkel proposed a “*sociology in which the problem of social order was reconceived as a practical problem of social action, as a members’ activity*” (Ten Have, 1999:6). Such a perspective raises the question as to how participants achieve a local and shared understanding of each other’s actions by means of language as one of the most fundamental resources. This achievement is intriguing in the sense that language is highly indexical, i.e. the meaning of language draws fundamentally on its local context of production. Garfinkel suggests that participants’ ability to understand each other is not due to a common vocabulary or sets of grammatical rules, but it is the result of shared common-sense knowledge and operations (Garfinkel, 1967:30; 1967:78)¹⁹. According to Garfinkel then, community members achieve a common understanding by means of *methods* that they share (*ethnomethods*). By means of these methods, participants recognize a co-participant’s action “*to accord with a rule*” (Garfinkel, 1967:25) and can make meaning of it. Methods or *methods of reasoning* (Heritage, 1995) entail a cognitive dimension as they denote something like rules that members of a group rely on for producing actions in interaction and for making sense of co-participants’ actions. At the surface of interaction, these methods become observable as members’ *accounting practices*, i.e. practices that are used to create social order and to make observable and describable (i.e. *accountable*) for the co-participants (and for the analyst), what a member is currently doing²⁰ (cf. section 1.2. *infra*).

Against the background of these basic assumptions on social order, Sacks and Schegloff draw attention to talk-in-interaction for describing in a detailed manner how members of a group accomplish this *order in interaction* (considering interaction as one type of social organization), basically by means of language. Sacks and Schegloff aimed at demonstrating that social interaction is a basic form of social organization, suggesting that the accomplishment of social order on the higher level draws on the accomplishment of interactional order at the lower level. The aim of Conversation Analysis is therefore to identify and describe the interactional practices for accomplishing this interactional order. This *interactional order* pertains to different layers of interactional organization. Consequently, the interactional problems²¹ (or tasks) participants have to deal with are of different natures. There are for example local problems such as establishing mutual reciprocity or ‘who speaks next’, or there are problems referring to modality (e.g. being serious or making a joke), or far more global problems such as ‘negotiating a price’ (cf. Deppermann, 2007:36). One specific layer of order concerns the ‘constitution of reciprocity’ (Deppermann, 2007:44; citing Kallmeyer, 1982), which is essentially referring to the constitution of meaning in interaction and the establishment of intersubjectivity. The interactional problems that participants have to deal with present therefore different levels of granularity.

¹⁹ “To see the ‘sense’ of what is said is to accord to what was said its character ‘as a rule’. ‘Shared agreement’ refers to various social methods for accomplishing the member’s recognition that something was said-according-to-a-rule and not the demonstrable matching of substantive matters. The appropriate image of a common understanding is therefore an operation rather than a common intersection of overlapping sets.” (Garfinkel, 1967:30)

²⁰ “Thus, shared methods of reasoning are publicly available on the surface of social life because the results of their application are inscribed in social action and interaction.” (Heritage 1995:393)

²¹ The term ‘interactional problem’ refers to the purpose or aim that a practice accomplishes (following Deppermann, 2007). It does not imply that its accomplishment is ‘problematic’ in the common sense.

1.2 The notion of practice

In this section I provide a short discussion of the term ‘practice’ that I will use throughout this study. An initial useful differentiation is made between *practices of conversation* and *practices in conversation* (Schegloff, unpublished lectures; cited by Heritage, 1995). *Practices in conversation* refer to actions, as for example the action of questioning or complaining. By contrast, *practices of conversation* is used to “refer to the underlying structural organizational properties of these activities” (ibid: 394), i.e. the organizational properties of for example questioning or complaining. I refer to this latter meaning (unless explicitly marked otherwise) when I use the term practice in this study.

Practices (of conversation) can be conceived as being built up of a systematic interrelation between a ‘form’ (resource, turn design, turn feature) and a ‘function’ (the action that the resource implements)²². Consequently, practices are essentially two-fold in nature. The first integral aspect relates to the ‘procedural how’ of a practice (i.e. ‘form’; Deppermann, 2007:32), referring to the question of how a practice is designed in terms of resources (linguistic, non-linguistic, temporality, etc.). A second essential aspect relates to the ‘wherefore’ of a practice (i.e. ‘function’, ibid.), referring to the question of what a practice accomplishes in interaction in terms of actions. Altogether, the meaning of a practice draws on the systematic relation between both integrated aspects. One must exercise caution with the idea of a two-fold practice because the systematic relation between the two aspects must not be understood in terms of a simple nomenclature (of form-function mapping). Language is highly indexical and therefore the association between form and function is intimately tied to the interactional context within which it occurs (cf. section 1.1. supra). This indexical dimension of practices resonates with an understanding of practices as methods, referring to the idea that intersubjective understanding among members is not only based on (shared) language but also on the common-sense knowledge and on the language productions’ local embedment in a context (cf. also Ten Have, 1990)²³. Heritage puts it as follows:

“Instead of beginning from the assumption that the terms of a language invoke a fixed domain of substantive content and that their intelligibility and meaning rest upon a shared agreement between speakers as to what this content consists of, Garfinkel proposed an alternative procedural version of how description works. In this alternative version, he argues that to make out what is meant from what is said according to methods which are tacitly relied on by both speaker and hearer. These methods involve the continual invocation of common-sense knowledge and of context as resources with which to make definite sense of indefinite descriptive terms. A major result of their use is that speaking is inevitably understood as action.” (Heritage, 1984a:144)

Heritage’s (2010:212) definition of practice clearly entails this dimension of local and indexical sense-making. Heritage adds to the idea of two folds the dimension of its local embedding by defining a practice as “any feature of the design of a turn in a sequence” presenting three specific characteristics: (a) The feature of a turn design is distinctive (e.g. prosodically different), (b) it has specific sequential position within a turn or a sequence, and (c) it contributes to the fact that the turn implements a specific

²² This position contrasts with Sidnell (2010) who suggests that *practice* and *action* are not related, proposing that ‘oh’ is a practice that can implement different actions.

²³ Deppermann (2007) refers to these practices as methods (*Gesprächs-Methoden*; ibid.:32) that conversationalists deploy in interaction as a means of solving interactional problems.

and distinctive action. Heritage illustrates his argument with the example of the ‘oh-prefaced response’ as a practice for displaying that the previous question was irrelevant or inapposite. By contrast, the freestanding ‘oh’ is considered as another practice that participants rely upon for displaying a revised state of understanding (Heritage, 1984b). In sum, there is a same element (‘oh’) that is distinctive on the prosodic level, which is integrated differentially into a turn (freestanding or part of a response) and accomplishes a different action. Most importantly, the definition of practices must be grounded in the participants’ perspective, i.e. co-participants must systematically treat the practice in a particular way (Stivers, 2002:301; cf. section 1.4. for more details on methodology).

It is crucial to emphasize that a practice can operate on different levels simultaneously²⁴. An often cited case is the practice of ‘huh’ as a practice that can address different interactional problems – on one level it can be described as a practice for the action of repair initiation, on a second level it functions as a vehicle for displaying for example non-alignment or disagreement. In Schegloff’s (1997) terms, different practices can be used to accomplish an other-initiated repair, but still other actions “*can be implemented by the use of other-initiated repair by virtue of being other-initiated repair*” (ibid: 505; Schegloff’s emphasis).

Traditionally, CA has been concerned with practices that make use of vocal resources, by focusing on the sequential unfolding of both vocal verbal (i.e. linguistic) and vocal non-verbal (i.e. paralinguistic as inbreath, intonation) resources. A detailed study of bodily-visual resources however has largely been lacking (but see Goodwin, 1981). With the proliferation of video recordings however, CA scholars have become increasingly interested also in actions that are accomplished non-vocally and non-verbally, i.e. by means of spatio-visual resources (e.g. Goodwin, 1980, 1981; Heath, 1984; Streeck & Hartge, 1992). According to Stivers (2002) for example, the establishment of mutual gaze during word searches (Goodwin & Goodwin, 1986; Goodwin, 1987) can be understood as a practice for gaining help (nonvocally) by the co-participant in the word search (Stivers, ibid:301). The study of non-vocal practices brings with it important methodological challenges as well as theoretical discussions of the adaptability of CA notions (cf. Deppermann, 2013a; Hazel, Mortensen & Rasmussen, 2013.). A more detailed discussion on this issue is provided in section 3.

A range of disciplines has become interested in CA and each has adapted its principles more or less strictly to their study. Within applied linguistics for example, there are bodies of research that adopted basic terminology as turn-taking and overlap, but without entirely acceding to CA’s epistemological framework and analytic mentality. Section 1.3. briefly outlines how CA is understood in the current study.

1.3 CA as a theoretical framework

In the present study, CA is understood as a two-fold paradigm (Ten Have, 1999) comprising a methodological and a theoretical aspect. From its inception, Ethnomethodological Conversation Analysis not only proposes methodological tenets according to which social (inter-)action should be analyzed, but

²⁴ In this regard Deppermann (2007:38) notes the following: “Gesprächspraktiken haben Funktionspotenziale: Sie sind meistens nicht nur für ein spezifisches Problem einzusetzen, sondern können Leistungen für unterschiedliche Aufgaben und Zwecke erbringen. In der situierten Verwendung leistet eine Praktik meist einen Beitrag auf mehreren Ebenen der Interaktionskonstitution (s. Kap. 1.4.5.).”

it entails a clear theoretical and epistemological stance on social interaction and language. The epistemological stance of Conversation Analysis can be described by means of five universal organizational principles that constitute interaction (Deppermann 2007, 2008[1999]): constitutivity, methodicity, interactivity, processability and pragmaticity²⁵. These principles relate to the theoretical layer of CA – at the same time however, precisely these principles will be followed in the CA methodology, specified in section 1.4.

- *Constitutivity*: participants actively construct conversational events. They do not render a pre-established script of a conversation, but make use of semiotic resources in a productive way.
- *Methodicity*: participants use systematic and recurrent procedures that are mutually recognizable in order to construe and interpret their contributions. They make mutually recognizable what they are doing. Conversation is therefore not chaotic but *there is order at all points* (Sacks, 1984a:22). These methods function as routines that members acquire during socialization in a community, in order to establish sense in a situated manner (cf. also sections 1.1. and 1.2.).
- *Interactivity*: interaction consists in contributions that are designed in a reciprocal and reflexive manner. In order to establish mutual understanding, participants to interaction design their speech for the other participant (*recipient design*, Sacks et al., 1974:42), they coordinate each other's turns, and they constantly display their understanding of the ongoing interaction. There is no individual act, each act is interactive and reciprocal (*primacy of interaction*; Gülich & Mondada, 2001)
- *Processability*: linguistic structures in interaction are not isolated but occur as a result of interactional processes. A specific turn for example has always two aspects: one level that retrospectively links back to the previous turn, and a second level that is operating prospectively by renewing the context for a subsequent turn. This means that units in interaction are emergent in and from the interactional step-by-step unfolding, in contrast to a transfer of a predetermined plan.
- *Pragmaticity*: participants pursue individual and common objectives. Ethnomethods are designed for solving interactional problems or to pursue communicative aims that may originate from the interaction itself (Deppermann, 2007:11).

These five principles constitute theoretical assumptions on language and social interaction which underlie the framework of Conversation Analysis. From these assumptions derive some specific methodological and analytical principles, which I turn to in the next section.

1.4 Methodological and analytic principles

Conversation Analysis uses qualitative research procedures. A most fundamental methodological tenet is that the basis of analysis is built by *naturally occurring data*, i.e. data that would have been produced independently of the presence of a researcher. A major advantage of studying naturally occurring data is that it prevents researchers from studying phenomena that turn out to be of no relevance for the

²⁵ My translations of the German terms *Konstitutivität*, *Methodizität*, *Interaktivität*, *Prozessualität*, *Pragmatizität* (Deppermann, 2007, 2008[1999]).

participants themselves (Ten Have, 1990; cf. also Goode, 1990). By contrast, examining naturally occurring data enables the researcher to discover particularities that are grounded in real-life situations. The data is *audio-* and if possible *video-recorded*. First, this has the advantage of a repeated viewing of the data for analysis, by contrast for example to the notetaking of events with a coding scheme. Second, the recording of the data allows researchers to archive language productions, building up larger language corpora and thereby contributing to the documentation and maintenance of cultural heritage. The act of recording represents a first selective process because the camera angle or the zoom chosen reflect the researcher's interpretation of what will be of importance to catch (Mondada, 2006c). The recorded data is then rendered in a written form by means of a *transcription* and/or an *annotation*²⁶. In CA, transcription consists in providing a fine-grained rendering of how speech and increasingly frequently also bodily-visual actions unfold from one moment to the other. The transcription will be used as a “*convenient referential tool*” for the analysis (Hutchby & Woffitt, 2008:70), while for the finegrained examination analysts will always make use of the data, i.e. the original recordings as well. The reason for this is that the transcription process necessarily transforms the raw data as it is impossible to render the complexity of talk-in-interaction in a written form. Hence, transcriptions are not understood as ‘data’ but as ‘a version’ (Psathas & Anderson, 1990) or a ‘representation’ of the data (Hutchby & Woffitt, 2008; for more details cf. chapter V, section 2). They present the advantage of making the recorded data easily and repeatedly accessible and available for the researcher, as well as providing access for other researchers who therefore can put under scrutiny the analyses of their peers (e.g. Heritage, 1984a; Gülich & Mondada, 2001).

After the recording of the primary data, CA researchers proceed with an *unmotivated examination* of the data (Psathas, 1995); hence the analyses do not draw from a preestablished classification scheme but are data-driven (Deppermann, 2008[1999]:18; Gülich & Mondada, 2001; Psathas, 1995). In Sacks's (1984) terms, a piece of data is not approached with a specific problem but “[w]e sit down with a piece of data, make a bunch of observations, and see where they will go.” (ibid.:27). Basically, this procedure prevents a researcher from approaching data with questions that are of no importance for the participants themselves. By contrast, researchers may discover phenomena and peculiarities they could not have thought about previously, and which consequently they could not have caught within experimental settings. It must be noted however that to date, CA studies are less strictly applying an unmotivated examination than those administered by Sacks and Schegloff at their beginning. To a great extent data is gathered with an albeit large research question, suggesting that the specific recordings will provide the data necessary for responding to the research question. It is important however that researchers attach themselves to the analytic mentality of CA and are receptive for unplanned discoveries, particularities and unexpected finds that turn out to be of specific relevance within the data analyzed (cf. chapter V, section 4 for this procedure in the current data).

Related to the principle of an unmotivated examination is that within their analyses researchers are expected to adopt an *emic perspective*, i.e. the point of view of participants. This means that analysts cannot, for example, consider a sequence as a misunderstanding if it is not the participants themselves

²⁶ Transcription is used to refer to the transfer of spoken language into written language. The term annotation is used for descriptions of conducts. Annotations are interpretative and enriched labelings, as e.g. conventionalized glosses for sign language productions, descriptions of embodied conducts or comments.

who orient to it as such. This means that unless participants address the divergence explicitly, e.g. by means of a repair as ‘no I mean xy’, it must be assumed that common understanding has actually been established. Likewise, the categorization of a turn as being a question or a ‘rhetorical question’ must be grounded in how the participants themselves understand and react to a specific turn. As Conversation Analysis aims at discovering and describing participants’ methods to co-construct social order and reality, researchers must exercise caution and limit themselves to accounting for how participants design their actions and how these are understood by participants.

When analysts adopt an emic perspective, their analyses must be based on the theoretical principles of interactivity and processability (cf. section 1.3.) and analyze a piece of interaction by strictly *following the sequentiality of interaction*. This entails that the analysis proceeds on a turn-by-turn basis and that contributions to interaction are never analyzed in isolation, i.e. independently of their sequential embedding. By contrast, the analytic procedure is founded on the assumption that each contribution emerges within the temporal unfolding or in the process of interaction, that it is responsive to what precedes (retrospective orientation) and that it co-shapes what will follow (prospective orientation). Moreover, the principle of interactivity of interaction makes it necessary that researchers analyze each turn or conduct as being only one part of an activity. Hence, there is no independent action and each contribution must be analyzed in relation to those which precede and have been accomplished by co-participants (Gülich & Mondada, 2008:18; *primacy of interaction*).

Finally, in an endeavor to establish interactional *practices*, the analyst’s aim is to uncover not only isolated ways of designing interaction but recurrent patterns and regularities that participants rely upon for the accomplishment of interactional order (related to the principle of methodicity, cf. section 1.3.). In this endeavor CA researchers establish *collections*. A collection is a coherent ensemble of a practice, i.e. a feature presenting the same sequential embedding and the same implemented action (cf. definition of practice, Heritage, 2010). The aim of building a collection is to demonstrate the general character of a practice as well as its adaptability to the contingencies of the specific course of action in which it appears. The establishment of the collection is based on the participants’ perspective and implies an analysis of the *next turn proof procedure* (Sacks et al., 1974; Hutchby & Woofitt, 1998:13 and 1998:41). This means that for deciding if a specific occurrence is an instance of a practice, participants must orient themselves to the instance as implementing the specific action. An important tool within this procedure is the *deviant case analysis* (Heritage, 1984b). If a recurrent pattern has been described on the basis of several instances and a further instance seems to contradict the previously established pattern, there are two options. First, a detailed emic and sequential analysis reveals that participants themselves orient to the occurrence as a ‘deviant case’, i.e. as differing from what is normatively expected, for example by sanctioning it. Second, if the first option does not apply to the specific instance, then the pattern that has been suggested to be regular to this point must be described differently so that it can include the exceptional case (cf. Schegloff, 1968, reconsidering the pattern of summon-answer sequences for including a case out of 296 that did not fit the initially described collection). Originally researchers built collections of vocal practices, based essentially on the criterion of the sequential embedding of a feature and the action it accomplishes. Within a multimodal approach to social interaction the resources potentially relevant for a practice are multiplied and pose important methodological challenges for CA analyses (Mondada, 2008). A basic question is for example where researchers set the barrier for deciding

if something is similar or different because “*what may look like similar cases when considering only talk, may differ considerably in terms of the use of other modalities*” (Deppermann, 2013a:4). The problem is related to the fact that despite an understanding of social interaction as a fundamentally multimodal accomplishment, the formal analysis constrains researchers to select some modalities as being important in a specific practice (e.g. lexeme, hand gesture and gaze direction) and to ignore some other modalities (e.g. eyebrow position, neutral or wrinkled nose) and importantly, to account for this selection (ibid.). Methodologically speaking, the more modalities a description includes, the less occurrences one will find presenting the same pattern. The question therefore is, what features must be systematic for being able to speak of a practice?

With regard to the very concrete procedure of analysis, there is no stable and universal way of doing a CA investigation. The procedure proffered in this section follows suggestions made by Ten Have (1999). The analytical procedure in CA studies involves examining a piece of interaction according to the methodological principles above (unmotivated looking, sequential and turn-by-turn analysis and emic investigation) as a means of observing how vocal and visual practices are used for the management of specific interactional ‘problems’. This examination is done with respect to four basic interactional organizations (which are specified in section 2 *infra*). First, the interaction is examined in terms of turn-taking and looks at how participants accomplish speaker change in a local manner (section 2.1). Second, one examines the interaction with respect to its sequence organization by looking at how participants build actions one after the other (section 2.2.). Third, one examines repair organization, i.e. how participants address potential problems in speaking, hearing, and understanding (section 2.4.). Finally, a more detailed observation is made of how turns are designed with respect to vocal or visual resources. Within this analytical step, one pays attention to *recipient design* and preference organization (cf. section 2.3.). These basic organizations are the result of the early works of Sacks, Schegloff, Jefferson as well as Pomerantz (70ies and beginning of the 80ies). These results provided the upcoming research field with analytical frames that are used in later CA studies. Hence, today CA is not entirely based on induction but it makes use of a basic conceptual apparatus that “*was developed in its originators’ struggle with the data, while in the second phase this apparatus is generally available as an established repertoire*” (Ten Have, 1999:38). The challenge of the analyst is not to exploit this apparatus as a coding scheme but to follow uncompromisingly a sequential and emic perspective. Moreover, when one is working with video material, a critical perspective on those aspects that have been described on the basis of audio recordings is of special relevance.

2 Basic organizations

In this section I provide a brief overview of the basic organizations on which social interaction is grounded and that have been explored and described by a large body of CA studies. In what follows I report on how turn-taking organization has been accounted for essentially on the basis of vocal language interaction (section 2.1.). A short account of the sequence organization and some types of preference organization are provided in sections 2.2. and 2.3. Finally, a short account of repair organization is provided in section 2.4. The description of the classic CA work on the basic organizations in this section will prepare the reader for research findings pertaining to the same organizations within the more recent

reconsiderations of multimodality (section 3) as well as within the research on atypical populations, especially hard-of-hearing and deaf participants (section 4)²⁷.

2.1 Turn-taking organization

From its inception, CA aimed at describing the social order that is accomplished by participants in a situated and collaborative manner. One of this order pertains to the question of how interactants organize their participation in the conversation with regard to turn-taking and speaker change. In a nutshell, the interactional ‘problem’ participants have to deal with pertains to the question ‘when and how can interactants get a turn at talk’. This problem is particularly relevant in ordinary conversation where the topic of conversation, the order of who intervenes when in the interaction as well as the length of the turns at talk are not previously defined but must be locally negotiated.

In their seminal paper, Sacks, Schegloff & Jefferson (1974) reveal that at its basis conversation is characterized by the fact that speaker change occurs and that this happens in a finely timed and smooth manner, i.e. without gap nor overlap. The authors explain that this interactional order is made possible by the fact that interactants rely on a *turn-taking machinery*, i.e. a locally managed systematic organization for turn exchange in conversation. The description and illustration of the systematics for the organization of turn-taking provides compelling evidence that ordinary conversation is not chaotic and disorganized but, to the contrary, the result of participants' use of recurrent methods and rules to organize their contributions, e.g. to take and give turns at talk.

The *turn-taking machinery* relies on two components that account for the possibility of interactants to systematically organize *when* and *how* to take or to give a turn at talk, the turn-constructive component and the turn-allocational component. The *turn-constructive component* deals with the formal construction of turns. Sacks et al. propose that each turn is built out of minimally one turn-constructive unit (henceforth: TCU). If a turn comprises more than one TCU it is called a multi-unit turn. A TCU is an interactional and an ‘actional unit’ (*Handlungseinheit*, Deppermann, 2007:62) which is defined *in situ* by the participants themselves. Originally, the characterization of a TCU has been based to a large extent on its syntactic dimension and it has been described as consisting of a lexical, sentential, clausal or phrasal unit (Sacks et al., 1974). According to its context of appearance, a TCU can consist of a single lexical item or a clausal unit and it must not consist of what was traditionally considered a syntactically complete and correct sentence. The completion of a TCU corresponds to a potential *transition relevant place* (henceforth: TRP), i.e. a place where speaker change can occur. More precisely, the TRP is a moment in the unfolding interaction where the transition from a current to a next speaker is possible, relevant, but not obligatory. Syntax is however not the principle feature that contribute to the completion of TCU. In fact, Ford & Thompson (1996) demonstrate that “*syntactic completion points alone are the least reliable indicators of any other sort of completion*” (ibid.:155). Grounded on an empirical study the authors propose three types of completion: syntactic, prosodic/intonational and pragmatic. A fundamental finding of their study consists in their observation that a majority of speaker changes occurred at moments where syntactic, pragmatic and intonational completions converge, in the so-called *Complex Transition Relevance Places* (henceforth: CTRPs; cf. also Auer, 2010). While all three

²⁷ For an account of how turn-taking organization is implemented specifically in classroom interaction the reader is referred to chapter IV, section 3.

completions co-occur in a high number of cases, there is also a great amount of syntactic completions that do not converge with pragmatic or intonational completion. These potential completions less often result in effective speaker change. While Ford & Thompson's study has been based on audio data, Ford, Fox & Thompson (1996) further highlighted that in addition to the three types of completion cited above, also embodied conducts (body movements, gaze and gesture) are of import for defining when a turn comes to completion (cf. also Fox, 1999). This account is also in line with the observation that each turn can be further extended by the current speaker, either by adding a new TCU to the initial one or by an expansion of the initial TCU itself (an *increment* according to Schegloff, 1996). These turn boundaries are responsive to the local and emergent contingencies in interaction, e.g. the current speaker can expand a turn in response to an absence of recipient uptake by the co-participant. And it is the "*the fact that TCUs are interactionally achieved that makes TCUs and turns impossible to precisely define and precisely predict*" (Ford, Fox & Thompson, 1996:428f).

The potentiality of expanding turns at each of its potential completion points illustrates that turns are not graspable as etically defined units. To the contrary, they are built incrementally and their boundaries are not fixed but dynamic and negotiable. In this sense, Auer (2010) demonstrates that the idea of *segmenting units* should be abandoned. What participants seem to do is orienting to *points* of completion of a gestalt (rather than to units), and these points are negotiable. The author shows that as analysts also we should not search for limits of units but we can see breaks (*Zäsuren*) at the intonational, sentential and actional level. These different breaks can converge or they can diverge, in which case some types of breaks seem to override others. Auer (ibid.) argues that the convergence of the three types of breaks results in the optimal completion of a Gestalt, but not all of these breaks lead necessarily to a speaker change (out of 46 optimal breaks only 3 are followed by speaker change). Most importantly, the completion of a turn is collaboratively negotiated. But to a certain extent, co-participants can foresee when an ongoing turn is (potentially) coming to completion. This is what enables them to finely tune their turn-beginnings to the current speaker's TRP. This anticipation of turn completion by co-participants is based on the principle of *projection* (cf. Auer, 2002, 2005 on the difference between grammatical and action projection). Projection, defined as the fact that "*an individual action or part of it foreshadows another*" (Auer, 2005:8) is a fundamental principle. Grammatical projection refers to the fact that at every turn beginning, the turn design (syntax, prosody) sets a projection on how the ongoing unit will unfold and when it may come to a potential end (trajectory). The initiation of a unit with 'I bought' for example sets a strong projection for the presence of a direct object. As mentioned above, not only syntax, but also pragmatic context and intonation are relevantly implicated in this projection. The completion on the syntactic, prosodic and pragmatic level is tied to this projection operating since the beginning of the unit. Also action projection is related. A question for example projects an answer or a request a grant or a refusal; both actions (question, request) set strong projection because only one or a small set of relevant next actions are expected (Auer, 2005:16). Other actions have weaker projections, as e.g. news announcements, which leave the array of what will follow more open (cf. also section 2.2.).

Projection in interaction is strongly related with the second component of the turn-taking machinery, which I present in the remainder of this section. The second component is the *turn-allocational component*, which deals with the various practices of turn allocation at the end of turns (at TRPs). It describes in detail the various mechanisms by means of which a current speaker can allocate a turn to a

next speaker (other-selection) or an incipient next speaker can self-select, or how a current speaker can continue past a first TRP. The turn-allocational component consists of a *basic a set of rules* that applies in a chronological/ordered manner at each TRP (Sacks et al., 1974:704):

At the first possible completion of a TCU:

- (1) Other-selection: the current speaker can other-select the next speaker who in this case has the right and obligation to take the next turn.
- (2) Self-selection: if the current speaker did not other-select a particular next speaker, then any next speaker can self-select (but he needs not). In case of self-selection, the speaker who speaks first gets the right to a turn.
- (3) Continuation: if neither other-selection nor self-selection operated, then the current speaker can continue talking (but he needs not).

If on the first possible completion neither a) nor b) operated, the current speaker continues up to the next possible completion where the set of rules re-applies.

Sacks et al. (1974) provide initial observations on the practices participants rely upon for other-selecting and self-selecting. Recurrent other-selection techniques are for example the use of address terms, gaze towards a potential next speaker as well as the use of first pair parts of adjacency pairs which select the addressed participants as a next speaker. Self-selection techniques on the other hand are responsive to at least two important features: First, in multiparty interaction, where diverse participants may self-select, the person who speaks first gets the turn. This rule accounts for the fact that turn-beginnings are often minimally overlapping the turn-endings of previous speaker. Second, and related to the appearance of short overlaps, the self-selecting speaker may use pre-beginnings, i.e. lexically empty devices that project the beginning of a turn, as turn-entry devices (Schegloff, 1996). Such pre-beginnings may be for instance hesitation markers, inbreaths as well as gestures (ibid.:92f). These turn-entry devices can indicate an incipient speakership and thereby be used to guarantee a turn-at-talk without properly beginning it. On the other hand, the use of pre-beginnings prevent that important information at the turn-beginnings are lost because of an overlap with the previous turn. These responds to an important interactional task as turn-beginnings constitute an important and sensitive place with respect to the setting of the projectability of a turn (Schegloff, 1996; Pochon-Berger, 2010).

At its most basic, the turn-taking organization provides speakers with a local management system (Sacks et al., ibid:425) which enables them to deal with the interactional ‘problem’ of locally and collaboratively negotiating above all the length of turns and the order of turns in conversation. The turn-taking machinery enables the participants to deal with these tasks in such a way that turn exchange is smooth, i.e. long overlapping talk and longish inter-turn silences (gap) are rare. This is guaranteed by the turn-allocation rules as well as the participants’ ability to foresee to some extent the trajectory of unfolding talk on the basis of the unit-type under way (sentential, clausal, phrasal or lexical) in a specific interactional context. The point of potential completion can be projected (*projectibility* of talk), but will only be confirmed later and interactionally. Participants to interaction orient to this machinery as a normative framework, which does not mean that their turn-taking conducts are automatic and rule-governed but rather that departures from it are meaningful.

2.2 Sequence organization

2.2.1. Adjacency pairs

As exposed above, social interaction is organized so that speaker change occurs and one turn follows the other. More precisely, turns do not follow each other just in a serial way, but they are sequentially ordered. ‘Sequential’ means that the turns have some organizational relation and that “*there are describable ways in which turns are linked together into definite sequences*” (Hutchby & Wooffitt, 2008:41; Sacks, 1987). The basic building block of this sequential order is the *adjacency pair*, i.e. two actions that conventionally go together because the first action calls for a specific type or some specific types of second actions. For example, a question calls for an answer, an invitation for an acceptance or a refusal or a request calls for a grant or a rejection (these are called different pair types). In adjacency pairs, the first action (called *first pair part*, henceforth FPP) creates a slot, and there is a normative expectation that this slot is filled with a specific next action, namely the relevant next action (called *second pair part*, henceforth SPP). Those conventionally tied actions are referred to as adjacency pairs and they have been defined on the basis of five different features (Schegloff, 1968; Schegloff & Sacks, 1973:295f.; Sacks, 1987):

- The sequence is composed of two turns.
- The two turns are typically adjacent.
- They are produced by two different speakers.
- The sequence is ordered so that first parts precede second parts.
- The first part of a specific pair type requires the accomplishment of a second part of the same pair type (they are *type-related*)

The adjacency pair sequence can be understood as an instrument for participants for organizing their actions, and as a “*normative framework for actions*” (Heritage, 1984a:247). ‘Normative’ does not imply that participants in interaction automatically provide an SPP or that they do not have the possibility of doing something different than providing the SPP. However, the FPP of a specific pair type does provide for *sequential implicativeness*, which means that the FPP “*projects for the sequentially following turn(s) the relevance of a determinate range of occurrences*” (Schegloff & Sacks, 1973:296), in the case of adjacency pairs for the accomplishment of a specific type of SPP. While the FPP can be referred to as sequentially implicative (also other turns are sequentially implicative), type-related second pair parts are *conditionally relevant* after first pair parts of this specific type (Schegloff, 1968). The normative dimension of adjacency pair organization is best described by means of an example where the conditional relevance is not addressed, i.e. when an SPP is not provided.

Example 1

		did you understand it	
01	A	[°hast du's verstanden?°]	← FPP
	Rot	[kannst du das wiederhol]en?	
02		(1.2)	← noticeably absent
		did you understand it pashali	
03	A	°hast du's verstanden pashali?°	← FPP-bis
		(I) did not understand	
04	B	°hab nich(t) <u>ve</u> (r)stand[e(n)]°	← SPP

In this example, participant A addresses a question to participant B. At the completion of A's turn (l.01), B is expected to provide an SPP that fulfills the conditional relevance of the FPP in line 01. Participant B however does not provide any relevant SPP (l.02). Due to the normative expectation or the projection of an SPP set by the FPP, the SPP is *noticeably absent*. This absence is then addressed by participant A who recycles his FPP (producing a bis-version of the FPP; Auer, 1984). Thereby participant A attempts to work towards a completion of the adjacency pair, making apparent that the SPP is *due* and that it is *officially absent* (Schegloff, 1968). When the SPP is not provided, this lack of accomplishing the next one due is accountable. This means that the participant who is expected to provide a relevant next should make observable (accountable) for his co-participants the reasons why he does not provide the SPP. If such an account is lacking, co-participants and especially the co-participant having produced the FPP will make interpretations concerning the reasons for this absence “*by invoking aspects of the circumstances of the action, or the role identity, personality, goals, motives, etc. of the breaching party.*” (Heritage, 1984a:253). These interpretations develop further at the surface of the interaction through the co-participants' attempts in pursuing a response (Pomerantz, 1984b) from their partners by means of for example repetitions and reformulations.

The adjacency pair organization is most fundamental for the collaborative and situated construction of social interaction because it inherently functions as a *template for interpretation*. Based on the normative expectation that links an FPP and an SPP, participants analyze any action subsequent to the FPP with respect to this FPP. Any action that occurs in the slot of an SPP will be inspected for how the SPP-speaker analyses, understands or appreciates (Heritage, 1984a:255) the prior first action. If for instance he does not understand an FPP of his co-participant, his non-understanding becomes publicly observable in the second turn. Furthermore, his non-understanding will be treated or oriented to in the next and third turn. This is illustrated in the example below taken from a classroom interaction.

Example 2

01	A	can you say it louder so that we can hear it kannst du's etwas lauter sagen damit wir's hören.
02	(..)	
03	B	yes °ja.°
04	A	so also.
05	(..)	
06	A	make the question again noch einmal die frage stellen.

In the first turn, participant A asks participant B to repeat his question by speaking out louder (l.01). In the second turn, B's response at line 03 makes publicly available his interpretation of the FPP as building a confirmation request. The third turn (and the fourth) however disconfirm that B understood correctly

the initial action which did not implement an information request but a request. Hypothetically, if in line 3 participant B had provided the question with louder speech, he would have made publicly available his understanding of the first turn as a request for action. Participant A would then have implicitly confirmed this understanding by not recycling his initial turn. Hence, the linked actions are the basic *building-blocks of intersubjectivity* (Heritage, 1984a:256) and thereby provide an *architecture of intersubjectivity*. Intersubjectivity in interaction is not often built by means of explicit confirmations of understanding but rather it “*arise[s] as a kind of by-product or indirect outcome of the sequentially organized activities of the participants*” (ibid.:259; cf. also chapter IV, section 4).

An adjacency pair is completed or accomplished when a conditionally relevant next has been provided. As already mentioned however, other actions than type-related SPPs can come in the next turn position. These actions either defer the SPP to a later position, or they can replace the SPP. For instance, when an FPP has not been understood, participants can engage in an insert expansion dedicated to the repair of a problem in understanding before the SPP will then be provided and close the sequence (cf. section 2.3. *infra*). In this case, the repair initiator is not type-fitted because it is not precisely the action made relevant through the initiating action. It is nevertheless sequentially-fitted because it comes at a position where repair can relevantly be initiated. Likewise, in response to questions, non-answer responses as for example claims of insufficient knowledge (Beach & Metzger, 1997; Sert, 2010) are sequentially-fitted and they can replace the SPP but they are not type-fitted (cf. chapter IV, sections 3.3. and 5.2.3. on questions and non-answer responses).

2.2.2. Preference

Preference is a CA concept that dates back to Sacks’ lectures and has since then been treated in various manners (also by himself) and gave rise to some debate (Bilmes, 1988; Boyles, 2000). A major criticism addressed by Bilmes (1988) is that the notion of preference has been taken up and used in occasionally incompatible ways. A major problem may be that psychological preference and conversational/structural preference are not always thoroughly distinguished.

Additionally, it may be appropriate to differentiate between two main aspects of preference, namely one that relates to the organization of initiative and responsive actions, and one that relates to social interaction more generally (Sidnell, 2010; Pomerantz & Heritage, 2012). In this section I focus on the first aspect of preference, more precisely the preference of responsive actions to first pair parts. I treat the second aspect of preference, which is related to the ranking of alternative ways of interacting, in section 2.3. (preference for self-repair) and in chapter IV, sections 4 and 5. (preference for progressivity, preference for answers, preference for selected speaker to answer).

As already mentioned, first pair parts can make relevant the accomplishment of one specific action (e.g. greeting – greeting) or *legal* alternatives (grant or refusal in response to an invitation; Sacks, 1987). Among the legal alternatives that relevantly fill in the slot after a first pair part, there is always one alternative that is preferred over the other. According to Bilmes (1988), there can be three or more alternatives with respect to the action responding to an FPP:

- the response is preferred (X),
- the response is dispreferred (Y)

- the response is absent (N)

What defines preferences is the principle that if X is preferred, then N implies necessarily Y (ibid.:65). The example provided by Bilmes (1988) is that: when you show an artwork to a friend and he does not respond (N), it is the preferred action, namely praise (X), that is noticeably absent; and this absence in turn is understood as a dispraise (Y). By contrast, the same absence of response is *not* understood as a *lack of dispraise* (in the sense of ‘*he did not dispraise the work, so he likes it.*’). A common formulation in CA is that the preferred action is the ‘invited action’, e.g. that an offer invites an acceptance. According to Bilmes (1988) however, this is combining a structural and a psychological understanding of preference. While denials are the preferred action in response to an accusation (because N in response to an accusation implies acceptance, i.e. denial is officially absent, i.e. denial is preferred), it would be misleading to say that accusation invites denial.

It is important to highlight that the preferred action is the action that addresses the *normative expectations* of the first pair part. This does not imply, however, that the speaker or the recipient *personally* prefers this specific action. For instance, I can personally prefer to refuse an invitation, but there is a preference for acceptance – this becomes evident in the fact that an absence of response after an invitation is regularly interpreted by the inviter as indicating a refusal. Moreover, the *normative expectations* of a first pair part cannot be addressed, the response to the first pair part commonly makes nevertheless visible that these normative expectations exist; e.g. the refusal in response to an invitation is commonly accompanied or consists of an account why the invitation cannot be accepted. This account proves that the participants orient to the normative expectation of an acceptance, i.e. the preferred action.

Caution must be exercised however with generalizations and oversimplifications which tend to define preferred and dispreferred actions for “*gross action categories*” (Pomerantz & Heritage, 2012:223). As stated above, acceptance in response to offers for example are regularly seen as preferred response – however, what happens when the offer is for example ‘*do you want the last piece of cake*’ (Pomerantz & Heritage, 2012:223). In their discussion on the weaknesses of how preference has been used within CA, Pomerantz & Heritage (2012) state that participants in fact make subtle distinctions within the “*gross action categories*” (ibid.:223; which analysts often disregard), and that they “*(..) make determinations about the appropriateness/inappropriateness of agreeing, disagreeing, accepting, rejecting, correcting, requesting, and so on, based on context, so studying preference principles as they relate to how the participants view each other and the situation is a promising direction for future studies.*” (Pomerantz & Heritage, 2012:225f.). Likewise, Boyle (2000) states that participants attempt to respond in a manner that is, whenever possible, *seen but unnoticed*, and in each situation participants have to locally evaluate what would precisely be such a response that is seen but unnoticed, i.e. the preferred response (cf. also Ten Have, 1999, on the caution concerning the use of analytic frames of CA traditional work as ‘coding schemes’).

Pomerantz (1984c) has provided a groundbreaking investigation on preference organization in her study of *preference for agreement* in assessment sequences. The author showed that participants do not provide agreement and disagreement of an assessment (as an FPP) in the same manner, i.e. that their response turns show different structural features. Agreements get produced in a straightforward manner, without gap between the FPP and the SPP, without turn-initial delays e.g. through hesitation markers and without

any mitigation. This type of turn design has been called *preferred action turn shape* (Hutchby & Wooffitt, 2008:46). It is regularly observable not only in agreeing responses to assessments but also in grants of requests, acceptances of invitations or providing of answers. On the other hand, Pomerantz (ibid.) observes disagreeing SPPs to assessments are designed with *dispreferred action turn shape*. This implies inter-turn silences, turn-initial delays (e.g. uhm) and pauses that push the proper response to the end of the SPP (Sacks, 1987; typical for this are proforma agreements, Sidnell, 2010; cf. also Fasel Lauzon, Pochon-Berger & Pekarek Doehler, 2009; Pekarek Doehler & Pochon-Berger, 2011). The *preferred action turn shape* has been explained by Sacks (1987) as being built on the interaction between agreement and contiguity, and between disagreement and noncontiguity. This interplay entails that preferred responses commonly occur contiguously with the FPP, which means that they are directly juxtaposed to the end of FPP. By contrast, dispreferred responses are regularly produced non-contiguously, which means the responses come with delay, i.e. they are preceded by pauses, hesitation markers or elements like ‘I don’t know’ or ‘well’ (there are inter-turn gaps, as well as intra-turn delays/turn-initial delays pushing the answer deep into the turn). According to Pomerantz (1984b, 1984c) as well as Heritage (1984a), the difference between preferred and dispreferred turn shapes is most powerful resource for participants for the management of social solidarity. The SPP-speaker’s inter and intra-turn delays function as harbingers of an upcoming disagreement and provide the participant who produced the FPP with a resource for potentially modifying his initial turn so as to avoid an upcoming disagreement, rejection or non-answer response. Note however that caution must be exercised again in associating preference organization to specific turn shapes in a decontextualized manner. As Bilmes (1988) suggests, also dispreferred answers can be provided in a straightforward manner, for example in a political debate. By contrast, when a preferred answer as an acceptance of an offer is provided e.g. with delays, the sincerity of this answer may not be questioned. On the basis of this, Bilmes (ibid.) refers to the dispreference markers as reluctance markers and thereby avoids associating them strictly with preferred or dispreferred action.

From the above it can be concluded that the notion of preference is an important one for the way in which especially adjacency pairs (but not only) are built in social interaction, but that caution must be exercised with respect to its application to the analysis according to a rule-like schema. Also, a different type of preference in terms of ranking of alternatives builds an important basis for how courses of action are designed by participants (preference of self-repair, preference of progressivity). These are discussed separately in section 2.3. of this chapter and in chapter IV, section 4).

2.2.3. Excursus: Sequence, course of action and activity

The terms *course of action* and *activity* are ubiquitous in CA studies, but they are not always used in exactly the same way. Fox (2010) for example emphasizes that by contrast to the term of sequence that refers to the sequential unfolding of turns by different participants, course of action includes “*actions that are produced simultaneously, including nonverbal actions by both current speakers and by others.*” (ibid.:214). Schegloff (2007) conceives a course of action as a sequence of actions “*that have some shape or trajectory to them*” (ibid.:2). By using the term course of action, Schegloff emphasizes the fact that each turn must be inspected for what it does in interaction, for the *action* it implements. Likewise, also a series of turns must not only be understood as a sequence but must be inspected for the *course of action*

it implements. Schegloff further proposes that the notion of sequence is used for these courses of actions when it can be shown that they are organized by participants by general patterns or structures (ibid.:3). Sequence is used when pointing to the technical and structural dimension of how turns unfold, while course of action is used when one emphasizes the actional dimension of what these turns and sequences implement.

In a similar vein, Heritage & Sorjonen (1994) refer to sequences as unexpanded or expanded adjacency pairs (as Schegloff), whereas courses of actions are understood as “*constituted and undertaken in and through a series of [sequences]*” (ibid.:4). Thus, according to Heritage & Sorjonen, courses of action can be ‘bigger’ than sequences by involving multiple sequences; Schegloff seems to put sequence and courses of action on a par, differentiating them only with respect to the emphasis on the technical or the actional fold. Heritage & Sorjonen (1994) by contrast put on a par course of action and activity, saying that the activity is the work that is achieved across a sequence or a course of action. An activity is a “topically-coherent and/or goal-coherent course of action”, as e.g. instance talking about the weather, a diagnosis or claiming social security (ibid.:4). The authors further demonstrate that it is necessary to distinguish between sequence and activity: for example, the activity of ‘filling in the form’ during the visit of a nurse at the home of new parents is accomplished by means of different question-answer sequences, and the *and*-prefacing of new questions enable the speaker to tie separate sequences together and build a coherent course of action (despite departures from this course of action). Likewise, in their discussion on progressivity in interaction, Stivers & Robinson (2006) make a clear distinction between the promotion of activity and the promotion of sequence. According to the authors, the non-answer response ‘I don’t know’ for example technically closes the sequence (adjacency pair) but it does not promote the progress of the activity (ibid.:372; chapter IV, section 4.4.4.). Stivers & Robinson conceive sequences as vehicles for activities (ibid.:375).

Based on the abovementioned points, I use sequence when referring to the technical nature of how turns are built one after another and how each turn responds to the sequential implicativeness of previous turns. The basic sequence is the adjacency pair, which can be expanded (pre-, insert and post-expansion). A sequence (minimal or expanded) is referred to as a course of action when the emphasis is on the actional dimension – in this case the focus is put on the actions that are accomplished by the speakers, but also simultaneously by the recipients (cf. Fox, 2010). On the basis of these assumptions, I consider that a sequence can be technically closed by a non-answer response. In this case I understand the course of action as not completed, because the initially stated question is still pending, hence the action that responds to this question is not provided (cf. also Rossano et al., 2009:246, considering that a course of action is ending when the “*gist of the initial action*” is completed). Furthermore, I reserve the term course of action for smaller units than activities. I conceive activities as being goal-oriented and related to an agenda (cf. Heritage & Sorjonen, 1994) and as not being defined necessarily in sequential terms. Relevant activities in classroom are for example ‘explaining an exercise’ or ‘correcting an exercise’. The whole activity is built up of different courses of action.

2.3 Repair organization

Repair organization refers to an ensemble of practices that participants draw on for addressing and solving problems in hearing, speaking and understanding. The element that is addressed by a repair is

referred to as the *repairable* or the *trouble source* (Schegloff et al., 1977; Schegloff, 2000a). In their seminal paper, Schegloff et al. (ibid.) describe the repair organization by means of two basic dimensions with respect to the trouble source turn: who initiates the repair (the speaker or the recipient of the trouble source turn), and who accomplishes the repair (the speaker or the recipient of the trouble source turn). Against the background of these dimensions, each repair in interaction falls into one of the following categories:

- *Self-initiated self-repair*: the speaker of the trouble source turn initiates a repair and himself accomplishes the repair. Common techniques for self-initiating self-repair are cut-offs, sound stretches and hesitation markers (ibid.:367).
- *Other-initiated self-repair*: the recipient of the trouble source turn initiates a repair, but it is the speaker of the trouble source who carries out the repair. Common initiation techniques are the use of *what* or *huh* by the recipient of the trouble source turn (cf. Drew, 1997), as well as partial repeats with rising intonation and wh-questions (Schegloff et al., 1977:367).
- *Self-initiated other-repair*: the speaker of a trouble source turn initiates repair, which is then accomplished by the recipient of the trouble source turn.
- *Other-initiated other-repair*: the recipient of the trouble source initiates and carries out the repair (frequently observable in learning situations and discussed under the term of correction).

Additionally to these categorizations, the different repair initiations can occur at four different placements, called the *repair initiation opportunity space* (Schegloff et al., 1977; Schegloff, 2000a). It can occur within the trouble source turn (*same turn repair initiator*) or in the turn transition space after the trouble source turn (*next turn repair initiator*, NTRI; can be self- or other-initiated). Repair can also occur in the turn subsequent to the next turn (*third position repair initiator*), i.e. when the trouble source speaker sees in the reaction of the co-participant that his first turn has been misunderstood, so that he will repair with ‘no I mean xy’. Finally, the repair can occur at fourth position. For instance, a question by participant A can be answered by B; a follow-up question by A then makes apparent that in fact B did not understand the initial question from A, and B will address this misunderstanding. The fourth position corresponds to “*the last systematically provided opportunity to catch (...) divergent understandings that embody breakdowns of intersubjectivity*” (Schegloff, 1991a:158; 1992a), thus when the repair initiation opportunity space has passed, no repair is initiated. With respect to this repair opportunity space (which is four turns long), it has been shown that with respect to other-initiations of repair, the longer the distance between a repairable and the initiation, the more complicated it gets for the repair to be successful because the precise localization of the repairable gets difficult (Drummond & Hopper, 1991). This results in the fact that other-initiation is canonically accomplished in next-turn position (Schegloff, 2000a).

Schegloff et al. (1977) provide empirical evidence for the fact that there is a preference for self-initiation of repair as well as a preference for self-repair²⁸. Preference for self-initiation becomes most clearly observable in the fact that other-initiation of repair is regularly not occurring within the trouble source

²⁸ Note that this type of preference is different than that described in section 2.2.2., as it does not refer strictly speaking to the preference as defined in structural terms, but a ranking of alternatives towards which participants in interaction orient as a normative expectation (Bilmes, 1988).

turn but is delayed and “*withheld a bit past the possible completion of trouble-source turn*” (ibid.:374). This delaying provides the trouble source speaker with the opportunity to self-initiate a self-repair. Moreover, it appears that the techniques for other-initiating repair regularly locate the trouble source but do not repair it. By contrast, the other-initiator of repair indicates a problem but provides an opportunity for the trouble source speaker to self-repair. The preference for self-initiation can be related to a more general preference in interaction, a preference for progressivity (chapter IV, section 4 for more details). In a nutshell, self-initiated self-repair is carried out in one and the same turn, i.e. it does not make necessary any insert expansion. In example 3, participant A carries out a same turn self-repair

Example 3

A *let himself celebrate it would th- this would be the base form*
 liess sich prei:sen >wäre es d-< das wäre die (..) *grundform*

After the launching of the turn, the participant does a cut-off, indicating a self-initiation of repair, and then he straightforwardly self-repairs with *das wäre die grundform* (‘this would be the base form’). Initiation and repair are thus carried out in one turn and do not make necessary an insert sequence by a co-participant. By contrast, any other-initiation of repair implies a further turn and an insert sequence, breaking thereby the progressivity of interaction.

Example 4

A *did you show it*
 >hast du es gezeigt?<

B *pardon*
 °wie?°

A *did you show the notebook to miss roth*
 hast du das heft frau roth gezeigt?

It is interesting to note however that when a participant other-initiates repair, it would be (sequentially) less disruptive if he would also directly carry out the (other-) repair. In this case the preference for progressivity is in conflict with the preference for self-repair; this points to the fact that the preference for self-repair is prevailing over the preference for progressivity.

CA scholars have proposed to think of other-initiation of repair as being organized in two different types of orders of preference according to which participants chose repair initiators. Schegloff et al. (1977:369) proposed a specificity scale (cf. Egbert, 2009, for an account in German). The authors suggest that repair initiators can be more or less specific in their strength of locating the trouble source. The less specific repair initiators are *huh* and *what* (Schegloff et al., 1977) or in German *hm*, *was* (with raising intonation) or *bitte* (Egbert, 2009)²⁹. These non-specific repair initiators are also referred to as *open class repair initiators* (OCRIs, Drew, 1997). OCRIs indicate a problem with the entire preceding turn but do not specify which element poses a problem in the preceding turn. More specific repair initiators are wh-

²⁹ Note that *was* with final-falling intonation has been shown to seek for specification of a referent, it is therefore more specific and it displays an understanding problem (Egbert, Golato & Robinson, 2009).

questions or partial repeats, addressing more specifically part of the preceding turn as problematic (e.g. *who did you see?*). As Egbert (2009) notes, these initiators are also under-specified with respect to the type of problem the recipient has, i.e. if he did not hear or did not understand something. By contrast, the most specific repair initiators, candidate understandings (e.g. *you saw monica?*), display that the preceding turn was heard and proposes a potential interpretation of the turn. Commonly, candidate understandings are reformulations of the preceding turn and they are often designed as Y/N-questions that the co-participant can ratify. Often they are accompanied with *you mean* or *meinst du* in German (Egbert, 2009). Schegloff et al. (1977:369) note that there is a preference for more specific repair initiators over less specific repair initiators, shown in the fact that less specific initiators get self-interrupted in favor of more specific repair initiators. Following the idea of an order of the strength of repair initiators with which they single out the trouble source, Clark & Schaefer (1987) report that problems in hearing in telephone conversations are more often indicated with specific than with non-specific initiators, making apparent the realization of the *strongest initiator rule*.

Another type of order of repair initiators pertains to the type of problems they address. According to Svennevig (ibid.:335), when repair sequences are extended (i.e. the problem is not resolved with one repair; cf. *multiple repairs* by Schegloff, 2000a) one observes that repair initiators which can be equally specific are first understood as addressing problems in hearing, then as addressing problems in understanding and only ultimately as problems in alignment, namely a disagreement (cf. also Pomerantz, 1984b). The preference for addressing first hearing problems may be related to two different aspects. According to Svennevig (ibid.) it may be less delicate for a participant to display a problem in hearing than a problem in understanding because co-participants may read the latter as a lack of competence (cf. already Sacks, 1992b:413). Furthermore, as already suggested by Pomerantz (1984b:156), participants tend to “*try an easy solution first*”. Pomerantz (ibid.) has shown that a problem is initially treated as a problem in reference before being addressed as foreshadowing a disagreement. According to the author, this procedure may respond to the fact that reference problems are less complicated and less costly to repair than problems in alignment between participants. This also pertains to the management of social solidarity and face. Further studies by Selting (1987a, 1987b, 1988a, 1988b) underpin this result on the basis of institutional German interaction (administration department, *Bürgerverwaltung*). She reports that both employees of the administration and clients show a tendency to rather indicate or address problems in hearing than problems in alignment (i.e. there is a preference for interpreting problems as local understanding problems than global ones). Selting (1986) interprets this preference as bearing testimony of a preference for ascribing the problem to the recipient of the trouble source (i.e. hearing) over making the trouble source speaker responsible for the problem (i.e. alignment). This seems in line with what Svennevig states when observing that repair initiators addressing hearing problems come in a straightforward manner, while second repair initiators addressing more delicate issues come only delayed, after an inter-turn pause. A classroom study by Mazeland & Zaman-Zadeh (2004) further underpins this finding, showing that lexical problems are first addressed as hearing problems. The authors explicitly state that the preference for hearing problems first may be related to an attempt to minimize the break in continuity.

An important issue in repair organization is the question as to what extent specific repair initiators are addressed systematically by co-participants as indicating a problem in hearing, understanding or

alignment. In this regard, Selting proposed that a type of repair initiation makes relevant a specific repair (1987a, 1988b). This does not imply however that the repair initiator is systematically related to a same type of trouble source, but only that at the surface of interaction same initiators set expectations for specific repair practices (e.g. *what* making relevant a repetition). Drew (1997) highlights the impossibility of relating a repair practice to a type of trouble source. His examples provide evidence for the fact that OCRIs can adumbrate hearing problems but can also be used for treating problems in topical mismatches of turns. Likewise, Egbert (2009) shows that other-initiated repair can be deployed as a means of splitting a conversation in two participation frameworks (*schisming-inducing*; cf. Egbert, 1997) or to the contrary merging two existing participation frameworks. In this sense, her examples also show that specific repair practices may not be unilaterally related to one type of conditional relevant action as proposed by Selting (*ibid.*). Nevertheless, there seems to be something like canonical use of OCRIs as indicating problems in hearing (Drew, 1997; Svennevig, 2008). According to Svennevig (*ibid.*), the fact that they are not always addressed as problems in hearing reflects precisely their interactional potential: by signaling a problem in hearing, repair initiators may address more delicate matters as e.g. problems in understanding as well as problems in alignment without explicitly doing so (cf. also Sacks, 1990a).

The discussions on ordering of repair initiators and preference organization in repair practices is based on conversations with adult hearing persons. As initially suggested by Schegloff et al. (1977), repair organization may be different in interaction with what they called *not-yet-competent* participants (*ibid.*:381). In these interactions for example, other-repair may be exploited as a device for socialization and may therefore not be a dispreferred repair practice. In a similar vein, repair in classroom interaction is sensitive to the setting and the participants involved. How repair organization is implemented in classroom will be further discussed in chapter IV, section 3. It is important to note also that the preference for signaling hearing problems over signaling understanding problems, based on the assumption that the former are less problematic in regard of the presentation of the self may be different in interaction with hard-of-hearing participants. In this regard, Skelt (2006) suggests that hard-of-hearing adults' management of repair may be influenced by an attempt to de-emphasize that the participant is not 'an ordinary speaker' (e.g. by letting pass).

3 A holistic perspective on social interaction

This section is dedicated to a discussion of select literature with regards to the recently growing and consolidating body of research that considers social interaction as a fundamentally multimodal accomplishment. In section 3.1. I briefly discuss how CA developed from a predominantly vocal approach towards an integrated and holistic approach to social interaction. Section 3.2. then is dedicated to a selection of studies that have investigated the basic organizations of social interaction (cf. section 2) can be described within a holistic perspective. The section ends with a short statement on the current issues and challenges that are open for discussion (section 3.3.).

3.1 *Multimodality and embodiment in CA of spoken language interaction*

From its inception, Conversation Analysis has aimed to unravel the apparently chaotic nature of social interaction. In this endeavor, Sacks, Schegloff & Jefferson (1974) launched fine-grained analyses of how participants build interaction on a turn-by-turn basis, accomplishing thereby the sequential order of interaction. This initial focus on the sequentiality of interaction implied an emphasis on the unfolding of vocal speech. Studies paying attention to the fundamental contribution of bodily-visual resources to interaction were nearly non-existent. Sacks & Schegloff's (2002[1975]) analysis of how gestures and other bodily movements unfold in social interaction represents a notable exception. Sacks & Schegloff (ibid.) characterized gestures and other body movements as being sequentially organized, characterized by a beginning and an end, noting that the movement ends in a position that converges with the position where the movement has started from, the *home positions*. It is noteworthy that this study does not focus on any simultaneously deployed resources but concentrates on the sequentiality of spatio-visually deployed resources. Further exceptions that draw attention to how diverse types of resources unfold sequentially but also simultaneously is Schegloff's examination of how gestures are deployed in relation to speech (1984), the pioneering work by the Goodwins (e.g. Goodwin, 1979 or M. Goodwin, 1980) as well as Heath's study of the organization of reciprocity in medical consultations (1984). Heath shows how the patients' displays of reciprocity, cast in terms of body movements and gaze, can elicit a first turn at talk from the doctor and thereby function as embodied sequence-initiating actions³⁰. The studies mentioned bear testimony to the fact that the integration of bodily-visual aspects has not been deliberately excluded by researchers who more or less strictly follow the CA agenda; i.e. that the lack of attention to visual resources in classical CA studies is not grounded in explicit theoretical assumptions that exclude these resources (Gülich & Mondada, 2008). Rather, the focus on the vocal speech modality results from the above-mentioned primary research aim that consisted in demonstrating that there is *order at all points* (Sacks, 1984a), as well as the low proliferation of video recordings in the early 1980s. Additionally, Erickson (2010) suggests that the use of vertical transcriptions may have consolidated an "*overemphasis on speech by which the larger 'whole' of social interaction - its collective temporal/spatial/bodily organization - gets short shrift analytically*" (ibid.:246f.) because they put forward the temporal and sequential unfolding of turns at talk.

In spoken language interaction, the emphasis on vocal speech implied a focus of attention on the verbal (i.e. linguistic) resources (except some vocal non-linguistic elements like inbreaths). As just mentioned, this area of interest presumably originated from methodological choices (audio data and vertical transcript), but its importance has also been accentuated by researcher's definitions of basic CA concepts. For example, despite the fact that Schegloff has shown the importance of non-verbal conducts in the organization of sequences (e.g. summoning of the phone, Schegloff, 1968), he clearly argues against considering non-vocal and non-verbal conducts as being 'turns-at-talk' (for a discussion cf. also McCleary & Leite, 2013). According to McCleary & Leite (2013), Schegloff's exclusion of gestures or embodied actions from the category *turn* (1999) is based on the fact that these do not appear in the vocal

³⁰ Heath also shows how a body movement can elicit a display of reciprocity (namely gaze), which in turn elicits talk. In this case a non-vocal resource is initiating a three-action sequence. "The body movement elicits the display of reciprocity and the display of reciprocity elicits talk. Thus we find a systematic relationship not only between a nonvocal action (the display of reciprocity) and a vocal action (turn continuation), but also between a nonvocal action such as body movement and a following nonvocal action, such as a display of reciprocity." (1984:257)

modality. Additionally, it may be suggested that this decision also relates to their non-verbal status. This interpretation is backed up with Schegloff's (1996) discussion of continuers (as *uh huh*; Schegloff, 1982) and of non-lexical elements in pre-beginnings which are vocal (e.g. inbreaths) but not considered as a being (part of) a turn because of their non-verbal status.

Against the background of these studies, it may be suggested that despite a non-exclusion of bodily-visual and non-verbal resources, classical CA studies make observable an overemphasis and prioritization of vocal and of verbal (linguistic) resources. In other words, vocal and verbal resources constitute the baseline of interaction. Visual and non-verbal means, as e.g. gestures or posture, are additional and secondary. By contrast to this logocentric view of human action in social interaction, a growing body of researchers working within CA converges on advocating a more holistic understanding of interaction (e.g. Ford, Thompson & Drake, 2013; Goodwin, 2000, 2007; Hayashi, 2003, 2005a; Hazel et al., 2013; Mondada, 2006; Schmitt, 2007). Within this perspective language is understood as being one among a range of semiotic resources that participants draw upon for the situated and collaborative organization of action. This perspective has been founded and consolidated by the extensive work from C. Goodwin. He convincingly demonstrated how participants build action by using a combination of several resources that *"mutually elaborate each other to create a whole that is both greater than, and different from, any of its constituent parts"* (Streeck, Goodwin & LeBaron, 2011:2). This is the basic idea of the holistic approach to social interaction. Within this perspective on the organization of human action, the vocal modality of spoken language (speech, prosody) is intrinsically tied to the use of spatio-visual resources such as gesture, posture or gaze, as well as to the material world in which the specific interaction is embedded³¹.

Goodwin's early accounts of the embodied organization of action in human interaction have built an important basis for a growing body of research that has further explored how participants to interaction rely upon and combine a variety of semiotic resources for interacting. These studies pertain to various interactional settings (e.g. conversation, classroom, workplace) and report on the exploitation of embodied resources and practices for different interactional purposes. Extensively researched issues are how gaze, gesture as well as posture or material manipulation intervene in displaying availability to engage in interaction and in establishing and sustaining reciprocity (Fasel Lauzon & Pochon-Berger, 2010; Ford & Stickle, 2012; Goodwin, 1981; Heath, 1984; Mondada, 2004, 2007a, 2007b; Mortensen, 2009; Szymanski, 1999). Further issues are how embodied resources are used in the organization of turn-taking and participation (Fasel Lauzon, Steinbach Kohler & Berger, 2008; Pochon-Berger, 2010; Schmitt, 2005a, 2005b; Schegloff, 1996; Streeck & Hartge, 1992; Streeck, 2007) or more generally in the organization of sequences and courses of action (Rossano, Brown & Levinson, 2009; Mondada, 2007a; Mondada, 2006d). Additionally, visual resources have been discussed as (constituting or being part of) embodied practices for displaying understanding (LeBaron & Koschmann, 2003; Hindmarsh, Reynolds & Dunn, 2011; Mondada, 2011a) or as resources in the establishment of intersubjectivity (Lazarton, 2004; Olsher, 2008; Seo & Koshik, 2010; Mori & Hayashi, 2006).

³¹ According to Streeck et al. (2011), the emphasis of this relation to the material world is what differentiates Goodwin's perspective from other work on gestures such as provided by Kendon or McNeill.

In the next section I go in some details of a selection of studies that emphasized the import of embodied conducts, and especially gaze, in the collaborative accomplishment of interaction (section 3.2.). Section 3.2.1. is dedicated to investigations that revealed how embodied practices intervene and shape turn-taking organization. Section 3.2.2. reports on two studies that focus on embodied resources and sequence organization. In section 3.2.3. I discuss some studies that focused on the import of embodied conducts in repair sequences. The last section of this chapter then restates the assumptions of a holistic approach to language and interaction as it is advocated by a growing body of research in CA and shows the conceptual discussions emerging from it (section 3.3.).

3.2 Gaze and other visual resources in basic organization

3.2.1. Turn-taking and sequence organization

Interactional researchers have long been interested in gaze conducts and its pervasive role in the management of turn-taking in interaction. A preliminary study on this issue has been provided by Kendon (1967). He examined how gaze conducts are deployed in dyadic interaction, focusing on the relationship between the participation status (speaker or listener) and the gaze direction. A basic result has been that speakers predominantly gaze at their co-participants towards the end of long utterances³², signaling thereby that the turn comes to completion and that they are reaching out for some response. At the same time, by gazing towards the co-participant the speaker can monitor if the co-participant is still attending and if he is ‘receiving’ the speaker’s turn (cf. also M. Goodwin, 1980). By contrast, at the beginning of long utterances speakers are reported to avert their gaze from their co-participants. Kendon (ibid.) interprets this conduct in two ways. First, the gaze aversion from the co-participant is meant to indicate that the participant is ready to talk and that he will actually take a turn. It is noteworthy that Kendon mentions also other embodied resources such as changes in head position which are used for indicating an upcoming turn at talk (*pre-beginnings*, Schegloff, 1996). In sum, Kendon states that “*such changes in behavior which precede the utterance itself clearly make it possible for each participant to anticipate how the other is going to deal with the actual point of change of speaker role, perhaps facilitating the achievement of smoother or more ‘adjusted’ changeovers than might otherwise occur.*” (ibid.:62). The second function of gaze aversion at turn beginnings (of long utterances) according to Kendon is related to a planning activity of the speaker who avoids cognitive overload. These interpretations are in line with Ehlich & Rehbein’s (1982) study on gaze in interaction in experimental and in natural settings. The experimental setting consisted in the task of two unacquainted persons getting to know each other. The interaction was organized basically in question-answer sequences. Ehlich & Rehbein examined specifically the gaze aversion of the recipient at the end of the question turn of his co-participant. They attributed the following functions to the gaze aversion:

- inform the questioner that the participant is in a mental search process
- inform the questioner that the question has been received and that its response is in progress
- the recipient thereby avoids that the absence of an answer is interpreted as a violation of the sequential organization

³² Kendon defines long utterances as those with more than five words.

- the recipient thereby avoids being disturbed in his thinking process by a repair of the questioner

It appears that Kendon (*ibid.*) as well as Ehlich & Rehbein (*ibid.*) refer to the function of cognitive planning (cf. also Baker, 1977 on sign language), which resonates with previous psycholinguistic studies on gaze aversion. Without contesting the possibility of gaze aversion as a regulatory function for cognitive processes, these issues go beyond what we can grasp when adopting an emic perspective as in CA (cf. chapter III). The examination of gaze conducts in a CA perspective must be confined to the sequential consequences that are observable at the surface of the interaction, bearing testimony of the way that participants treat the gaze conduct of their co-participants. It was Goodwin (1979, 1980) who first provided evidence for the fact that phenomena apparently translating cognitive states may be exploited interactionally. In his studies on collaborative sentence construction Goodwin demonstrated that speakers make use of hesitations and restarts as a means of establishing mutual gaze at turn beginnings when their co-participants are not gazing back to them (*ibid.*, 1979, 1980; Rossano, Brown & Levinson, 2009, did not find that same pattern in Italian interaction). All in all, the results of such interactional studies have demonstrated that phenomena at the interactional surface (as a hesitation signal) cannot be unambiguously related to a cognitive origin, as the participant can also deliberately use it for interactional purposes.

A further early study on the importance of gaze in social interaction has been provided by Heath (1984), already mentioned earlier. He showed how gaze and posture are exploited by patients as resources for displaying their availability for engaging in interaction. In a similar vein, Mortensen (2009) has shown how participants can establish reciprocity in interaction prior to the proper turn beginning; participants may e.g. claim incipient speakership and thereby launch a specific participation framework by means of gaze, inbreaths or facial expressions. By contrast to establishing reciprocity, Fasel Lauzon & Pochon-Berger (2010) have shown how gaze aversion from the teacher in classroom interaction is used by students as a means of displaying their non-availability (cf. also Mortensen, 2008), which may be backed up with a claim of insufficient knowledge in case the teacher nevertheless other-selects the student.

In addition to the exploitation of gaze, several studies demonstrate how gestures and more precisely their temporal deployment are used as resources for projecting a vocal turn initiation (Mondada, 2004, 2007a, 2007b) or a turn ending (Fox, 1999; Streeck, 1995; Mondada, 2006b; Schegloff, 1984). Other studies reveal how participants rely upon gestures and other embodied conducts for projecting specific types of action. Streeck (1995) shows that participants can use embodied resources to ‘foreshadow’ what will follow in a turn. He reports for example that gaze aversion and iconic gestures function as harbingers for a word search (cf. also Streeck & Hartge, 1992; Streeck, 2009). Additionally, gesture and more precisely the holding of gestures are exploited by participants for embodying their ongoing expectation for the accomplishment of an action that has been projected in the initiation of a course of action (M. Goodwin, 1980; Groeber & Pochon-Berger, 2013; Sidnell, 2005; Streeck, 2007). These studies emphasize that the import of visual resources goes beyond its contribution to the organization of turn-taking. By contrast, gaze and gestures are powerful resources for the organization of action and sequence. Rossano et al. (2009) have emphasized this point by suggesting that the functioning of gaze conducts is not limited to the turn-taking organization but is more appropriately described as a resource for the organization of

action in interaction. On an even more global level, Oloff (2013) has recently provided an interesting insight into how participants who drop out of talk because of overlap may display either further engagement in the activity trajectory or, to the contrary, disengagement from the whole activity with embodied resources (e.g. leaning back).

3.2.2. Repair organization

Gaze and embodied conducts have also been studied specifically in relation with repair sequences. Gaze conducts and gestures can either constitute or be part of the repairable, they can be used as repair initiators, or they may be exploited as a resource for carrying out the repair. As already mentioned, Goodwin (1980) demonstrated that speaking participants treat the absence of mutual gaze at turn-beginnings as a repairable. The current speaker deploys resources such as hesitations and restarts as a means of establishing mutual gaze with the co-participant. The relation between gaze and repair is somewhat different in Egbert's (1996) examination. In an attempt to find some systematicity between the use of different types of repair initiators, the author examined a small collection of the repair initiator *bitte* ('pardon'), which occurs only rarely in face-to-face interaction and much more frequently in telephone conversation. Egbert (ibid.) found that the use of *bitte* as a repair initiator is systematic and that it is responding to the contingencies of interaction. Participants tend to use *bitte* when mutual gaze has been absent during the repairable.

Other and quite recent studies on embodied conducts and repair have focused on how participants design their repair practices (initiations and repair) not only by means of vocal and linguistic but also visual resources. Olsher (2008) for instance showed how repair is carried out by gestures in interactions among language learners. Seo & Koshik (2010) as well as Mortensen (2012) on the other hand concentrate on repair initiations and propose an analysis of body leans and head pokes as embodied repair initiating practices. These findings contribute directly to the discussion whether embodied practices can be considered interactional 'turns' which are on a par with vocal and verbal turns (Schegloff, 1999). However, even if they were not explicitly speaking of repair sequences, initial observations that non-vocal conducts can engender reformulations of previous turns have already been made earlier, e.g. by Auer (1984) and later by Krafft & Dausendschön-Gay (1993). Auer's (1984) study was basically concerned with conversational code-switching. He found that in bilingual interaction the change from one language to another was regularly responding to an initial absence of response from the co-participant. More precisely, first actions that were either not oriented to by co-participants (absence of reaction) or that were followed by an open class repair initiator (e.g. *was*, 'what'), the participant produced a bis-version of the first action, a *non-first first*, by changing language. On the one hand, Auer (1984) treats the notable absence of answer as a *covert problematization*, on the other hand he clearly states that it is "*avoiding initiating a repair sequence*" (ibid.:100). This may account for why he refers to them as *non-first firsts* and not as repairs. What appears to be missing in Auer's (1984) examination however is an attention to how precisely the silence is designed with respect to gaze conducts or other embodied resources (cf. chapter VII).

Following a similar line of argument, Krafft & Dausendschön-Gay (1993) were interested in reformulations as they are accomplished in interaction with language learners. Krafft & Dausendschön-

Gay (ibid.) presented the ‘*séquence analytique*’ as a method that participants rely upon for managing problems in interaction. The method consists in four moves:

- a first turn that establishes conditional relevance for a second turn,
- a request for a *bis-version* of the first turn (or a *non-first first* in Auer’s terms)
- a *bis-version* of the initial turn,
- and the accomplishment of the response, the second turn.

What is noteworthy is that the authors treated requests for repeating a first pair part (e.g. through *what*) and a silence (absence of answer) as a same practice for eliciting a *bis-version* of the initial action. The role of silence as embodying an active role is made explicit by the authors when stating that the *bis-versions* are other-initiated reformulations (Gülich & Kotschi, 1983). Thereby, silence is understood as having an initiating function. Note also that despite an absence of empirical examples, Gülich & Kotschi (1983:321) already suggested that gesture or facial expressions may be used for indicating problems in understanding and therefore count as reformulation markers.

3.3 Challenges for a holistic approach to social interaction

The studies discussed above have considerably consolidated the understanding of face-to-face social interaction as being, per definition, a multimodal accomplishment (Stivers & Sidnell, 2005; Hougaard & Hougaard, 2009; Mondada & Schmitt, 2010; Hazel, Mortensen & Rasmussen, 2013). The studies contribute to the growing body of research which adopts a holistic approach to social interaction. Within this approach, researchers propose avoiding to foreground the verbal and the vocal modality as the baseline of human conduct and to conceive the bodily-visual resources as complementary to the former. Nevertheless, one has to admit that the concrete and total adoption of such a holistic approach is very challenging. Researchers continue to transcribe all vocal conducts, whereas the bodily-visual displays are only selectively annotated. This procedure basically responds to the necessary time management of research, as all conducts will not be relevant for analysis and can therefore be reasonably excluded. However, the necessary selection and choice we make as analysts must be accounted for (Deppermann, 2013a; cf. also section 1.4.). Nevertheless, this transcription procedure to some extent contributes to the continuation of the logocentric bias as it promotes the vocal conducts as a baseline.

A further challenge that the holistic approach brings with it is the question whether CA terminology is appropriate or adaptable to a study of embodiment and multimodality in interaction. For instance, studies that take into account the spatio-visual deployment of interactants’ participation to interaction contribute to the question whether these conducts can be conceived in terms of *turns* or *overlaps*, notions which are initially shaped for accounting for *turns-at-talk* (Gülich & Mondada, 2008; Hayashi, 2005a; Klippi, 2006; Schmitt, 2005a, 2005b; Mondada, 2007a; Mortensen, Spencer & Rasmussen, 2013; cf. also Oloff, 2013). Similarly, what is treated as silence or absence is to be reconceptualized against the background of such a holistic approach (cf. already Bergmann, 1982; M. Goodwin, 1980). With regard to overlap, Schmitt (2005b:78) for example asked the following:

“In Bezug auf die klassische overlap-Vorstellung stellt sich nun die methodologisch interessante Frage, wie sich das verbal definierte Konzept zur multimodalen Vorstellung von Interaktion verhält. Ist es sinnvoll, an dem verbalen overlap-Konzept festzuhalten und für die

beobachtbare Simultaneität auf anderen Ausdrucksebenen neue Konzepte zu formulieren? Oder ist es sinnvoll, dem Aspekt der Simultaneität so zu begegnen, dass er in einer multimodalen Variante neu formuliert wird? Wie könnte eine solche Neukonzeption dann aussehen?³³”

It has recently been explicitly pointed out by Deppermann (2013a) that multimodal turns seem to be an empirical reality. The question that arises is therefore not if there are embodied turns or not, but rather how we may rethink basic CA findings (e.g. one speaker at a time, turns consisting in different TCUs) within such an approach (ibid.).

The current study contributes to the ongoing discussion of this potential reconceptualization of CA notions within the theoretical framework of multimodality. The particularity of the data under study in this thesis is that the participants are bilingual in a spoken and a signed language (cf. chapter IV, section 1 for more details). Note that similarly to what occurred in spoken language interaction, sign language linguists attempted to administer a clear-cut separation between verbal conducts (linguistic) and non-verbal conducts (non-linguistic). For a schematic and straightforward illustration of the different modalities and traditional subdivision of verbal/linguistic and non-verbal/non-linguistic status between sign language and spoken language, consider the table below:

	Spoken languages	Signed languages
Linguistic / verbal	Vocal modality	Spatio-visual modality (signs; non-manual features)
Non-linguistic / non-verbal	Spatio-visual modality Vocal modality (vocalizations)	Spatio-visual modality (gestures; non-manual features)

Table 1

As the table illustrates, in signed languages verbal conducts and non-verbal conducts are both deployed within the spatio-visual modality. This implies that a hasty and superficial separation between verbal and non-verbal status as reflected by two different modalities is not possible in signed languages. However, it is precisely this definition of spatio-visual phenomena as being either part of the sign language linguistic system or of non-verbal gestures which constitutes a most important research agenda of sign language linguists. The challenge of this attempt is that a same feature, as e.g. raised eyebrows, can be attributed both linguistic and emotive status (cf. chapter IV, section 1). A great body of research is concerned with grammatical descriptions of signed languages, making necessary a clear-cut separation between verbal and non-verbal conducts. In this sense, the logocentric view is prolonged also within sign language studies even if it is not reflected in a separation between two different modalities of production (visual vs vocal conducts).

³³ Translation: A methodologically interesting question pertaining to the classical conception of overlap is how the concept, initially defined in terms of verbal conducts, relates to a multimodal understanding of interaction. Does it make sense to maintain the verbal overlap-concept and to elaborate new concepts for the observable simultaneity on other layers? Or does it make sense to approach the aspect of simultaneity by proposing a revised formulation of the concept of overlap within a multimodal approach? How could such a new conception be like?

4 Interaction studies on deaf and hard-of-hearing participants

Within sign language linguistics only very little research exists that adopts a CA perspective. In what follows I provide an account of studies that have focused on interactional phenomena in deaf and hard-of-hearing participants' interaction which have been further studied within a CA approach.

4.1 *Repair in interaction with deaf and hard-of-hearing participants*

As presented in section 2.3., problems in speaking, hearing and understanding are ubiquitous in face-to-face interaction. Their appearance is generally not an index of unsuccessful communication and they are solved by the participants, *in situ* and mostly without much effort. Findings of studies on deaf and hard-of-hearing persons' abilities to interact with hearing participants converge towards the conclusion that repair sequences are more frequent and regularly also longer than in hearing participants' interaction. These results stem from studies that draw on different theoretical and methodological frameworks.

A common assumption of studies on DHH participants' participation to conversation is that a competent interactant must be able to contribute to the fluency of interaction by efficiently overcoming communication problems (Cassie & Gibson, 1997; Cassie & Wilson, 1995; Gagné, Stelmachovich & Yovetich, 1991; Erber, 1996; Ibertsson, Hansson, Mäki-Torkko, Willstedt-Svensson & Sahlén, 2008; Jeanes, Nienhuys & Rickards, 2000; Most, 2002, 2003; Tye-Murray, 1991, among others). While most investigations focus on how DHH participants initiate repair (request for clarification), some studies concentrate on the DHH participants' ability to carry out a repair initiated by their co-participant (Caissie & Wilson, 1995; Jeanes et al., 2000; Most, 2003). A number of studies conclude that DHH participants are not efficient in asking for clarification. This finding is based on the assumption that non-specific repair initiators (e.g. *what* or *huh*) are less efficient than specific initiators as for example requests for specific information (e.g. *where are they going?*) or candidate understandings (e.g. *are they going to Berlin?*), but that they are heavily used (Tye-Murray & Witt, 1996; Caissie & Wilson, 1995; Caissie & Gibson, 1997). Some of these results must be treated with caution because the analysis of repair initiators is based on a coding scheme that ignores the specific relationship between a repair initiator and its repair. This means that repair initiators are studied out of their context and based on an a priori assumption that non-specific repair initiators are always less competent/efficient than specific ones. Hence, potential cases where non-specific repairs are necessary and successful are not taken into account (e.g. Caissie & Wilson, 1995; Jeanes et al., 2000). Caissie & Gibson (1997) by contrast examined the success of different repair strategies in relation to their repair initiators. These authors point out that the three types of repair initiations are equally effective (i.e. nonspecific request, specific request and candidate understanding). By contrast, the effectiveness differs in the different types of repair carried out by the co-participant - paraphrase and confirmation appear to be most successful in re-establishing understanding, while elaboration is not very successful. All in all, the authors propose that some combinations between initiator and repair type work better than others: for instance, paraphrase is very effective with all types of requests (nonspecific and requests for partial specific repetition), but partial repetition following nonspecific requests are not efficient. A shortcoming of the cited studies may be that the success or failure of re-establishing communication is taken as a direct consequence of the repair initiator or repair type. Different types of understanding problems or a differentiation between understanding and hearing

problems is not taken into consideration. This is however relevant especially for studies with prelingually DHH children who may present not only hearing loss but also language delays (Caissie & Wilson, 1995; Ibertsson et al., 2008; Jeanes et al., 2000; Most, 2003).

Another study that looked more precisely on the relationship between initiators and repair type is Tye-Murray & Witt (1996). They found that nonspecific repair initiators were regularly addressed with repetition (70%), requests for information with provision of specific information (77%), and requests for confirmation were regularly followed by feedback response (100%). Tye-Murray & Witt (ibid.) also included non-verbal initiators such as e.g. shrugs of shoulder or quizzical facial expression (Caissie & Rockwell, 1993; cf. also Jeanes et al., 2000; Skelt, 2006). Interestingly, they found that associations between non-verbal initiators and the repair type that followed are quite disparate. Non-verbal initiators were basically followed by repetitions (32%) and by restructurations of the original message (27%). To a lesser extent, they have been addressed with reduction of the original message (18%) or the co-participant has not addressed them at all (18%). Also Jeanes et al. (2000) revealed the use of non-verbal repair initiators, differentiating between implied (non-verbal) and unsolicited (staring at the table) requests and suggests that both of them index a lack of competence in initiating repair. I come back to this in the analysis, demonstrating that implicit repair initiators are not always incompetently initiating a repair sequence (chapter VIII). Two very recent studies have described the relevance of non-vocal actions for the management of interactional trouble in conversations between hard-of-hearing adults (acquired hearing loss) and their hearing familiar partners (Pajo, 2013; Pajo & Klippi, 2013). Pajo (2013) shows that HH participants' repair initiations are often preceded by non-vocal conducts as e.g. frowns or leaning forward which are often 'hold' during the vocal repair (she refers to these actions as *trouble posture*). Pajo & Klippi (2013) have further shown how two participants use non-vocal actions individually for indicating trouble: gaze shifts, leaning forward, turning one ear toward the speaker, frown, and then followed by immobility. Two of the five participants under study used also isolated visual initiators (without vocal resources). These participants have been further analyzed in Pajo & Klippi (2013). The authors show how the HH recipients use non-vocal actions during the hearing speaker's turn construction and that these actions build a basis for heightend collaboration between the hearing and the hard-of-hearing participant (e.g. the hearing participant segments his turn delivery, pauses, maintains mutual gaze while speaking). Pajo & Klippi (2013) did not find a systematic relation between these non-vocal actions and the interactional consequences and, as a consequence, they do not describe these actions as repair initiating actions. By contrast, they associate these actions as representing "*points on a continuum of collaboration instead of analyzing them as clear-cut categories of action types* (cf. Seo and Koshik 2010)." (ibid.:166).

Many of the abovementioned studies have been based on experimental settings, using for example referential communication or image description tasks (e.g. Ibertsson et al., 2008; Jeanes et al., 2000, Most, 2003; Tye-Murray, 1991). Emphasizing that real-life interaction may be very different from such tasks, other scholars arranged interaction among participants in semi-experimental settings, requesting participants to communicate about a topic of their choice or on the basis of topic cards (e.g. Caissie & Wilson, 1995; Caissie & Gibson, 1997; Tye-Murray & Witt, 1996). The requirement for more interactional data allowed conveying a truer picture of the hard-of-hearing participants' ability to deal with communication breakdowns. However, some basic claims emanating from experimental

frameworks have not been re-examined in detail on the basis of this new type of data. The lasting assumption that nonspecific repair initiators are less ‘competent’ than specific ones is a typical example of the fact that occurrences have been coded with pre-established categories and analyzed out of their sequential context. This has been put into question by a recent body of research that examines interaction with or among hard-of-hearing persons within a CA perspective (cf. Egbert & Deppermann, 2012a). On the basis of finegrained sequential and multimodal analysis, it can be shown that nonspecific repair initiators are not a priori a sign of incompetence but may be more appropriate in some specific contexts (Pajo, 2012; cf. also Drew, 1997 on spoken language interaction). Moreover, the effectiveness and the appropriateness of types of repair initiations have predominantly been approached in terms of a rapid establishment of understanding. However, Skelt (2006, 2007, 2012) points out that intersubjectivity is not the sole matter for those participants who continuously and simultaneously have to deal with issues related to identity and face management. For example, Skelt (2006) shows how hard-of-hearing participants and their hearing co-participants work hard on preventing repair sequences by means of finely timed gaze conducts. When a hearing speaker reaches potential turn completion he regularly launches turn expansions in case the HH recipient does not avert gaze and thereby project his incipient speakership. Thereby the hearing participant prevents upcoming interactional problems. Likewise, Pajo (2012) and Pajo & Klippi (2013) note that hard-of-hearing participants can rely on nonverbal conducts as for example leaning forward during a co-participant’s turn as a practice for inducing self-repair of the co-participant in a smooth and non-disruptive manner (cf. also Skelt, 2006). Hence, to study hard-of-hearing participants’ repair sequences solely in terms of effectiveness, without taking into account these issues, is providing only half of the picture. Egbert & Deppermann (2012b:46f) put it as follows:

“A major task for CA studies in hearing loss thus will be to analyze how both persons with hearing problems and their partners orient to the possibility of stigmatization, how they try to evade this problem and how they might run into dilemmata, e.g., of choosing between stigmatization, pretense, loss of information, coherence and progressivity in the interaction.”

Most importantly, Skelt (2007) mentions that hard-of-hearing participants have three possibilities when they encounter a problem in understanding: They may *let it pass*, they may delay their turn-beginning and give the co-participant the opportunity to self-repair or they may weakly display understanding without demonstrating it (as e.g. *mhm* or other claims of understanding; Sacks, 1992b). Note at this point that the possibility of ‘letting it pass’ and displaying understanding without demonstrating is not possible in all situations; according to the specific activities and interactional goals at hand, participants may be required to demonstrate that they understood or participants may assume that as long as no misunderstanding occurs, intersubjectivity is established. I detail these issues on intersubjectivity and progressivity in chapter IV section 4.

To conclude this section on repair in interaction with DHH participants, some characteristics of these repair sequences have been summarized by Egbert & Deppermann (2012b:46) as follows:

- The hearing participants de-emphasize apparent hearing problems (Skelt, 2007)
- Repair sequences are long and complex (Pajo, 2012)
- Trouble in interaction is explicitly related to hearing loss (Kaul, 2003)

- Co-participants adjust their speech to the hard-of-hearing co-participant (e.g., slow down speech, clearer articulation and louder volume (Kaul, 2003)).

4.2 Gaze in interaction with deaf and hard-of-hearing participants

Gaze conducts are of crucial import in face-to-face interaction (cf. section 3.2.). Within deaf and hard-of-hearing participants, the importance of gaze is slightly different within interaction in spoken interaction or in sign language interaction.

In spoken language interaction, recent studies examining hard-of-hearing adults' interaction within a CA framework have emphasized the importance of gaze for the management of interaction. Particularly Skelt's (2006) investigation has provided evidence for how hard-of-hearing persons and their hearing co-participants rely on gaze as a powerful resource for the management of turn-taking and sequence organization (cf. also Groeber, 2010). Basically inspired by the work of Kendon (1967), Skelt shows that HH participants' gaze withdrawal towards the end of their co-participants turns indicates incipient speakership. This interpretation of the HHs' gaze conduct as a meaningful practice is backed up with those occurrences when HH participants remain in mutual gaze past turn transition. In these cases namely, their hearing co-participants regularly expand their turns, provide further information, pre-empting thereby potential understanding problems (cf. also section 4.1.). Hence, hearing participants understand the HHs' gaze withdrawals in these specific sequential environments as displays of 'getting it' (Skelt, 2006, 2007; Pajo, 2012).

Furthermore, Skelt (2006, 2007) suggests that the HH's gaze toward the hearing participant is fundamental when the latter is the speaker, and even more importantly when the same is repairing a problem in understanding. She observes that when the hearing participant is addressing the HH participant (especially with repair) and the latter is not gazing back to him, the hearing participant regularly relies on gestures as a means of re-establishing mutual gaze or drops out (e.g. Skelt, 2006:7). This practice is especially relevant in interaction with hard-of-hearing participants whose ability to understand depends not only on the auditory but also the visual access to the spoken language (i.e. lipreading or other visual resources such as eyebrows). As exposed in section 3.2., the importance of gaze is by no means limited to hard-of-hearing participants but it may well be that its importance is particularly enhanced in these interactions.

When participants are predominantly using sign language, gazing to the participant who is signing is a necessary precondition for 'receiving' what is signed. Moreover, gaze direction in these interactions has linguistic status in a range of contexts (e.g. referential loci). An interesting issue related to gaze conducts in signed interaction is how participants deal with the fact that gaze is used for grammatical means and for interactional means³⁴. To date, there are only few conversation-analytic studies of signed interaction (but see Bono, 2012; Leite, 2008; McCleary & Leite, 2013; McIlvenny, 1991, 1995). In what follows I provide a short overview of turn-taking in sign language. The analysis of sign language does constitute

³⁴ The upcoming SNF project "Gaze and Productive Signing in a Corpus of Interactions of Deaf and Hard of Hearing Signers of Swiss German Sign Language" (Prof. T. Haug, HfH Zurich) deals with the question of how gazing at the hands as a grammatical aspect in productive signing is related to gazing at the recipient as a means of monitoring the recipient's attention and understanding.

an objective of this thesis, but as the participants under study are bilingual in a spoken and a signed language, some basic observations may be insightful for the upcoming analyses.

4.3 Turn-taking in signed interaction

Preliminary and rather detailed observations on turn-taking in sign language can be found in Baker (1977). Baker's study is based on Wiener & Devoe's conception of communication being organized by 'regulators', which are defined as multimodal behaviors that "*convey information necessary for the regulation of a turn-taking system*" (Baker, 1977:217). Thus, Baker's account of turn-taking does not follow analytical principles of Conversation Analysis but adopts a rather monological view of participants who 'signal' their intentions. This entails that the mutual coordination and adjustments by participants is not taken into account. Based on conversations between two dyads of deaf signers in a semi-experimental setting, Baker describes the organization of turn-taking by means of a set of *initiation regulators*, *continuation regulators* and *shift regulators*. The *initiation regulators* comprise those conducts that the incipient signer adopts for displaying that he will initiate a turn. The most fundamental initiation regulator is moving the hands out of *rest position* (Kendon, 1980; in rest position speaker's hands are relaxed e.g. on table or legs), providing a first visual index that the participant launches a turn. In case of absence of mutual gaze between participants, the incipient signer uses an *attention-getting device* (he waves his hand in the visual field of the addressee, taps on the table or the shoulder of the addressee) in order to establish reciprocity (in lieu of an address terms). Baker attaches great importance to the establishment of mutual gaze by stating that the "*speaker cannot initiate a turn until the desired addressee looks at the potential speaker*" (ibid.:221). As Coates & Sutton-Spence (2001) point out however, it seems that incipient signers may launch a turn even without previously established mutual gaze and without explicit attention-getting devices. Resources for this are restarts and holds of sign beginnings, allowing for a smooth turn beginning (cf. Goodwin, 1980 for restarts in spoken interaction). Additionally, Baker observes that during turn-beginnings signers are not gazing at their co-participants unless the turn is a question (cf. also Metzger & Bahan, 2001). This result however should be considered with caution. Martinez (1995) for example did not find a consistent pattern of gaze withdrawals at turn-beginnings (on Philippine Sign Language). Likewise, a preliminary analysis of turn-taking in Swiss German Sign Language (Deutschschweizerische Gebärdensprache, DSGS) within a conversation-analytic framework demonstrates that gaze withdrawals at turn-beginnings may be more relevantly described as displays of understanding (Groeber, 2011). Additionally, the study based on classroom interaction reveals that gaze conducts appear to be contingent to the use of co-present artifacts (and therefore have no compulsory function).

Continuation regulators refer to those 'signals' that manifest that the signer will continue past a first "information package" or after a short pause (ibid.:218). According to Baker, not gazing at the co-participant, speeding up the signing and not returning to rest position as well as holding/freezing the last sign are regulators enabling the current signer to continue. This implies that if a speaker is not willing to abandon his turn, he can either 'fill the pause' "*with small movements that indicate planning what next to say or by holding the final position of the last sign*" (ibid.: 227).

Finally, *shift regulators* are a set of behaviors used by the current or the incipient signer for signaling that turn goes over from a next signer. Shift regulators by the incipient signer are understood as signals he

deploys in overlap with the current signers turn. Baker notes that e.g. increased size and quantity of head nods, palm-up gestures or gaze withdrawals are indicating that a co-participant attempts to shift from recipient status to signer status. The current signer's fundamental shift regulator is his gaze towards the potential next signer, as well as a diminution of the sign rate and the return to rest position (see also McIlvenny, 1995; McCleary & Leite, 2013 on overlap). Moreover, the end of a turn is signalled (in Baker's terms) by the returning of the hands to rest position or by the holding of the last sign. Note that in Baker's account then, the holds at the end of "information packages" are understood as continuation regulators and as shift regulators.

Since Baker's seminal paper, there have been several discussions especially on the issue of overlap in sign language. Some scholars clearly contest the validity of Sacks et al.'s 'one-at-a-time model' for sign language interactions. On the basis of informal conversations by native signers, Coates & Sutton-Spence (2001) for example observe frequent overlapping and conclude that deaf signers do not orient to the interactional organization of 'one speaker at a time' but to a 'collaborative floor' as described in Edelsky (1981) for spoken language interaction among women. Already Baker (1977) stated that the visual mode of interaction in sign language *"allow[s] interactants to sign and observe another's signs without a loss of understanding, whereas in oral languages, it is more difficult to hear another's speech while talking."* (1977:216). Likewise, Cicourel (1973) stated that regular overlap in signing and the simultaneous packaging of different types of information may imply that signers are not *"constrained by sequential ordering or chaining rules"* (ibid.:168; cited by McIlvenny, 1995:138). These assumptions must be questioned however on the basis of fine-grained analysis of the participants' coordinated accomplishment of turn-taking. In a recent conversation-analytic account, McCleary & Leite (2013) provide compelling evidence for several *overlap resolution devices* (Schegloff, 2000b) deaf participants rely upon for managing overlapping signing.

4.4 Applying CA to the study of plurilingual HH students

Recently, also interaction with hard-of-hearing participants came to the center of attention within a CA framework. By contrast to experimental studies on hard-of-hearing participants' competence, the CA framework provides methodological tools for understanding *"how hearing loss affects everyday living"* (Antaki & Wilkinson, 2013:549). The results of CA studies on hard-of-hearing participants can provide valuable insight for hard-of-hearing participants themselves, for communication partners in general as well as professionals who are in contact with them (teachers, audiologists, doctors). For all of these actors, CA findings may be used to enhance awareness for problematic situations and can be exploited for developing strategies that enable participants dealing pre-emptively with communication problems (Egbert & Deppermann, 2012a). Fine-grained sequential analyses of audiological meetings may also be used for the teaching of professionals in health care (doctors, audiologists), sensitizing them for how HH participants describe problems they encounter in communication, related to the hearing prosthesis for example. Additionally, insights from real-life data may be used to train the professionals in being attentive not only to the technical and physiological aspects that are vehiculated by talk, but also psychological problems as stigmatization or unrealistic expectations (Heinemann, Matthews & Raudaskoski, 2012; Deppermann & Egbert, 2012). At a more global level, findings may be used for sensitizing the large public, thereby arriving at better knowledge of hearing loss, less stigmatization. This

in turn may have a consequence on how hearing participants collaboratively interact with the HH participants.

5 Summary

This chapter was dedicated to an overview of the methodological and epistemological framework of Conversation Analysis. This overview started with a presentation of some classic work within Conversation Analysis and has further included the findings pertaining to social interaction as a fundamentally multimodal accomplishment. The chapter ended with a brief statement on what a conversation analytic approach adds to the study of hard-of-hearing plurilinguals (with a spoken and a signed language).

Social interaction is organized in an ordered manner and the members of a group who participate in interaction collaboratively achieve this order by means of interactional practices. The aim of Conversation Analysis is to identify and describe precisely these practices. Practices can be a vocal or a visual resource (linguistic or non-linguistic), a turn design or a turn feature that is systematically used within a same sequential position and accomplishes the same action. The basic methodological tenets are to analyze these practices on the basis of naturally occurring data that are audio- and possibly video-recorded and then transcribed and annotated. The procedure of analysis reflects the characteristics of social interaction; most basically this means that the analysis proceeds on a turn-by-turn basis, following the theoretical assumption that social interaction is the result of a local and collaborative achievement of participants where each turn is responding to the prior turn and building the context for the following turn. For a CA investigation, special attention is paid to how participants build and take turns at talk, build sequence and how they repair problems in hearing and understanding. Since the 1980s, an ever-growing body of research has put the focus on how not only speech but also other bodily resources are used in an organized manner for making sense in interaction. Especially gaze but also gestures have been shown to have a fundamental bearing on turn-taking, sequence and repair organization. To date, an important body of research advocates a *holistic* approach to language and social interaction. Essentially such a perspective consists in understanding the different visual and vocal resources as being inextricably linked and as building an entity that is more than the mere addition of each resource. Methodologically this perspective implies refraining from taking the vocal modality or the linguistic fold as the baseline of interaction, which would in fact downplay spatio-visual conducts as additional and subordinate to language.

Within studies on deaf and hard-of-hearing individuals, a lot of research is based on experimental or semi-experimental data. Studies on communication with HH participants has shown that repair occurs frequently and that it is often long and unresolved. Moreover, several authors converge on the observation that HH individuals overuse unspecific repair initiators (e.g. what) that are seen as less efficient than specific repair initiators (e.g. which house). Recently, several researchers have started to put under scrutiny how interaction with participants with acquired hearing loss is organized within a CA perspective. They have for example highlighted how hard-of-hearing participants and their hearing participants collaboratively deal with troubles in interaction while at the same time being sensitive to

issues of face-management of the HH participant. The current study shares with them the methodological apparatus, and differs from them in focusing on *plurilingual* participants (sign and spoken language) with a *prelingual* hearing loss participate in *institutional* interaction.

The chapter has shown on what epistemological and methodological tenets hard-of-hearing participants' interactional competence will be studied. In the next chapter I present the very specific locus where the hard-of-hearing individuals' interactional competence will be examined, namely in integration classroom interaction, and I introduce the issue of progressivity.

Chapter IV - Participation of hard-of-hearing plurilinguals in a hearing classroom through the lens of progressivity

Interactional competence is of paramount importance. As soon as we are involved in a social encounter, whether we are participating in the interaction as a speaker or as a recipient, interactional competence is at play. Moreover, it is by means of this participation that we are socialized and become members of a specific community (Lave & Wenger, 1991). As a consequence, individuals with a prelingual hearing loss who have to participate in spoken language interaction are on the one hand required to deploy interactional competence as a means of participating in interaction, and on the other hand they are provided with the opportunity to further develop this competence and to become a member of the hearing community.

The aim of this chapter is to present the precise issues that hard-of-hearing participants are dealing with when participating in classroom interaction. In this thesis the hard-of-hearing individuals' interactional competence is investigated in spoken language interaction that is unfolding in an integration classroom. This participation confronts them with a diversity of interactional issues, part of which are ubiquitous in classroom interaction and others specifically related to the fact that the classroom is an 'integration' classroom. Progressivity has been chosen as a lens for the study of the students' interactional competence. The principle of progressivity is fundamentally underlying social interaction and can further give rise to the study of multiple aspects. In this thesis, mainly two aspects of progressivity have been chosen: the timing of answers to questions, and the completion of question-answer sequences when troubles in responding occur. Both issues relate to the management of sequence progressivity.

The chapter begins with an account of the notion of bimodal bilingualism, discussing also the range of semiotic resources the participants rely upon (section 1). Section 2 is concerned with the participation in classroom interaction. I first describe the prevalent education systems and language policies for the schooling of the DHH participants (2.1.), then I briefly report on how participation of HH individuals in hearing classrooms has been studied (section 2.2.). In chapter 3 I explain how classroom interaction has more precisely been studied in a CA framework, by discussing how language and interaction are formatted for the achievement of institutional pedagogical goals (section 3.1.), how different activities make relevant different forms of participation (3.2.). Then, I will show to what extent the principle of intersubjectivity and of progressivity are particularly at stake for the HH participants in classroom interaction (section 4). After a short review of the principles in sections 4.1. and 4.2. as well as their interrelationship (section 4.3.), I review how sequence progressivity can be seen in the timing of responsive actions, the absence of answer or non-answer responses.

1 The notion of bimodal bilingualism and the language resources it provides

An estimate of 10'000 deaf and hard-of-hearing people is living in Switzerland. This population is constrained to develop some competence in a spoken language that is used by the hearing community surrounding them. Despite an increasing offer of sign language interpreters and interpreted programmes at television, much information is only accessible with some competence in spoken language. This spoken language competence does not necessarily cover all language skills; it may be composed of speaking, reading and/or writing skills in a spoken language (Grosjean, 2008). The skill of auditory perception (hearing) is often impossible to develop (at least for profoundly deaf individuals without hearing prostheses), however, perception can be enhanced by means of the DHH individuals' lip-reading skills. They may also acquire sign language, an acquisition that is possible in a natural and unhindered manner. When DHH participants acquire a signed language, they become bilingual in a signed and a spoken language to the extent that they use two or more languages on a regular basis, also without covering all language skills in both languages (Grosjean, 1982, 1985, 2008). Signed-spoken language bilingualism is commonly referred to as *bimodal bilingualism*³⁵ as it implies two linguistic systems that are grounded in two (bi) distinct modalities (vocal-auditory and spatio-visual modality). This type of bilingualism brings up challenging questions with regard to the assignment of semiotic resources (as e.g. head shake) and the turns that host these to a verbal or non-verbal system. It is not the attempt of this study to provide a discussion of how linguists make these categorizations on the basis of formal criteria. The concern in this study is to treat these resources within an emic perspective and a holistic understanding of social interaction. However, a short explanation of the type of questions that arise shall shed light on the complexities of the resources that the students draw upon for designing their participation in interaction.

Signed languages are natural and full-fledged languages that make use of the other bodily articulators than the vocal tract – mainly the hands, but also eyebrows, head or the eyes (cf. chapter II, section 1.2.1.). A characteristic that is inherent to *bimodal bilingualism* is that languages cannot only be switched, sequentially, but also simultaneously *blended* (Emmorey, Borinstein & Thompson, 2005 cf. also *simultaneous communication*, Van den Bogaerde, 2000). A signer can for example express the proposition *I go home* by saying *I go* in spoken language and then produce the conventional sign *HOME* (cf. ex. 1 in table 2 below). In this case, the two languages are switched as it is common in spoken language alternation. Additionally, a speaker can also produce simultaneously *I go home* and sign the whole proposition *I GO HOME* (cf. ex. 2 in table 2 below), in which case he produces a *full code blend* (Bishop, 2010; Van den Bogaerde & Baker, 2009). Two further categories are utterances with *partial code-blends*. A speaker can produce an utterance in spoken language and accompany only part of it with signs (cf. ex. 3 in table 2 below), or he can sign a proposition and only produce some words from the spoken language (cf. ex. 4 in table 2 below). The first case represents a *partial code-blend with spoken language base*, while the second case would be a *partial code-blend with Sign Language base*³⁶.

³⁵ Some critical comments on this term can be found at the end of this section.

³⁶ *Base language* is defined by Van den Bogaerde & Baker (2005) in terms of semantic criteria (not number of morphemes as in other studies on language alternation). When an utterance's whole proposition is expressed in sign, it is counted as sign language

	Ex. 1	Ex. 2	Ex. 3		Ex. 4
Spoken	I go	I go home	I go	home	home
Signed	HOME	PNT(1) GO HOME	HOME	HOME	PNT(1) GO HOME
	Code-switch	Full code blend	Partial code-blend (English base)	Partial code-blend	Partial code-blend (sign language base)

Table 2

A further category build *mixed code-blends* (Van den Bogaerde & Baker, 2009), which are propositions without any redundancy between the elements in spoken and in the signed modality, i.e. where both signs and words are unfolding simultaneously and both are necessary for the constitution of the meaning. Van den Bogaerde & Baker (2008) also refer to this language mode as a *supplementary system*, a third system that is neither signed language nor spoken language. An example is the following proposition, taken from Van den Bogaerde & Baker (2008:192), where neither of the two productions could stand alone:

Signed	INDEX _{shed} BICYCLE
Spoken	rood
English gloss	red
Translation	'there is the red bicycle'

Table 3

Within a holistic approach to language and social interaction, no priority should be given to the verbal (signed and spoken) level and non-verbal conducts should be understood as being on a par with verbal ones. This is what has been proposed by Millet & Estève (2009, 2010) in their investigations on deaf bilingual children. In an extensive report on the development of their annotation conventions, Millet & Estève (2010) explain that especially in studies on deaf children a logocentric view is unsatisfactory if as analysts we want to account for the language practices (*pratiques langagières*) of these children (and not only linguistic practices). The language practices of deaf children regularly present contributions without any apparent linguistic baseline. Millet & Estève (ibid.) show that also non-verbal gestural resources can build a contribution's baseline, or that each resource adds a different but essential piece to an integrated contribution. It appears therefore that an account of these bilinguals is lacking basic information if one considers only the verbal dimensions. This position resonates with the idea of some scholars that DHH children should not be assessed either in spoken language only or in sign language only because they are not one monolingual participant in sign language and another participant monolingual in spoken language (cf. also chapter II, section 2.2). By contrast, DHH participants must be assessed in a manner that takes into account all resources, so as to estimate their competence in a reasonable manner (Klatter-Folmer et al., 2006; Lichtig et al., 2011; Mahon, 2009). Millet & Estève (2009, 2010) appear to align to this idea and propose an annotation grid that takes full account of the fundamentally multimodal bilingual nature of deaf children's communication:

"The deaf children draw on every resource available in both modalities: voice and gesture. Thus, these productions are fundamentally multimodal and bilingual. In order to describe these specific practices, we propose to consider verbal and non-verbal, vocal and gestural materials as part and parcel of one integrated production." (2010:9)

even if isolated mouthings occur. The principle criterion is that the utterance can stand alone. If the utterance can stand alone neither in spoken nor in sign language, then it is a third system (bimodal utterance).

On the basis of these theoretical assumptions, Millet & Estève (2009, 2010) establish a categorization tool that first distinguishes the *base* of a proposition, which is the language or the modality that organizes the proposition (cf. also Van den Bogaerde & Baker, 2009). Additionally to the *spoken*, the *signed base*, and the *bilingual base*, Millet & Estève (ibid.) propose the *non-verbal base* (cf. first row in the table below). Furthermore, independently of this base language or modality, a proposition can be *monolingual* (either spoken or sign language), *bilingual* (spoken and signed) or *non-verbal* (neither spoken nor signed but gesture or onomatopoeia, to which one could add other vocalizations) (cf. first column in the table below). Within each of these categories, the proposition can further be organized either in a *monomodal* or in a *bimodal* way (cf. second column in the table below). This means e.g. that a monolingual proposition can be monomodal in either spoken or sign language. But monolingual can also be bimodal when the spoken language is accompanied with gestures, or sign language with onomatopoeia.

		Practice with base spoken language	Practice with base bilingual	Practice with base sign language	Practice with base non-verbal
Monolingual	Monomodal	Spoken Language		Sign language	
	Bimodal	Spoken Language + Gesture		Sign language + onomatopoeia	
Bilingual	Monomodal	Sign Language A + Sign language B		Sign language + mouthings	
	Bimodal	Spoken Language + French Sign Language	Spoken Language + French Sign Language	Spoken Language + French Sign Language	
Non-verbal	Monomodal				Gesture
	Bimodal				Onomatopoeia + Gesture

Table 4 (from Millet & Estève, 2010:20; Estève, 2009)

In line with the table above, Millet & Estève (2009, 2010) maintain an annotation grid that explicitly denotes one tier as sign language, another tier as gesture (and a further as spoken language and a last as onomatopoeia). It must be noted however that distinguishing between a gesture and a sign is a challenging endeavor especially for productions of children who are learning sign language where the boundaries between a gesture and an erroneous sign may be blurred. Moreover, and even more importantly, the distinction between gesture and sign must be critically examined on the basis of recent descriptions of *productive signing* or *structures of high iconicity* (Cuxac, 2000). Productive signs are used for descriptions of size, form and of movements (direction and manner), and they rely heavily on iconicity (König et al., 2012). These productive signs are forms at the interface between gesture and signs: on the one hand they include conventional constituents (often the handshape is conventional), but on the other hand they are not lexicalized but gain their meaning locally from its very specific context.

Beyond the difficulty of assigning resources either to the linguistic system or to a gestural modality, one must question to what extent a transcription grid with tiers that single out signs from gestures or linguistic speech from onomatopoeia influences the analyst's and/or the reader's perception of the childrens' production. While it may be necessary for a specific analysis, the explicit labelling of resources as being part of language A, language B or a non-linguistic system can constitute a bias in the assessment of the participant's competence.

Taking all resources into account for considering the deaf participants' contributions raises further issues in regard of the use of non-manual features (e.g. head nods, eyebrows movements) that have non-linguistic status in spoken language but have undergone a grammaticalization process in signed languages: when can they be considered being part of the linguistic system of sign language and when as a non-linguistic element of signed/spoken language? For example:

- *Head shakes*. A head shake is gestural in spoken language (Kendon, 2004), but it counts as a linguistic feature when occurring with signs (building a negation marker; e.g. Boyes Braem, 1990). When a head shake occurs in sign language productions without any sign, e.g. in response to a question, it would be regarded as non-linguistic and therefore as a gestural instance. On the basis of these assumptions, the question arises, how one should categorize a head shake when a student is speaking in German and he accompanies the spoken predicate with a head shake? Is the head shake gestural or may it be conceived as a linguistic feature and therefore as a blend between signed and spoken language? How many signs would have to occur simultaneously to the spoken German so that the head shake would be seen as part of a blend?
- *Mouthings*. Likewise, a mouthing may be obligatory for some signs and not for others³⁷. When a mouthing is obligatory it has linguistic status; when its use is not obligatory, it may be seen as part of the spoken language. In this specific case, the use of the mouthing (the spoken language) is characteristic of a mixed proposition (manual signs, spoken language mouthings; Boyes Braem, 2001). The difficulty with this distinction is however that the status of mouthings in signed languages is not clear, and that it may be obligatory in one discourse context (for reference introduction) but not in others (maintenance of reference). Furthermore, should there be a difference between the production of a sign with an unvoiced or with voiced mouthings, and when yes, how to distinguish between whispered or nearly unvoiced mouthings?
- A further issue pertains to the categorization of those non-manual resources that may have linguistic and paralinguistic functions. Raised eyebrows for instance, comparable to an intonation feature in spoken language, can linguistically mark polar questions and have at the same time paralinguistic function for expressing surprise (De Vos, Van der Kooij & Crasborn, 2009). Furrowed brows to the contrary intervene in marking wh-questions, whereas paralinguistically they are associated with anger or disgust.

It becomes rapidly apparent that the hard-of-hearing adolescents can draw on a highly rich and complex set of resources, giving raise to the possibility of using them either individually or in different types of combinations. Participants can use German, Swiss German Sign Language and gestural resources. Moreover, marked juxtapositions or simultaneous use of different languages possibly occur (code-switches, code-blends) and the borders between the categories can sometimes be blurred. For grammatical investigations the clear assignment of each language production to a category would be necessary, but for the current study the crucial point is to adopt the participant's perspective (chapter V section 2.3.). From a strict CA viewpoint, assignment of turns or resources to different codes (languages,

³⁷ There is sign BRUDER and the sign SCHWESTER, which consist exactly in the same manual component. The only feature that distinguishes them is the mouthing /bruder/ with one and the mouthing /schwester/ for the other.

dialects) may not be relevant because their use and combination (sequential or simultaneous) can be *unmarked* and thus without any ‘interactional effect’ (cf. Auer, 1999, on language mixing by contrast to functional code-switching where the contrast is marked and therefore meaningful). Especially in these cases it seems appropriate not to highlight categorical differences between the resources. When, by contrast, a combination of different resources becomes meaningful for the local interactional business, then the different codes are used as a resource and may be highlighted (especially for representational analytical reasons).

The discussion above fosters an understanding of how the plurilingual adolescents under study can possibly design their participation in the classroom interaction by different types of resources. This participation is fundamental for the students’ language acquisition and more generally their socialization. How is this participation organized and what are the important factors that contribute to the opportunities and constraints of this participation? What specific issues do the students have to manage when participating in classroom interaction? These are questions I turn to in the next sections.

2 Education of hard-of-hearing students

The question of what type of education is the most beneficial for the DHH child still gives rise to much debate. This issue pertains to two basic questions. First, what language of education should be chosen for the DHH children (section 2.1.1.)? Second, what is the appropriate system of education for these children - one that is specifically designed for their special needs (but separating them from their hearing peers), or one that provides them with the opportunity for participating in the (major) hearing community (but where their special needs may be left unaddressed) (section 2.1.2.)? While there are extensive studies on the development of speech and hearing by DHH children and adolescents, still little is known about their actual participation in different types of classroom. After having raised some points of these debates, I report on how the DHH students’ participation in hearing classrooms has been mainly studied (section 2.2.).

2.1 Language policy and education systems for the DHH

2.1.1. Language policy

The language policy within the field of deaf education is an intriguing issue. On the one hand, a consistent body of research has been advocating bilingual education of DHH children since the 1970s, defending the idea that children must be given the opportunity to learn both spoken and sign language (e.g. Erting, 1978; Strong, 1988; Grosjean, 1992, 1999; cf. already Vygotsky, 1993). The changing understanding of bilingualism as a normality rather than a danger for the child’s development (e.g. Lüdi, 1998) has reinforced the idea that DHH children should benefit from a bilingual education (cf. Swanwick, 2010). On the other hand however, and 30 years later, bilingual education for DHH children is established in some countries but it is still far from being taken for granted. The trend rather seems to be reversed, as an increasing part of DHH children are fitted with cochlear implants and learn only spoken language.

After a long period of language oppression, sign languages became recognized as full-fledged languages in an increasing number of countries as a result of the basic findings from sign language linguistics launched in the late 1970s. The acceptance of signed languages as an important communication system for the deaf has allowed education policies to open up for the introduction of *visual methods* (communication methods that make use of isolated gestures or signs, as e.g. *Total Communication*, cued speech or signed English/*Lautsprachlich Begleitendes Gebärden*) and sign language. Today, the Confederation recognizes the right of the deaf child to learn a signed language (whereas the use of sign language was forbidden at Swiss schools up to the 1990s). Nevertheless, even to date the implementation of official bilingual education is still unclear in Switzerland. Note also that Swiss signed languages are not *officially recognized*, i.e. deaf persons cannot require that they can use sign language for addressing public authorities (an exception is the canton of Zurich where Swiss German Sign Language has been officially recognized since 2005). The United States as well as other European countries such as Sweden, Germany, or Austria are some way ahead with regard to this issue (cf. e.g. Svartholm, 2010; Günther & Hennies, 2011). Sweden was the first country where sign language has been officially recognized, and the need for bilingualism for deaf explicitly stated (in 1981; Svartholm, 2010). On behalf of the situation in the United Kingdom, Swanwick (2010) reports that since the 1980s, professionals started to turn towards sign language as a possible tool for the education of the deaf. She relates this to the increasing dissatisfaction with the *Total Communication* method and more generally with the poor outcomes of DHH students trained with oral methods. Additionally, the increasing acceptance of bilingualism in general as “*a strength and not a hindrance in the learning context*” (ibid.:148) favored the introduction of sign bilingualism in the deaf education. The author also points out that the technological advances and the increasing number of children with cochlear implants will have an impact on how this population relies on their hearing capacities, which in turn will change their learning needs as well as their language use (ibid.:155). “*These opportunities and challenges reveal a need to re-think how BSL [British Sign Language] and English are used in sign bilingual practice. In particular we have to re-establish that the goals of our language use in the classroom are for the individuals and understand how they may change over time.*” (ibid.). This entails that professionals continuously adjust their communication and teaching to the language needs and language use of the students.

Scholars recommending bilingual education for deaf and hard-of-hearing children fundamentally emphasize that the uncertain outcome of hearing aid provision and cochlear implants makes it indispensable to provide children with the opportunity to learn sign language (cf. also Zaitseva et al., 1999). According to Humphries and colleagues, “[t]he lack of awareness of medical professionals that sign language gives deaf children unambiguous and total access to a human language is a source of great harm to many deaf children.” (Humphries et al., 2012:2) because it leads to linguistic deprivation. The authors report that for many children, cochlear implants do not allow for developing appropriate language skills for real-life communication, which differs from the language performance deployed within laboratory settings (cf. also chapter II, section 1.2.). To some extent this argument is backed up by information provided by the Swiss CI-register, reporting that around 21.9% of CI-users indicating that they had no to medium benefit of their implant (Version 2011; 32.4% report good and 45.1% report excellent benefit).

The problem is that much debate on the appropriate language of education for DHH children is still regularly conducted in a spirit of proving the benefits of one language to the detriment of the other. In this regard, Haug, Hennies & Mann (2012) point out that the use of sign language and the use of cochlear implants are often understood as two competing (educational) tools and as an ‘either-or’ solution. There has been much discussion for instance on whether the use of sign language or *total communication* compromises the development of spoken language development or not (e.g. Geers, 2004; Connor, 2006). In a study based on a series of language tests on 181 deaf children between age 8 and 9 who have been implanted before 5 years old, Geers and colleagues report that on narratives, vocabulary, use of bound morphemes, lengths of utterances and syntax complexity, children educated without sign language performed better than children educated with use of a visual system (Geers, Nicholas & Sedey, 2003; cf. also Geers, 2006; Geers, 2002). Other researchers, as e.g. Yoshinaga-Itano (2006), report that the early exposure to sign language enabled profoundly deaf children to develop age-appropriate vocabulary which had apparently also an advantage for the further lexical development in spoken language after cochlear implantation. Similarly contradictory results exist on behalf of the appropriate education system, which I turn to in the next section.

2.1.2. Education models: Separation, integration, inclusion

The language choice is only one aspect of the issue of DHH education. An additional issue is the choice of an education model, basically between an *integration* model (full or partial) or a *separation* model. The separation model refers to specialized education, which consists in the attendance of children to day schools or residential schools, where they are taught separately from the hearing children. In the current study, integration is understood as the attendance of DHH students within classes of hearing students. This definition excludes socio-emotional aspects of integration as the attendance does not necessarily imply that a person is socially included in the community or that he is feeling part of the community. Note also that in anglo-saxon literature one may rather find the term *mainstreaming* rather than integration, because integration is sometimes reserved for referring to the *outcome* of the practice of mainstreaming (e.g. Stinson & Antia, 1999).

Full integration means the enrollment of DHH participants in hearing classrooms without any additional specialized lessons or teachers. Pupils may however be punctually visited by an itinerant teacher or be coached by an audiologist. *Partial integration* refers to a system where pupils are part of specialized classes where they are taught with other DHH children mostly by specialized teachers, but additionally they attend to some lessons in mainstream classes, i.e. with hearing students (and teachers) who are taught in the same building (this system is often referred to as *self-contained classes*). To date, the mainstreaming of DHH pupils has become a predominant method of education in a lot of countries, as e.g. in Sweden, Australia and Switzerland (Boyes Braem & Rathmannn, 2010; Power & Hyde, 2002; Hyde, Ohna & Hjulstad, 2005; McKee, 2008; Svartholm, 2010). In the United States, a large-scale survey by the *Gallaudet Research Institute* reveals that between 1987 and 1997 the number of children who are integrated (partially or fully) increased by ca. 20% in comparison to those who attend day or residential schools (Holden-Pitt & Diaz, 1998). In 2011 the number of partially or fully integrated children reached 91.7% (n=25’067; *Gallaudet Research Institute*, 2011). To date, also in Switzerland, where a majority of DHH children receive cochlear implants, most children and adolescents are reported

to be co-enrolled in classes with hearing children (Audeoud, 2012; Boyes Braem & Rathmann, 2010). This goes along with a decrease in the number of DHH pupils who attend Swiss day and residential schools (e.g. Landenhof in Aargau or St-Joseph in Fribourg; cf. also Swanwick, 2010 on the situation in UK), a DHH population which often presents other disabilities or have an immigrant background (Boyes Braem & Rathmann, 2010).

A third model which is increasingly thematized is *inclusion*, differing from integration basically on a conceptual level. Integration is based on a two-group model, suggesting that a minority group is integrated within a majority group (Hinz, 2002). Within this view, the difference between the two groups is emphasized (hearing vs non-hearing), while the differences that exist within the groups are obliterated (e.g. differences in gender, nationality or school achievement). The inclusive model to the contrary aims at focusing on the diversity of all individuals, suggesting that within a classroom there is a big heterogeneity, which cannot be reduced to the existence of two homogenous groups (ibid.). The main difference between integration/mainstreaming and inclusion is that in the former one expects the child to adapt to the regular classroom, while in the latter the classroom is expected to adapt to the diversity of all children (Stinson & Antia, 1999). This is in line with the UNESCO *Salamanca Declaration*³⁸ that advocates that every child has a right to education and that this right is best met by means of an inclusive model of education.

While theoretically the issues can be approached individually, there is some relationship between language policy and educational model. Within mainstream education, the focus is quite clearly put on the development of spoken language. There is, as McKee (2008) reports with regard to the situation in New Zealand, an obvious tension between expectancies for a bilingual education and the growing mainstreaming of DHH children. Bilingual education emphasizes the need for the deaf child to have access to both languages as being “*equal but different*” (Evans, 2004:142) and by moving away from a deficit view on the DHH person. Quite regularly, the mainstreaming on the other hand has as an underlying objective to make DHH individuals equal to hearing children, which conveys a medical and deficit model of the hearing impairment. Theoretically, however, it is possible to provide DHH children with the opportunity to participate in regular classes and at the same time emphasize the need for a bilingual language education. This would imply fostering a real valorization of the DHH person’s bilingualism, for example by promoting the learning of sign language by the hearing classmates. However, despite an official promotion of bilingualism, it appears that within hearing classrooms, DHH students are still not constructed as equal to the other students but rather as “*impaired monolinguals and/or marginal bilinguals who have restricted access to the social and academic life of the classroom*”, and therefore they are subject to exclusion (McKee, 2008:536). As McKee (ibid.) argues, this happens for example when sign language is not considered as a basic and fundamental language for the child, but just a transitory tool for better access to the spoken language.

As mentioned earlier, the integration into a hearing classroom with a specialized teacher does not automatically mean that the student ‘feels’ integrated or that he is actively participating in the interaction and learning the spoken language. Nevertheless, the classroom provides a basis for potential

³⁸ Salamanca Statement on Principles, Policy and Practice in Special Needs Education and a Framework for Action, adopted by the UNESCO World Conference on Special Needs Education (1994).

participation. In the next section I show how participation of DHH individuals' participation in hearing classrooms has been studied.

2.2 The participation of DHH individuals in hearing classroom

Fundamentally, mainstreaming DHH children is responsive to new developments in education research where the inclusion of children with special needs is advocated as the solution for guaranteeing equal rights to education for every child (cf. *Salamanca Declaration*, 1994). More concretely, proponents of mainstream education for DHH children advance basically three advantages. First, mainstream education allows the child to be taught in local schools. In comparison to schooling in day or boarding schools this allows the child sharing more time with peers from the neighborhood (less time for transport). Second, the hearing or the spoken language environment provides a rich and stimulating basis for language learning and socialization (Eriks-Brophy, Durieux-Smith, Olds, Fitzpatrick, Duquette & Whittingham, 2006; Hyde & Power, 2002). Finally, mainstream education puts the hard-of-hearing students on a par with the hearing students in terms of the curriculum and school performance to be achieved (cf. Audeoud, 2012).

Adopting a socio-interactionist perspective on language development and use (chapter II, section 2.4), it may be assumed that the mere exposure of DHH students to a hearing and speaking environment is not sufficient, neither for learning the spoken language nor for being socio-emotionally integrated within the community. An important issue within linguistic and education research is therefore to investigate how DHH individuals actually participate in these classrooms. The study of DHHs' participation has been conducted within different theoretical and methodological frameworks. One way of approaching this issue is to examine the number of propositions or turns-at-talk that DHH individuals contribute within an interaction, as compared to the other participants in the same interaction, or as compared to their own participation in previous interactions (Klatter-Folmer et al., 2006; Lloyd et al., 2001; Van den Bogaerde, 2000). Another frequently used method is the survey/questionnaire administered to the DHH individuals, to the parents or the teachers (Power & Hyde, 2002; Richardson, Marschark, Sarchet & Sapere, 2010; Stinson, Liu, Saur & Long, 1996). On the basis of interviews with itinerant teachers, Power & Hyde (2002) report for example that the two-thirds of the students are assessed similarly as the hearing students, which means that they did not need any adjustment of the evaluation standards. The authors label the students' 'academic participation' (based on Mirenda, 1998) and conclude that the majority of students is 'competitive'. A further dimension of participation investigated has been the students' level of independence. The survey reveals that less than a third is reported to be completely independent and "*not needing more than ordinary support for their participation in academic and social activities*" (ibid.: 308). It remains however implicit how this independence is exactly measured or what this support exactly consists in. Richardson and colleagues (2010) shift the focus on how postsecondary students experience their participation in specialized schooling (deaf classes) or mainstream education (with interpreters). On the basis of questionnaires, they report for instance that mainstream students participate less in class discussion and are less relaxed while contributing to group discussions than students in specialized settings. Moreover, mainstreamed students report being hesitant in asking questions as a consequence of experiencing a time lag due to their reliance on interpreters. Similarly, Stinson & Antia (1999:169) sum up that common constraints to classroom participation are "*rapid rate of discussion,*

rapid turn taking, rapid change of topics, the high number of speakers involved in the discussion, and more than one student talking at a time”.

In a different perspective and on the basis of focus group discussions (among teachers, parents and DHH adolescents), Eriks-Brophy et al. (2006) discuss the different facilitators and barriers that DHHs encounter with respect to their integration within family and community. Itinerant teachers and technology for example were considered facilitators for the social inclusion, as well as patient peers who accept and are able to exercise a role of communication facilitator by repeating information that the DHH does not understand immediately. On the side of the DHH person himself, the authors report that being ready to use hearing technology (including FM systems³⁹) as well as having good communication skills are facilitators for successful integration. The focus groups also point out there may be periods of isolation due to several barriers, as e.g. poor listening conditions and the lack of adequate hearing technology, which consequently constrain the DHHs opportunity for participation. This shows that the opportunities to participate are not automatically given by the attendance of DHH students to a hearing classroom. Rather, opportunities for participation are created or hindered (cf. also section 3.2. below).

Further features that may favor or impinge on the students’ participation and learning are teaching strategies and language choice (e.g. Evans, 2004; Eriks-Brophy et al., 2006; Keating & Mirus, 2003; Kelman & Branco, 2004). In an observation study of three different students in elementary school, Evans (2004) reveals that the teachers’ exploitation of multimodality, by which she understands ASL, spoken language and artifacts, presents an effective way of teaching. Additionally, assigning an active role in learning to the students was considered a positive strategy. By contrast, strategies that Evans (ibid.) considers being in conflict with a bilingual approach are for example an emphasis on spelling and vocabulary, focusing rather on explicit teaching while the students’ active role in learning is reduced. In a similar vein, studies generated from a project in Norway that focused on how teachers and students design communication within the classrooms with DHH students⁴⁰ gave also insight into how participation in classroom communication is handled by the participants concerned (Hyde, Ohna & Hjulstadt, 2005; Hjulstadt & Kristoffersen, 2007; Ohna, 2005). In this regard, Ohna (2005) reports on a comparison among three different classrooms where either one or two teachers were involved, of which at least one teacher was familiar with Norwegian Sign Language (NSL)⁴¹. A fundamental observation he makes is that by the way that teachers use language, they create different opportunities for students to participate in classroom interaction. The class involving only one teacher made observable that the teacher regularly mixed spoken Norwegian and NSL in plenary classroom, thereby addressing both hearing and DHH students and providing the opportunity to participate. In the classes involving two teachers two important observations could be made. First, the teachers firmly separated the two languages, using NSL with the DHH and Norwegian with the hearing. Second, when addressing the whole class, these teachers made use of spoken Norwegian. In these cases, the second teacher present functioned as an assistant and mediator of what the teacher in plenary was explaining. The consequence of these patterns of communication is interpreted by the authors as pointing to the construction of two

³⁹ FM (frequency-modulated) systems consists of a small external microphone worn by the speaker, a receiver in the DHH participant’s cochlear implant or hearing aid and a transmitter that transmits the sound directly from the speaker to the hearer. Speech is thereby heard more clearly and with less background noise.

⁴⁰ Project from 2004 to 2007 - *Pupils with CI, learning and participation in classrooms*, Statped, Oslo.

⁴¹ The original study is written in Norwegian, by Ohna, Hjulstad, Vonen, Grønlie, Hjelmervik & Hoie (2003).

groups of students, those using Norwegian and those using NSL. While the possibility of engaging in parallel interaction with the second teacher appeared to be non-disruptive to the ongoing plenary, it has the disadvantage of creating instead a two-group classroom, thereby not fostering inclusion (cf. also Stinson et al., 1996). One further aspect that has been revealed is that the DHH students rarely interacted with other students in the classroom (cf. also Keating & Mirus, 2003). When other students interacted in groups, the DHH student worked individually or solicited help from the teacher (Hyde et al., 2005).

It appears that a range of studies have revealed the necessity, the opportunities but also the constraints that DHH students experience in participating in hearing classroom interaction. What is missing to date are detailed and finer grained analyses of how this participation unfolds by focusing not only on language choice but also how language (and other resources) are used for the local accomplishment of participation. This thesis aims at addressing this issue through a systematic description of some select interactional tasks that DHH students have to deal with when participating in classroom interaction. This will provide a first sketch of what type of tasks the students have to deal with and how they actually deal with them. Such finegrained studies of language and interaction in classroom have been the object of study in linguistics and conversation analysis since the 80ies. In what follows I report on some basic findings in this domain which will build a basis for the analyses in this thesis.

3 The organization of classroom interaction

Since the 1970s, a growing body of research in CA has been interested in how participants achieve order not only in mundane conversation but also in interactions unfolding in different institutions (e.g. courtroom, classroom, medical consultation). The starting point of these studies was the assumption that the turn-taking machinery described by Sacks, Schegloff & Jefferson (1974) constitutes a ‘basic’ form, which will undergo more or less important transformations and give raise to different speech-exchange systems in other contexts. On the basis of this, several scholars launched comparative studies between mundane and institutional interaction (Ten Have, 1999) and examined the “*unique fingerprint*” (Heritage & Drew, 1992:26; cf. also chapter VI, section 2.1.) that interactions within a specific context have. One of these institutional contexts is the classroom. In what follows I report on some important features of classroom interaction that have been revealed by CA scholars. Thereby I sketch a general picture of what the interactional architecture is in which DHH participants are expected to participate when they are put in an *integration classroom*.

3.1 Institutionalization of classroom interaction

Institutional interaction is different from ordinary conversation to the extent that the participants are involved in the achievement of fixed institutional goals towards which they are expected to collaborate. In pedagogical institutions the core goal is the transmission of knowledge and competencies (Arminen, 2005; Becker-Mrotzek & Vogt, 2009; Seedhouse, 2004). To pursue this overall goal the teachers and students engage in a multitude of different interactional activities (or projects), such as for example explaining, solving tasks or correcting exercises. The particularity of classroom as a pedagogical institution is that a great deal of transmission of knowledge and competences is mediated by language

and interaction, which are used in a specialized way for the achievement of the activities specific to the classroom (Arminen, 2005).

Within a CA perspective, classroom interaction has been described as being characterized by some major transformations of mechanisms revealed in ordinary interaction, especially with respect to the turn-taking, sequence and repair organization (McHoul, 1978; Mehan, 1979). The most striking feature distinguishing mundane from classroom interaction has been suggested to be the *pre-allocation* of turns (McHoul, 1978): by contrast to the possibility of self-selection in ordinary conversation, classroom interaction is characterized by the predominance of teachers' (other-) selection of students for turns at talk. According to McHoul (ibid.), a further feature of the traditional classroom interaction is that teachers produce long multi-unit turns, while the students' contributions are regularly limited to short turns. Further transformations of interactional organization pertain to how sequences are organized: the activities in classroom are routinely organized by means of question-answer sequences (henceforth Q-A sequences; cf. section 3.3.). Moreover, it is commonly the teacher who addresses questions to the students, in what has been referred to as *turn-type pre-allocation* (Atkinson & Drew, 1979; cited by Ehrlich & Freed, 2010:7). More precisely, basic organization of classroom interaction has been described as based on a three-part sequence that consists of Question-Answer-Comment (McHoul, 1978) or of Initiation-Response-Evaluation (IRE; Mehan, 1979; cf. also Sinclair & Coulthard, 1975⁴²) in which the teacher accomplishes the first and the third turn. The third turn can be accomplished explicitly as a positive evaluation or as a negative evaluation, it can be produced more implicitly in terms of a repair (Seedhouse, 2004) without negative evaluation or as embedded correction (Jefferson, 1983). Further possibilities are the ratification of the answer by means of a simple repeat or ensuing follow-up questions (cf. Koole, 2012a for a recent study on teacher's evaluation). This type of three-turn sequence organization has been understood as a means of embodying the teacher's control over the classroom interaction, where one party has maximized and another party minimized participation rights (Markee, 2000; McHoul, 1978). An alternative view to the 'teacher-controlled classroom' is that it is not the pedagogical institution but particular activities that make more or less teacher-controlled interaction relevant (Ten Have, 1999; Schegloff, 1991b). In this view, different pedagogical goals appeal for diverse ways of organizing classroom interaction and for different forms of participation. I briefly discuss this idea in the following section.

3.2 Interactional organization and forms of participation

The view on classroom as a constrained interactional environment has been put into question by two different types of arguments. A first argument against this view has been that classroom interaction is not a monolithic organization but different types of activities make relevant different interactional organizations (turn-taking, sequence and repair organization as well as lexical choice). Seedhouse (2004) as well as Walsh (2006) for example have shown that different pedagogical activities (*contexts* according to Seedhouse, *modes* according Walsh) entail also different interactional organizations, hence, classroom interaction varies and affords different opportunities for participation. Seedhouse (2004) provides an

⁴² A basic description of how classroom discourse is organized is provided by Sinclair & Coulthard (1975) who aimed at a manageable schematization of how 'natural' discourse is structured. The choice of classroom discourse was rather methodological than bound to a particular interest in contributing to the research on learning situations (Becker-Mrotzek & Vogt, 2009).

empirically grounded description of classroom interaction by focusing on how interactional organizations and pedagogical focus constitute each other mutually. Within this perspective, the context ‘classroom’ is not a given entity but is constituted, or ‘talked into being’, by the participants as soon as a pedagogical focus is brought into play (ibid.:105). According to Seedhouse (2004), the classroom context is a macro-context (institutional context) that can be instantiated in four different types of classroom contexts, resulting from an interplay between the pedagogical focus and the specific interaction organization. The contexts he proposes are the following:

- *Procedural context*: The pedagogical focus is on the transmission of necessary information for the activities that will unfold in the further classroom contexts during the lesson. According to Seedhouse (ibid.), these procedural contexts mainly consist in monologues by the teachers in the plenum and a near absence of turn-taking. The students’ participation is minimal. When students ask questions on the procedure they commonly bid for a turn by handraising.
- *Form-and-accuracy context*: The pedagogical focus is on linguistic form and on accuracy, making relevant tight control by the teacher over turn-taking and sequence organization (consisting of teacher prompt and learner production). This context is regularly operated in plenary interaction but can also unfold in desk interaction among students (the pedagogical focus does not necessarily imply the teacher’s presence).
- *Content-and-fluency context*: The aim of this context is on “*maximizing the opportunities for interaction*” (ibid.:111) by providing the students with enough interaction space so that they can develop their own topics (e.g. on personal meanings and feelings). The context is characterized by a looser turn-taking organization where topic development is possible and where the teacher orients to fluency of conversation as being more important than correction of minor linguistic errors. Sequence organization is constituted by diverse action-types of adjacency pairs (not only prompt-learner production). This context is regularly carried out in desk interaction (pair or group work).
- *Task-based context* then relates to the accomplishment of a task (e.g. introduced in a procedural context), mainly during desk interaction in group or individually⁴³. The focus is put on the solving of the task (the outcome of the activity) and not the language used. Moreover, these contexts are characterized by *minimalization*, i.e. by high number of ellipsis/omission of copula, short turns and simple syntax. Interaction is highly indexical and may not be understood by analysts unless they know the task.

Most importantly, the description of contexts in Seedhouse’s view begins always with an account of the *micro context*, i.e. the very local interactional organization of a specific instance. By means of a fine-grained sequential analysis one describes the pedagogical focus at stake and the interaction organization. On the basis of this, one can examine the particular relation of those two (and see which type of *classroom context* it implements, by means of which in turn the *institutional context* is talked into being). Seedhouse’s account emphasizes the heterogeneous and dynamic nature of classroom interaction by demonstrating the reflexive relationship between pedagogical focus and interaction organization.

⁴³ Seedhouse (2004) focuses on the task-in-process, i.e. the way that participants actually deal with and carry out a task-as-workplan, i.e. the task as it was designed prior to its implementation (ibid.:109).

Concretely, his *three-way view of context* provides an interesting basis for the reflection on the type of competencies that students are required to deploy for participating in these different contexts. It may be assumed that due to their diverse organization, each context creates different opportunities and constraints on students' participation.

Seedhouse shows the systematics between interaction organization and pedagogical focus, but he does not provide schematic description of how language can be used within the different contexts for the achievement of the activities. Such descriptions have been provided by functional-pragmatic discourse analysts such as Becker-Mrotzek & Vogt (2009), inspired by work of Konrad Ehlich and Jochen Rehbein as well as conversation analytic insights. Within this perspective, a main idea is that participants to interaction organize their business at hand according to "*societally elaborated linguistic action patterns*" (Redder, 2008:136; *Handlungsmuster*), which build the basis for the resolution of a recurrent interactional 'problem' (e.g. making a reproach or transmitting knowledge). Since its inception, researchers in functional pragmatics described a diversity of such action patterns, also for interactional problems specific to institutional pedagogic interaction (e.g. Ehlich & Rehbein, 1986). Based on Ehlich & Rehbein (1986), Becker-Mrotzek & Vogt (2009) show that classroom interaction can be designed with different types of interactional genres that go well beyond the originally described question-answer-evaluation sequence. For example, transmitting knowledge can be achieved through teacher presentation (lecturing) or teacher dialogue (question-answer with the students that help to develop the teacher's agenda), presentation by students of their results, discussion among students during a plenary, group work or explanations. Additionally, the authors discuss how classroom interaction can be organized either as teacher-centered or as student-centered interaction. While each interactional genre and interaction format (teacher- or student centred) makes relevant a different form of student participation, the authors do not explicitly relate these two dimensions of pedagogical interaction.

A second argument that brings into question whether the classroom participation is constrained by the teacher is provided by studies that have demonstrated the active role that students can embody within the classroom organization. Sahlström (1999) for example states that the teacher's turns (and their length) are contingent upon what students do while the turn is unfolding, as e.g. raising their hands. In a similar vein, Koole & Berenst (2008) as well as Fasel Lauzon et al. (2008) show that teachers may install one type of participation framework and turn-taking exchange system, but that students can challenge these frameworks and negotiate them in a local manner. Koole & Berenst (2008) more generally had an interest in how students can participate in plenary interaction in two different classes, each one presenting a *content-and-fluency context* (discussion of content matter) and a *form-and-accuracy context* (homework correction). Their findings reveal that participation is not exclusively controlled by the teacher, but still, certain students appear to participate much more frequently than others. The authors explain this by the fact that those students who work hard in getting turns at talk (by means of handraising or self-selection) get a lot of turns, and, intriguingly, the same students are also other-selected often even when they do not bid for a turn. Koole & Berenst (2008) discuss this matter in relation to the fact that plenary activities appear to be a suitable place for displaying that one *knows*, rather than a place for requesting explanations (which seems to be reserved for desk interaction, cf. Elbers, Hajer, Jonkers, Koole & Prenger, 2008).

The issue of equal participation in the classroom has also been thoroughly examined by Sahlström (1999) who discusses the issue within the broader context of equity construction in primary classrooms in Sweden. Sahlström introduces a first distinction between *desk* and *plenary interaction*. Desk interaction unfolds predominantly between students (Sahlström, 1999) and is commonly a two-person two-party interaction. It can also occur between students and teachers, which has been less described however (but see Elbers et al., 2008). Plenary interaction is basically constructed as a multiperson two-party interaction where the teacher is one party and *the Student* (Sahlström, 1999, 2002) the second party. *The Student* is constituted collectively of all the individual students present (based on Lerner, 1993). In plenary interaction, the turn-taking organization of the two-party framework distributes participation among the teacher and the Student, which means more precisely that a teacher's turn is followed by a turn of the Student, therefore one student out of the whole class can participate as a speaker at each transition. This implies that within the overall class, the verbal contributions of each individual student are rather limited and not as frequent as the contributions of the teacher. This brings with it the issue of how participation opportunities can be distributed equally among the individuals composing the Student. In plenary interaction, the turn-taking is organized so that one individual student can speak at a time. Hence, while plenary aims at involving all students of a class, the teacher actually has to treat persons individually and cannot distribute participation in an equal manner. Concretely this is observable in the fact that one student among several are chosen for a turn (after a handraising for instance) and that when several answers have been provided by several students, the teacher will evaluate the answer of one student only. This demonstrates that the teacher necessarily 'gives preference to individual students' and cannot engage with each one of them. An important contribution of Sahlström's (1999) analysis is that it goes beyond an analysis of the cohort *Student* and includes an examination of what the individual students are doing (cf. also Koole, 2007). He points out that while one representative of the Student speaks in plenary interaction, other individual students have in fact different participation possibilities:

- They can sit quietly and display reciprocity and participation in the plenary by means of gaze towards the teacher, posture, nods. In this case they actively participate but as recipients (cf. also Arminen, 2005; Bezemer, 2008).
- They can sit quietly and *not* display reciprocity and participation in the plenary.
- They can get involved in non-public discussions with another student, hence engage in *desk interaction* (a form of *schisming*, Egbert, 1997).

The last point, desk interaction among students during plenary interaction is an important issue, often notorious for being a disalignment from the plenary interaction and qualified as non-participation. However, this type of interaction provides the students with additional and different opportunities for participating in interaction. Desk interaction with a peer during plenary is a two-party two-person interaction (vs. multi-person in plenary) and consequently puts greater pressure to respond on both of the students (Sahlström, 1999). At least on the quantitative level, this implies more turns-at-talk for each participant. Moreover, this type of desk interaction is most likely characterized by a looser turn-taking organization⁴⁴. Such desk interaction unfolding among students simultaneously to the plenary activity

⁴⁴ Note however that this is not necessarily so. Seedhouse (2004) notes that on the basis of specific tasks students can build form-and-accuracy contexts where a tight turn-taking organization is implemented even without the teacher, as a consequence of the students' learning of the interactional architecture within specific contexts.

can be (topically) related to the plenary or not (Markee, 2005; Sahlström, 1999). On this behalf, Koole (2007) speaks of *parallel activities* that can be content or not content related and he also includes activities such as writing. It is important to emphasize that this engagement in parallel activities does not entail a status of non-participation. By contrast, “[s]tudents’ activities that could be analysed as non-participation in terms of a central activity in which the teacher is involved can also be understood as activities that go on parallel to the teacher’s activity.” (ibid.:498). Most importantly, despite an engagement in parallel activities, students are often able to respond appropriately to teachers’ questions. Thereby they demonstrate their continuous monitoring of the teacher’s activity, which in turn displays their orientation to the teacher’s activity as the *central activity* (ibid.). Sahlström (1999) notes that one could hypothesize that participation in desk interaction may to a certain extent be considered as compensating for an absence of participation in plenary, constituting thereby a tool for equity construction. He refutes this however by saying that commonly students sit together with classmates that are similar to them (e.g. gender and social background), which does not favor the interaction across barriers but rather may accentuate the differences between the groups of students within the classroom. Note at this point that the studies on parallel activities have focused on mainstream classrooms where one main teacher is involved. The integration classroom with itinerant or specialized teachers will bring to light further aspects of how parallel activities can unfold and how they are designed (cf. also Hosoda & Aline, 2013). This will be shown in chapter VI section 3.

I have reported so far that participation opportunities depend on the pedagogical focus and the interaction format at stake, and that participation is not limited to those moments where students make active contributions to the interaction as speakers (also displaying reciprocity or engaging in parallel activities bears testimony of participation). To a great extent however, participation of students in classroom interaction is organized by means of question-answer sequences, as these sequences are an important vehicle for the accomplishment of the institutional goal. Some characteristics of question-answer sequences will shortly be discussed in what follows, as in this thesis participation will mainly be studied on the basis of these sequences.

3.3 Participation in question-answer sequences

Question-Answer sequences are one ubiquitous type of adjacency pair, i.e. pairs of actions that are composed of a first pair part (FPP) by one speaker that makes the accomplishment of a second pair part (SPP) by another speaker conditionally relevant (cf. chapter III, section 2.2). In classroom interaction Q-A sequences operate as an essential vehicle for constructing the business at hand, namely learning, and displaying learning and understanding (Cazden, 1988). According to Cazden, “[a]t their best, teacher questions can both assist and assess student learning.” (1988:92). Despite its ubiquitousness, studies on spoken interaction reveal that the choice of criteria for defining a *question* is not straightforward (e.g. Ehrlich & Freed, 2010) – a fundamental question is whether *question* refers to the form of an utterance (as inversion or wh-interrogatives), its function (as information seeking) or both of them. In what follows I briefly present some recent discussions.

In a recent project that attempted to search for language universals by means of an examination of question-response sequences (cf. special issue of *Journal of Pragmatics* 42 in 2010), ten different languages have been investigated. According to the coding scheme adopted within this large-scale

project (Stivers & Enfield, 2010), a question must have either linguistic markings of an interrogative (lexico-morpho-syntactic as e.g. *wh*-marker or prosodic as raising intonation) and/or it must be recognizable as accomplishing the function of a question (i.e. it must attempt to elicit information, confirmation or agreement; *ibid.*:2621). A functional and formal question is then further analysed in terms of the social action it implements, such as a request for confirmation, an offer or request, as well as other-initiations of repair (*ibid.*:2623). In comparison with Egbert & Vöge (2008), who define questions as the action of seeking for information, the criterion for defining a question is less restrictive, because turns that implement other social actions than information seeking are also included. With respect to the specific turn design of questions, Stivers (2010) describes, on the basis of English social interaction, three types of questions namely polar questions, *q*-word questions (who, what, where, when, why, how) and alternative questions (*x* or *y*). Polar questions can be cast in terms of declaratives (with or without raising intonation), with interrogatives (inversion) or with tag questions (in English; cf. also Raymond, 2003)⁴⁵.

A slightly different definition of question is adopted by Ehrlich & Freed (2010). On the basis of the different contributions in their book, they propose a definition based on functional and sequential criteria (*ibid.*:6). Questions are utterances that:

- “*solicit (and/or are treated by the recipient as soliciting) information, confirmation or action*” (Hultgren & Cameron, 2010; cited by Ehrlich & Freed, 2010), and that are
- “*delivered in such a way as to create a slot for the recipient to produce a responsive turn*” (Ford, 2010; cited by Ehrlich & Freed, 2010).

This definition allows including also requests for actions, which have been excluded by Stivers (2010).

Within classroom interaction research scholars commonly distinguish between *display questions* (Long & Sato, 1983; also referred to as known-information questions, Mehan, 1979, or pedagogical questions) and information-seeking questions (Koshik, 2010; also referred to as referential or ‘real’ questions). Mostly this distinction is based on an etic categorization, i.e. the analyst categorizes questions as either real or display questions on the basis of his estimate whether the questioner in fact knows the answer or not. This estimate can be made by reference to common assumptions of what, as a member of a specific community or category, one should know. While this procedure may be manageable, it has to be noted that it is a strictly etic approach. However, an emic approach would require that it is explicitly displayed in interaction that the answer has been known since the beginning, or that, by contrast, the answer provides real new information. Hence, under certain circumstances, the overall sequence may give insight into the fact that a question was a *display question*, namely when the teacher accomplishes a third evaluative turn (Cazden, 1988; Koshik, 2010; Koole, 2012a). By contrast, as Heritage & Clayman (2010) point out, the categorization of an initial action as a *real question* is generally only observable for the respondent after a third-turn acknowledgement (e.g. with a change-of-state marker *oh*, Heritage, 1984b). The difficulty is however that third evaluative turns may also be absent, e.g. when an answer is followed by a further question, which Koole (2012a) reports to occur in 20% of cases (cf. Nassaj & Wells, 2000; Seedhouse, 2004). In this case, there is no observable trace at the interactional surface for considering the

⁴⁵ Heritage & Roth (1995) by contrast refer to interrogatives as constituted by the five classes (alternative questions, *wh*-questions, declarative questions, Y/N-questions, tag questions). The same authors consider directives such as ‘tell us about it’ or ‘give me an example’ as questions in a pragmatic sense (*ibid.*:10).

initial turn as constituting a display question. In the present research I etically categorized questions either as requests for information or display questions in an etic manner but by mobilizing commonsense knowledge as a member of the German-speaking adult community. This procedure is disputable but appeared functional for the current purposes.

Within the context of learning and teaching, questions are not only used as a means of eliciting information but more predominantly as an instrument for designing the core business at hand, namely to test knowledge as well as to transmit knowledge (Koshik, 2002, 2010; Ehlich & Rehbein, 1986, on how questions are used for transmitting knowledge during teacher's presentation). In any case, both types of questions make conditionally relevant as a next action an answer. The responses to questions can be described as being relevant or non-relevant next actions (chapter III, section 2.3.; Schegloff & Sacks, 1973). Relevant next actions are those actions that the initial action projects to come: an answer to a question, a grant or a refusal to a request (or the accomplishment of the action). Note that when the core business of an interaction is learning, an answer can be the relevant response to a question, but it can still be inappropriate in terms of its factual content. If the question requests information about the colors of the flag of Switzerland, the response *yellow* can be judged inappropriate in an etic manner. However, despite the rather straightforward possibility of the analyst to judge on the appropriateness, he must attach himself to how the participants themselves orient to and eventually further treat the response. It is therefore possible that a response which is etically described as inappropriate may be considered appropriate by the participants (this is what occurs in excerpt 40 in chapter IX). It is important to note therefore that when I refer to answers as appropriate this categorization is based on the sequential consequences of the response, i.e. the co-participant's orientation to the answer as being appropriate. The provision of right or erroneous answers gives insight into the learner's state of learning, but it has no bearing on the interactional competence. By contrast, it is the way of responding to questions in social interaction that is part of interactional competence (Hutchby, 2002; Clemente, 2009; Van Compernelle, 2010). Responding to questions is one type among a multitude of forms of participation. The importance of question-answer sequences lays in the fact that they are a vehicle for the accomplishment of different types of activities and they occur especially in the form-and-accuracy and content-and-fluency context, but also in the task-based context (Seedhouse, 2004). The different activities implemented in school for the core goal of learning make relevant that the students understand – this understanding relates for example to the procedure of the tasks to accomplish (provided by the teacher or by a text) or to questions addressed to them by the teacher. Understanding is a necessary condition for the local pedagogical goals to be achieved – when a student does not understand the question or the explanation that are necessary for the accomplishment of an activity, then the progression towards the achievement of the activity is disrupted as participants have to search for solutions for overcoming this problem. In what follows I approach such problems with the notions of intersubjectivity and progressivity. First I provide an introduction to the notions (sections 4.1. and 4.2.), and then I discuss how these notions relate especially to the students in integration classroom (section 4.3.).

4 Intersubjectivity, understanding and progressivity in classroom

In this thesis I analyze the students' participation and their interactional competence especially in those moments when they are invited to actively contribute to interaction by means of answers or the accomplishment of requested actions. In these specific moments, intersubjectivity and understanding are necessary for the successful achievement of the local interaction goals.

4.1 Intersubjectivity

The notion of intersubjectivity goes back to the philosopher Husserl (beginning of the 20th century) and has since then been taken up and reconsidered in various ways in the social sciences. Also without explicit reference to Husserl it has further been used in the field of child development for example by Trevarthen and later Tomasello (for a recent critique cf. Duranti, 2010). Going back to Husserl's original texts, Duranti (ibid.:2) states that intersubjectivity refers to "*acts in which one actively works at making sure that the Other and the Self are perceptually, conceptually, and practically coordinated around a particular task*". He explains that intersubjectivity has erroneously been understood as 'mutual understanding', while the notion also refers to the fact that participants are "*minimally aware of the presence of an Other*" (2010:13). This means that even the personal experience of the world as a world where other participants have left their footprints refers to intersubjectivity. According to Duranti, intersubjectivity in Husserl's sense has neither been conceived as a process nor as something to be achieved, but as "*an existential condition that can lead to a shared understanding*" (Duranti, 2010:6) and that is a necessary basis for communication to happen (it is not a result of communication). Basically, participants can only engage in some collaborative interaction when they assume that the other perceives the world in a similar way.

An example that shows that intersubjectivity is not identical with 'mutual understanding' is illustrated by Schegloff (1991a).

Example 5

[Schegloff, 1991a:160f. ; transcript slightly adapted with respect to line numbering and indication of overlap]

- 01 M: What' Stuart have to say.
 02 N: Didn' I tell you?
 03 M: No::,
 04 N: He's coming
 05 M: Oh that's righ[t
 06 N: [Yeah he's coming he's coming.
 07 M: Oh that's right, [he's going to Berkeley
 08 N: [Yes.

Recipient M says that N did not provide him yet with a piece of information (l.03). N therefore provides the information (l.04), which he assumed to be already shared but for which M said that this is not the case. When the information is provided, M self-repairs his statement that N didn't tell him and avows that he did indeed tell him (l.05). The self-repair in this case is not repairing a problem in understanding in a common sense but a problem with regard to what is 'known in common' – there is a break in

intersubjectivity because participant A and participant B did not share a same knowledge of a state of knowledge.

“(...) that which is misunderstood itself concerns socially shared cognition – what is or is not known in common. (...), the issue is whether the participants share a certain knowledge; (...).” (Schegloff, 1991a: 160)

Thus, this example shows that trouble in intersubjectivity is not equal to ‘trouble in understanding’. The first refers to an interindividual dimension, which can be reformulated as follows: *what has been assumed as being shared is in fact not*. Let us consider two more examples: a speaker S can introduce a new personal reference (e.g. *Suzanne*) and the recipient R does not know the person. This implies a problem in intersubjectivity, which is not based on the fact that the recipient does not know who *Suzanne* is. The problem in intersubjectivity is not that speaker and recipient have different states of knowledge but that they are not ‘aware’ of this difference. As a counter-example, when a speaker addresses a recipient who is a language learner for example and he explains a word without having been solicited, but the recipient R then states that he knows what x means, there has been rupture of intersubjectivity because the speaker S made an assumption on the shared knowledge that has been revealed as being wrong. Such problems in intersubjectivity can reveal at the surface of interaction for example in the form of repair sequence (in the first example, speaker S should reformulate a posteriori who *Suzanne* is) or in the form of clarifications that refuse an explanation as in the second example. In other cases, the break in intersubjectivity may not be topicalized but appear at the surface of interaction by means of a misunderstanding.

In this thesis, intersubjectivity is not understood as a result but a necessary condition for the accomplishment of interaction – participants must share an understanding of what has occurred, what is done at the moment and what course of action is potentially going to be accomplished in the future (Schegloff, 1991a, 1992). Without intersubjectivity, collaboration between participants for the achievement of a situated interactional goal is impossible. Thus, maintaining intersubjectivity is necessary for the achievement of a goal towards which participants work by a course of action; it must continually be checked and re-adapted. A way of checking and re-adjusting intersubjectivity is by means of displays of understanding. Displays of understanding are accomplished individually, indicating for example in one turn whether and how a recipient understands a prior action. The maintenance of intersubjectivity, a process that extends over several turns, is fundamentally based on the participants’ accomplishment of displays of understanding (Deppermann, 2013b; Deppermann & Schmitt, 2009; Schegloff, 1991a; 1992a).

Intersubjectivity means that a recipient does not only have to understand what a speaker has said or done, but that the speaker further confirms or refuses this understanding - this in turn results in the fact that the speaker can assume that the recipient understands. By means of this process a certain understanding or knowledge becomes shared. Moreover, intersubjectivity is not limited to mutual understanding but extends to the idea that participants have to assume that they share knowledge and understanding, and breaks in intersubjectivity occur when the assumptions between the participants do not converge. This definition shows that the notion of intersubjectivity is familiar with the notion of *grounding* (Clark &

Wilkes-Gibbes, 1986; Clark & Brennan, 1991), referring to the process where some information is added to the *common ground* of different participants.

4.2 Progressivity

The notion of *progressivity* (Schegloff, 1979; Schegloff, 2006) has recently been discussed by different researchers working within the framework of Conversation Analysis (e.g. Clemente, 2008; Clarke & Wilkinson, 2010; Hayashi, 2005b; Heritage, 2007; Hosoda & Aline, 2013; Keevalik, 2012; Kuroshima, 2010; Mondada, 2011b; Schegloff, 2007; Stivers & Robinson, 2006). It was in his paper on repair and syntax that Schegloff (1979) initially discussed the principle of progressivity as a basic interactional principle. Progressivity refers to an interface between the sequential and the temporal unfolding of interaction: Each element makes relevant the occurrence of a *next one due* – which can be either a sound for completing a word, a next word for completing a TCU, or a next turn for completing a (minimal) sequence. The progressivity of interaction refers to the straightforward unfolding of such a next element. By contrast, inter- and intra-turn delays, cut-offs, repeats, inbreaths, non-answer responses or repair initiations constitute impingements on the principle of progressivity (Schegloff, 2006, 2007a).

Schegloff's (1979) initial discussion of progressivity related to *progressivity on the turn constructional level* or *within-turn progressivity* (Heritage, 2007). Troubles on this level concern for example self-repair, intra-turn pauses, hesitations, cut-offs (Schegloff, 1979). Self-initiated self-repairs break the progressivity of the turn insofar as completion of the turn is delayed: a cut-off prevents the accomplishment of *the next sound due*, and a hesitation marker or a pause replaces and therefore displaces the next element due. Later on, Schegloff (2006 and 2007a) discusses progressivity on the sequential level. Such troubles in *sequential progressivity* (Heritage, 2007) comprise all practices that displace a sequentially implicative action: inter-turn pauses that delay the next action, other-initiated repair that *displace* a next action, as well as accounts that *replace* a conditionally relevant action. Consequently, progressivity does not simply embrace the idea that the overall activity or talk-in-interaction should move forwards. The technical notion of progressivity is more precisely referring to the fact that interaction is *sequentially* organized (cf. Schegloff, 1979; Sacks, 1987) and not only serially. This means that a first and a second element are not only temporally adjacent, but there is a systematic and normative organization between them (Sacks, 1987:54). Put differently, the notion of progressivity does not only refer to *temporality* (as suggested by Kuroshima, 2010), but it is also intimately tied to the *preference for contiguity* (Sacks, 1987) and the preference for *nextness*. Furthermore, according to Schegloff (2006), *progressivity* is a universal principle of talk-in-interaction, valid across languages. It is tied together with the two universals of *minimization* (cf. also Levinson, 1987; Sacks & Schegloff, 1979) and *nextness*. Minimization refers to the fact that with regard to the basic organizations of social interaction, turn-taking, sequence and repair, it has been shown that “*the minimal form is the unmarked default; special import is attached to expansions of it.*” (Schegloff, 2006:86). Nextness entails the idea that each element is heard as being the next to a prior element (ibid.). Schegloff (ibid.) explains this interrelationship as follows:

“*progressivity is realized when some trajectory of action moves from the last-reached point to the next, delay means **something occurs next other than what was due next**; expansion of*

some unit—a turn, a sequence, a person reference—beyond its default, minimal realization can constitute a loss of progressivity, and so forth.” (ibid.:87; my emphasis)

The principle of intersubjectivity is intimately tied to the principle of progressivity. I discuss the interrelation between progressivity and intersubjectivity in section 4.3. before presenting different types of impingements on progressivity that will be of relevance for the analyses.

4.3 The interface between progressivity and intersubjectivity

It has been shown that there is a preference for securing intersubjectivity in a tacit manner whenever possible (e.g. Heritage, 1984a; 2007; Deppermann, 2010b; Schegloff, 1992a). This implies that to a great extent participants mutually assume that they are sharing knowledge and understanding, without resorting to clear demonstrations of such sharedness. Practically, participants’ understandings of each other’s contributions are “*displayed en passant*” as “*by-products of bits of talk*” (Schegloff, 1992a:1300). Put differently, understanding leaves its marks on the conversational surface as a result of conversational sequencing (Moerman & Sacks, 1988:185): it is by means of the turn-taking organization and the sequence organization (adjacency pair) that interactants necessarily *display* to each other how they hear the other’s turns and how they understand the momentary state of talk. In this regard I have shown in chapter III that adjacency pairs function as a *template for interpretation* or as an *architecture of intersubjectivity* (Heritage, 1984a; Kasper, 2009). The continuous display of understanding or non-understanding as an inherent part of sequencing is observable at different levels of social interaction. For instance, a participant takes turns at appropriate places, whereby he displays his understanding of syntactically, prosodic and pragmatic complete turns (Sacks et al., 1974). A participant’s response can be conforming to the *topical* and the *action agendas* of a question (Heritage & Clayman, 2010), whereby displaying his understanding of the action type (e.g. question) but also the content or the prior turn.

In addition to tacit displays of understanding that are a result of the conversational sequencing, interactants can also rely on specific practices for indicating whether they understand a prior turn or not. Participants can rely on such practices either for *claiming* or for *demonstrating* understanding (the latter is also referred to as *showing* or *exhibiting understanding*; Sacks, 1992a). Sacks argues that the repetition or ratification of a referential expression limits itself to a claim of understanding. Only the reformulation of this reference can demonstrate understanding of it⁴⁶. Sacks (1992b) illustrates this difference with the following (invented) example:

Example 6

[Sacks, 1992b:141]

A: Where are you staying?

B: In Pacific Pallisades.

A: Oh. Pacific Pallisades. ◀ Repetition - Claim of understanding

In this case, participant A claims understanding of B’s response by repeating it. Participant A *demonstrates reception* but no understanding. It is only through the performance of an *operation* on B’s turn that A can demonstrate understanding, as in the third turn below

⁴⁶ Another example from Sacks, cited by Hindmarsh et al. (2011), is the case of second stories: after a story-telling of A, only a second story of participation B can demonstrate that B really understood.

Example 7

[Sacks, 1992b:141]

A: Where are you staying?

B: In Pacific Palisades.

A: Oh at the west side of town. ◀ Reformulation - Demonstration of understanding

This type of response would have the advantage that the mutual knowledge that they are talking about the same location is *secured* (and not only assumed). However, such explicit ways of building intersubjectivity are not the default procedure and thus, such examples are found only scarcely in social interaction (Heritage, 2007). A reason for this is that “*such explicit displays of understanding do not contribute to the topical development of the conversation but rather take the form of side sequences or sequence expansions (...)*” (Svennevig, 2004:491). By contrast, the default procedure is, as has been stated, a tacit building of intersubjectivity which in turn allows to promote sequential progressivity. This preference for building intersubjectivity and progressivity simultaneously is not limited to the establishment of reference in interaction but it is grounded in a more general *principle of economy* (or *minimization*):

“Die Präferenz für die simultane Herstellung von Progressivität und Intersubjektivität entspricht einem interaktiven Oekonomieprinzip, das immer dann anwendbar ist, wenn Verstehen vermutlich unproblematisch bzw. hinreichend eindeutig aus dem Handeln inferierbar ist.” (Deppermann, 2010b: 367)⁴⁷.

Deppermann (2010b:366f.) sums up that displays of understanding (more precisely *Verstehensdokumentationen* which are in fact displays) fall under three main types:

- (1) Displays of understanding that are not specifically designed for showing understanding, but which become displays of understanding by means of their sequential placement. This is the case with answers to questions that necessarily display some understanding of the prior turn.
- (2) Displays of understanding can be implied in the turns, hence not explicitly focusing on the establishment of understanding. This is the case e.g. when participants use particles such as *ah* (‘oh’; Heritage, 1984b; Imo, 2009) as well as, in the case of doctor’s questions to patients, different question designs that show what the doctor has understood from the patient so far (Spranz-Fogasy, 2010:74).
- (3) Displays of understanding can be activities that are *specialized for the documentation of understanding* as e.g. backchannels, repair or *thematizations* of understanding (Deppermann & Schmitt, 2009) that rely on mental verbs (e.g. understand, grasp, mean) and are explicit formulations of (non-) understanding.

A potential fourth category of displays of understanding may be non-verbal displays of understanding. In her study on interaction between a salesman and a customer in a garage, Mondada (2011a) shows how the sequential embedding of facial expression, handling and gaze towards a specific object in the car displays the customer’s understanding of the salesman’s instruction (cf. also LeBaron & Koschmann, 2003 or Schmitt, 2010, for displaying understanding by means of bodily actions). In a similar vein,

⁴⁷ My translation: “The preference for simultaneously constituting progressivity and intersubjectivity reflects a principle of economy, which is applicable when understanding is inferable from the action in interaction with sufficient clarity and without problems.”

Hindmarsh, Reynolds & Dunne (2011) demonstrate how students of dental apprenticeship display their understanding of the trainer's comment. When trainers show something in the mouth of a patient, the students' verbal *claims* are embedded in students' leaning forward over the patient so as to see, and so display 'seeing' what the trainer is referring to in the patient's mouth. Without such a bodily display of engagement, the students' claim of understanding may be questioned by the trainer who will remedy the problem by explicitly requesting the student to look. Hence, Hindmarsh et al. (2011) show that the trainer's assessment of the students' understanding relies on the latter's bodily conducts that function as displays of engagement in the 'viewing'.

Sometimes however, when participants jointly work towards an interactional goal, it becomes evident that participants do not share knowledge or understanding (while they have assumed so). In these moments, participants may do some extra interactional work for making some information mutually understood and known. This shows that the principle of progressivity is subordinate to the maintenance of intersubjectivity – while interaction can unfold with breaks in progressivity, intersubjectivity cannot be renounced to. Consider the following example concerning the preference of recognitional (e.g. names) over non-recognitional (e.g. somebody) for reference introduction (cf. Heritage, 2007): when two participants talk about a third person, it is necessary that this personal reference is part of their intersubjective understanding. When participant A introduces this referent with a name but B does not know this person, A and B must first agree on an intersubjective understanding of this referent before they can proceed in the activity of discussing. In some situations, they may proceed to a negotiation that finally allows B to recognize who X is. Or, in other situations, A could decide that it is not important whether B knows who exactly this person is and can replace the initial recognitional with 'somebody'. What has happened in this case is that participants favour progressivity over the recognitional. Importantly, it is not intersubjectivity that is sacrificed, but the level of the common knowledge has been adapted (from recognitional to non-recognitional). As Heritage mentions however, "*there are circumstances in which speakers can not have, nor can they permit their recipients to have, the luxury of abandoning recognitional reference.*" (ibid.:270). This shows that the success of re-establishing progressivity depends on the activity at hand and its related ultimate goal: For certain interactional goals, the 'level of understanding' (*grounding criterion*, Clark & Schaefer, 1987) may be adapted, or the procedure to achieve the goal; for other goals however, mutual knowledge or understanding of a piece of information must be given for the progression of the interaction and, in this case, the only option would be to change the interactional goal at hand and therefore to abandon the original goal. The importance of understanding and the objects of understanding are intimately related to the interactional setting as well as the local activity at hand.

Deppermann, Reitemeyer, Schmitt & Spranz-Fogasy (2010) show that the relevance of claiming or demonstrating understanding as well as the different practices for displaying understanding vary according to three types of interaction (*Interaktionstypen*, i.e. counseling in an administration for migrants, medical interview, film set). This relates to the fact that the different institutional settings have different socio-structural concerns and therefore make relevant different types of understanding. Thus, the expectations on understanding depend fundamentally on the goal of the interaction – while at a film set the major purpose is to record the film, in an instructional setting (e.g. classroom), the aim is to transmit and test knowledge of the students. Consequently, not only the objects of understanding are

different but also the way that understanding is displayed is specific to these two settings. For the present purpose, intersubjectivity has to be built for the progression of interactional and institutional goals in a classroom setting. It may be assumed that in learning contexts the demonstration of understanding may be favored over claims of understanding, depending also on the sequential context in which they occur (Koole, 2010)⁴⁸. In the next section I discuss in some more detail the specific issues of progressivity and understanding in classroom interaction.

5 The issue of progressivity in classroom interaction

This thesis uses progressivity as a lens through which interactional competence will be looked at because it provides a coherent umbrella term for the examination of two major issues that have emerged as relevant for studying the students' participation in the integration classroom. Participation can be defined as an activity where persons co-construct an activity in a collaborative and structured way by means of different practices (Goodwin & Goodwin, 2004; cf. chapter II, section 3.2.). These practices can be said to be part of the participants' participatory or interactional competence.

As progressivity is an underlying principle of social interaction, participation to social interaction or more clearly all practices that the participants use for participating could be looked at through the lens of progressivity. Actually, each practice and each contribution to an interaction either favors progressivity or breaks progressivity. However, studying participation and the interactional practices it implies does not necessarily benefit from looking through this lens of progressivity. For the current study, two major issues of participation will be analyzed, and both of them can relevantly be approached through progressivity – the first issue is related with a rather colloquial meaning of progression, and the second issue is specifically related to sequence progressivity:

- When students are participating in classroom interaction they are faced with two competing constraints: They have to understand and they have to favor the progressivity of the classroom interaction. The presence of a teaching assistant provides the HH students with particular opportunities to deal with these constraints (5.1.).
- On occasion, the HH students are selected for participating by means of providing responses to questions. In these moments, there is a normative expectation relative to the
 - the *timing* of responsive actions (5.2.1.)
 - the completion of question-answer sequences by the hard-of-hearing student (5.2.2.)

⁴⁸ Whether participants to interaction rather claim or demonstrate understanding of their co-participants' actions is also related to the action type of the initial action. The most basic illustration of this is provided by polar questions. A *yes* or a *no* relevantly responds to a polar question, however, the *yes/no*-responses do not make observable if the question has really been understood. Likewise, a participant can provide a grant in response to a request for action, hence orienting to the previous action as a request and thereby displaying understanding of its action type. However, it is only the actional accomplishment of the requested action that can prove if the content of the request has been understood or not (and this accomplishment may be deferred to one week after the request).

5.1 Participation and dealing with competing constraints

When students are participating in interaction as recipients they have a continuous choice between staying in a recipient position and thereby favouring the progressivity of the speaker's unfolding course of action or initiating a repair sequence by asking for clarification when something is not understood. The delicate matter is that, depending on the situation, a recipient can become a speaker at each moment when the current speaker other-selects him for a turn (cf. chapter VII). Additionally, an immediate negotiation of understanding may be significant because it has been shown that with an increasing distance between the turn that has been problematic and the repair initiator it gets more difficult to localize the specific trouble source turn (Drummond & Hopper, 1991:305; cf. chapter III, section 2.3.). Hence, as next turn repair initiations participants can use minimal devices such as 'huh' or 'who' because they can rely on the principle of nextness which contributes to the fact that the initiator is heard as referring to the just prior turn. By contrast, when the *repair initiation opportunity space*⁴⁹ is progressing or passed, more 'costly' initiators must be designed for locating the trouble source turn and the precise element that is problematic. This challenge may be especially pronounced for hard-of-hearing participants because they are reported to generally struggle with precisely indicating what they did not understand (Skelt, 2006; Pajo, 2012). Consequently, the immediate initiation of repair by the hard-of-hearing students may be beneficial for a successful re-establishment of understanding. On the other hand however, progressivity of the unfolding interaction is preferred.

With respect to their participation in the integration classroom, HH students also have to deal with these issues and they have to strike a balance between the two *competing constraints*: on the one hand they have to make sure that they understand (an explanation, a question), and on the other hand they should minimize interruptions of the plenary activity.

As already mentioned, different communicative activities make relevant different types of understanding. These differences relate to the fact that the *grounding criterion* as proposed by Clark & Schaefer (1987; but see already Clark & Wilkes-Gibbs, 1986), saying that understanding must be *sufficient* for the successful achievement of current interactional goal. Consequently, one of the tasks for participants in interaction is to know or to negotiate what understanding is necessary and sufficient at the specific moment. Hence, they must deal with the *competing constraints* in a way that is appropriate for the local expectancies of interaction. It is important to note that the choice of signalling a lack of understanding or not, the choice of the precise moments of clarifications as well as the resources used for these clarifications is a local accomplishment by the students. Thus, students must actively deal with the competing constraints between breaking progressivity and clarifying understanding. The questions that arise are, how do students deal with these constraints, what competencies does this make relevant, and what competencies do they deploy?

5.2 Participation and progressivity in question-answer sequences

When students are constrained to participate by means of other-selection, they have the obligation to contribute to the activity at hand, which in turn necessitates that they understand what has been said and

⁴⁹ Schegloff (1992a) shows that repair is initiated at four possible positions: same-TCU, in transition space (i.e. at the TRP of the trouble source turn) and third position or fourth position. These four positions constitute the repair initiation opportunity space.

done in prior turn(s). In this case, they can promote sequence progressivity. However, students can encounter different difficulties that may hinder their contribution to this activity and therefore disrupt the progression towards the goal at stake – they may not understand or not having heard the prior speaker, or they do not know how to answer a question. Each type of problem has a different impact on how the problem may be interactionally solved so as to re-establish progressivity, and it puts different characteristics of the students to the fore. The immediate handling of the difficulty by the student can take different forms: the student does not provide any answer and therefore the prior speaker must deal with the disruption on the basis of his assumptions of what the problem could be (sections 5.2.1. and 5.2.2.). Another possibility would be to ask for repair, thereby favouring the work on understanding as a potential solution for carrying further the activity (5.2.3.). Another option is to provide an ignorance account as ‘I don’t know’ (5.2.3.). All of these losses of progressivity are very common in interaction and they are not necessarily a sign of problematic interaction.

5.2.1. Participation and the timing of responsive action (sequence progressivity)

In their seminal paper on turn-taking organization in mundane conversation Sacks et al. (1974:714-715) state that talk may be continuous or discontinuous, referring to pauses and lapses as breaking the continuous progression of talk. The authors distinguish between intra-turn silences (i.e. pauses), and inter-turn silences. Inter-turn silences can be gaps or pauses: the authors refer to gaps when the turn of the first speaker and the turn of the second speaker are not related by conditional relevance. By contrast, when the first and the second turn are related by conditional relevance and the second turn does not come in precision-timing, the inter-turn silence is referred to as a pause. Thus, “[p]arties’ treatment of silence in conversation is contingent on its placement.” (Sacks et al., 1974:715). The authors also state that when an inter-turn silence is resumed by the first speaker’s continuation instead of a speaker transition, then inter-turn silence is transformed into an intra-turn pause (cf. Sacks et al., 1974:715). At this point it should be noted that in sign language data, the notion of silence must be reconsidered. When silence means ‘absence of speech’, then the counterpart to silence in sign language may be ‘absence of signs’. As in this study the focus is on bilingual participants in a spoken and a signed language, the term silence will therefore be avoided (unless when referring to previous findings) – by contrast I will use the terms ‘pause’ and ‘gap’. By *pause* I mean the absence of speech and signs either within a turn or between two turns related by conditional relevance; *gap* is used as proposed by Sacks and colleagues. How the notions of pause and gap can be reconsidered within a holistic perspective on social interaction will be an object of discussion within the analytical part of this study (especially chapters VII and VIII).

Participants’ minimization of pauses between turns provides empirical evidence for the importance of the principle of progressivity in interaction. In this regard Schegloff et al. (2002:6) state that “*the unmarked value of the transition space (Sacks et al., 1974: 705f.) is one beat of silence*”, and they further state that “*departures from that value (shorter or longer) are potentially marked and import-laden*” (ibid.). In a similar vein, Ford, Fox & Thompson state “*(...) timing of speaker onset is crucial to the making of meaning in conversation*” (1996:427) and explain that the precision timing as well as the anticipation or the delay of a turn beginning are meaningful. It is fundamental to emphasize however that such breaks in progressivity do not entail interactional trouble or incompetence of the participants. The principles of nextness and of progressivity however imply that pauses/gaps that last too long are charged with

signification, and participants interpret the non-default continuation by inferring its possible causes. In this regard, Pomerantz notes:

“If a recipient manifests behaviors that indicate that he or she is having difficulty or is hesitant to respond, the speaker is in the position of guessing or inferring or determining what the trouble is.” (Pomerantz, 1984b: 155).

This trouble may pertain to insufficient hearing or understanding as well as to an inability to provide an answer if the prior turn has been a question. Furthermore, one pervasive account for delays in ordinary conversation is tied to preference organization; inter- and intra-turn delays are common features of the turn-design related to dispreferred responses (cf. chapter III, section 2.3.; Pomerantz, 1984b; Sacks, 1987 as well as Fasel Lauzon, Pekarek Doehler & Pochon-Berger, 2009 and Gardner, 2004 for L2 interaction, etc.). Furthermore, Carroll (2000) has shown that delayed turn-beginnings by second language speakers may be responsive to lacking fluency of the prior turn of his co-participant (cf. also Mondada, 2008), showing therefore that the delay is not necessarily a sign of interactional *incompetence*.

An inter-turn pause is only retrospectively definable as such, namely when the participant who is held accountable for a next turn launches his turn after some pause. By contrast, when the participant does not launch such a turn but the previous speaker re-launches a turn, the pause is broken and turned into an absence of answer (Bergmann, 1982).

5.2.2. Participation and absent answers (sequence progressivity)

Concretely speaking, a previous speaker may break the pause either by recycling his first pair part, or by accomplishing a *“pursuit tag”* (e.g. Bergmann, 1982, citing Schegloff unpublished). In both cases, the previous speaker’s action provides some insight into how he interprets the potential reasons for the absence of a response. An important aspect is that the interpretations are contingent not only on the interactional goal at hand, but also e.g. the displayed identities of the participants (Heritage, 1984a). For example, participants’ interpretation of that lack of answer may be that the potential answerer does not know the answer (Sert, 2011 on classroom interaction), that he does not want to provide the answer (Beach & Metzger, 1997, on courtroom interaction), that he did not hear the question (Mondada, 2006a on interaction by video-conference) or that there is a problem pertaining to shared reference (Pomerantz, 1984a; Schegloff, 1987b). Precisely these accounts for absences of answers may be explicitly referred to by so-called non-answer responses (which I present in section 5.2.3. below).

Before that, a last comment shall be made concerning the question how long a gap may last before it is turned into an absence of answer. In her examination on mundane conversation, Jefferson (1989) observed that participants orient to a *standard maximum silence* lasting approximately one second. She notes that pauses that are longer than this *standard maximum silence* are regularly subject to negotiation where *“one of the participants starts to do some remedial activity”* (1989:170), i.e. either the speaker modifies his initial turn or the recipient may initiate repair. In classroom interaction this standard maximum silence is adapted as participants within classroom contexts orient to a no-overlap rule just as in ordinary conversation, but pauses and gaps may occur much more frequently (McHoul, 1978). These *time-outs* (ibid.) or instances of *wait time* (Walsh, 2002, 2006) can be more or less extended, depending on the teacher’s conversational style. These extended cases of wait time occur commonly between a

teacher's question and the student's answer. However, Wong (2004) has shown that they also occur after learner's turn, where the teacher's use them as an interactional resource for providing the learners with extra time to complete a turn or self-repair.

In sum, inter-turn pauses and absences of response impinge on the sequential progressivity of interaction because the next one due is not coming in a straightforward manner. This implies that the sequence in terms of paired actions does not proceed, and that the overall activity for which the sequence is a vehicle is not carried forward (e.g. when the answer of a patient is lacking within a medical consultation, the consultation cannot proceed).

5.2.3. *Participation and non-answer responses (sequence progressivity)*

By contrast to absences of responses students may initiate repair and thereby attempt to solve the problem in understanding. Also in this case, progressivity is broken. Progressivity is not only compromised when a recognizable next action is delayed, but also when questions are responded to with non-answer responses, i.e. repair initiators, counters or ignorance accounts (Heritage, 1984a; Clayman, 2001, 2002; Stivers, 2010; Stivers & Robinson, 2006). When a participant is held accountable for a relevant next action, he may defer this action to a subsequent position through a repair initiation or a counter, or he can replace the relevant next action by an account for the absence of response (e.g. ignorance account). Stivers & Robinson (2006) qualify all types of non-answer responses as impinging on the principle of progressivity. They point however to a difference between ignorance accounts on the one hand and repair initiations (and counters) on the other hand: ignorance accounts (e.g. I don't know) "*display an orientation to the relevance of an answer but satisfy only the technical two-part structure of a sequence*", whereas repair initiations (and counters) "*impede the progress of the sequence.*" (ibid: 371) because they do not close the opened sequence but by contrast initiate a further (insert) sequence. At its most basic then, the notable difference between repair and ignorance accounts is that repairs initiate an insert sequence and normally *defer the SPP* to a subsequent position, whereas ignorance accounts do not initiate a new sequence but *replace the SPP* in itself. For an illustration, consider the following examples. In example 8 the teacher addresses a question to the student Aylin (l.01-l.03) who responds with an ignorance account (l.05.).

Example 8

[JNV_IN_100623_1ereheure]

		entered(ungramm.) entered(ungramm.) what else is there
01	Tea	trutet trotet was gibts noch alles. ← FPP - Sequence opening
02	(3.1)	
		aylin
03	Tea	aylin. ← Hetero-selection (FPP)
04	(0.4)	
		I don't know
05	Ayl	°weiss nicht.° ← Ignorance account - <u>Sequence closing</u>
06	(2.8)	
		loris
07	Tea	loris. ← Hetero-selection (FPP) - Sequence (re-) opening
		entered (x)
08	Lor	trat (xx) ← SPP - Sequence closing

The ignorance account technically closes the adjacency pair, which means that sequential progressivity is re-established. However, the course of action launched by the initial question is not terminated at this point – either another student or the teacher must provide an answer. In this example the teacher pursues a response by re-initiating a new adjacency pair, namely by selecting another student for responding to the FPP (1.07). By contrast, in example 9 the request for action is responded to with a repair initiation, which is not sequence-closing but initiating an insert sequence.

Example 9

Corpus SG, [JNV_IN_100603]

01	Tea	write it down that tomorrow you bring the w- the schreib es *"auf dass du morgen das sp- (...) das& workbook bring along
02	Tea	&sprachheft mitbringst. ← FPP - Sequence opening 1
03	Jac_nv	"(1.3) "handles his pencil case
04	Jac	what >*°wa(s)°< ← repair initiator - Sequence opening 2
05	Tea	bring along workbook <sprachheft mitbringen.> ← repair → Sequence closing 2
06	Jac_nv	((starts writing; micheli disengages)) ← SPP - <u>Sequence closing 1</u>

When the insert sequence launched in line 04 is closed at line 05, Jacob launches in the requested action and thereby closes the sequence. Hence, it is only at line 06 that progressivity is re-established. Thus, it is the student himself who finally provides the answer and thereby closes the course of action. Hence, in terms of sequential progressivity, one could state that repair initiations break progressivity to a greater extent because a further sequence is inserted before the next one due can occur. Considering the question within a more encompassing perspective however, repair initiations break the sequential progressivity but they are deployed in the service of ultimately providing an answer (carrying forward the course of action). Therefore, while breaking progressivity participants who initiate repair exhibit work on providing an answer and they may ultimately contribute to the progression of the overall course of action and the activity. By contrast, by accomplishing an ignorance account participants close the sequence but the sequence-initiating action is in fact still pending (more details on ignorance accounts cf. chapter IX, section 1). In any case, repair initiators and accounts accomplish one important job: Both of them *fill in the slot* that has been opened through an FPP, and thereby, they *address the conditional relevance of an SPP* (they do not accomplish the relevant next action, but they exhibit that a conditional relevance is hanging).

Other-repair (self- or other-initiated) constitutes a non-answer response that has regularly been examined within social interaction with second language learners and discussed more or less explicitly in terms of its impingement on progressivity. An important issue is for example that participants can maximize progressivity (Hayashi, 2005b; Kurhila, 2001; Skelt, 2006), by at least two different means. First, repair initiations may be entirely absent and the participants may attempt to adhere to the principle of *let it pass*

despite apparent errors or even misunderstandings (cf. e.g. Pajo, 2012 for HH interaction, Vasseur, 2005, for interaction with second language learners). This may be related to the fact that repair is a risky endeavor because it disrupts the progressivity of interaction and is a violation of *let it pass* (Drummond & Hopper, 1991:306). Second, when other-repair is accomplished, its form regularly exhibits that there is a preference for *embedded corrections* over *exposed corrections* (Jefferson, 1983). Hence, in embedded corrections a prior turn is corrected but without opening an insert sequence (Brouwer, Rasmussen & Wagner, 2004⁵⁰). It should be noted also that repair is not always successfully carried out (especially in hard-of-hearing interaction, repair may be long and unsuccessful; cf. e.g. Pajo, 2012). If this happens, multiple repair may be carried out subsequently (*multiples*, Schegloff, 2000a), but their number is reported to be regularly limited to three attempts (Schegloff, 2007:106), at which point participants may either abandon the repair or “*find another way of continuing the interaction*”. In contrast to this, Egbert, Niebecker & Rezzara (2004) show how second and first language speakers engaged in conversation around a cup of coffee work extremely hard in establishing intersubjective meaning – the repair sequence extends over two minutes of time and despite the possibility of abandoning the course of action, participants collaboratively engage in extended repair. As mentioned earlier, such differences in work and time spent in repair is tied to the local purposes of interaction (cf. section 4.1.). In the case of Egbert (2004), friends come together for sharing time and coffee together, thus the situation is characterized by the absence of pressure for achieving a certain goal within a specific time frame – this may in turn favor the extended repair work on the same references by the participants.

In sum, claims of insufficient knowledge (ignorance accounts) and repair initiations both impede on the completion and the progression of the overall interaction (by contrast to answers), accounts are nevertheless technically completing the sequence, whereas repair initiations (just as counters) break sequential progressivity inasmuch as they open in themselves new (insertion) sequences. In short, repair initiations are sequence-opening and backward-oriented, ignorance accounts are sequence-closing and forward-oriented.

5.2.4. Participation and the case of word searches (within-turn progressivity)

In previous research *word searches* have been analyzed in terms of intra-turn delays including cut-offs, sound-stretches and/or pauses that impinge on the within-turn progressivity (Goodwin & Goodwin, 1986; Goodwin, 1987; Streeck, 1995; Lerner, 1996; Kurhila, 2006; cf. also Schegloff, 1979). With respect to the subsequent analysis in the present research, a most crucial point to note is that “[i]n a word search, progressivity toward TCU completion has been halted, but the search is organized to show that an ongoing attempt is being made to continue the TCU.” (Lerner, 1996:261). This means that by contrast to pauses that may flag disengagement from an interaction, those pauses around word searches exhibit paralinguistic features that make them understandable as ‘attempts’ to continue and therefore as displays of continued engagement. Furthermore, not only paralinguistic but also visual resources such as gaze conducts have been shown to play a crucial role in the design of the word search practices. Goodwin & Goodwin (1986) as well as Goodwin (1987) show that in addition to cut-offs and delays, participants regularly make use of a ‘thinking face’, consisting in a “*out of focus ‘middle-distance’ look*” (Goodwin,

⁵⁰ The phenomena described by Brouwer et al. (2004) differ in some respects from Jefferson (1987) embedded corrections – for example, in Brouwer et al. (ibid.) the trouble source speaker does not integrate the corrected element in his further speech.

1987:117), as displays of a word search. The specific gaze direction of word searches can either invite co-participation (when the participant gazes at his co-participant) or flag the activity as self-directed (when the participant gazes away from the co-participant). With respect to word searches, co-participation and progressivity, Streeck (1995) notes the following:

“When entering into a pause, speakers engaged in a word-search commonly withdraw their gaze from recipients. They thereby display that they are currently ‘non-listeners’ in the moment’s conversation and – by implication – indicate that co-participation is dispreferred. When no solution is found, gaze is returned to the recipient, and the ‘preference for self-repair’ is relinquished or relaxed in favor of ‘progressivity’ of the conversation: co-participation is now invited.” (ibid.: 96; my emphasis)

From this statement it may be inferred that self-directed word searches are more heavily impinging on progressivity than those which invite co-participation (as invitation of co-participation is equal to favoring progressivity). To some extent this appears to contrast with Kurhila (2006). In her examination of searches pertaining to lexical and grammatical difficulties in interactions with second language speakers, Kurhila defines those searches as *substantial* that involve the co-participant in the search in contrast to those that are resumed by the ‘searching participant’ himself. Based on the assumption that ‘substantiality’ means also ‘impingement on progressivity’, the ideas of both authors are in some contrast. A closer look at their discussions shows the apparent difference between both authors can be broken down to the above-mentioned difference between within-turn and sequential progressivity. When co-participants are involved in word searches they are breaking within-turn progressivity. Through a gaze towards their co-participants and inviting them for overcoming the local problem, a side sequence is initiated (i.e. a self-initiation of other-repair). Consequently, what is in play is an impingement on within-turn progressivity and of sequence progressivity. Streeck’s argument by contrast is related to the fact that the invitation of a co-participant is finally working towards re-establishing progressivity to the extent that the turn which is suspended may progress, the pause is resumed, and finally the overall activity of searching for a specific word/form may be progressed by means of inviting someone else in the search. In sum, it appears that Streeck (1995) argues in terms of within-turn progressivity that is efficiently oriented to when a pause is resumed and a forward-movement proposed, for example by involving a co-participant in the search. Kurhila by contrast argues in terms of sequential progressivity as she considers the insert sequence caused by the participants’ implicit request for co-participation as a heavier impingement on progressivity. I align to this latter conception of breaks of progressivity, considering that a pause in the course of a TCU only *“retards the forward movement of the turn’s talk toward next possible completion”* (Lerner, 1996:260), while an insert sequence not only retards the forward movement but even operates a backward movement by recycling a prior trouble source turn.

In response to a teacher’s question, students may not answer in a straightforward manner because they do not know where they are, because they do not know the answer, or because they did not listen or did not hear. In these cases, progressivity is broken. The pressure for accomplishing an answer and carrying the course of action forward would (at least) make necessary that they either ask for help or provide an account by saying that they did not listen. In some cases however, students refrain from both solutions and do not provide any response – there is a silence. In this case, they give the responsibility to the co-

participant who is in the position to interpret the student's problem. For understanding the import of 'silence' and pauses, I have to allude to the initial account of the turn-taking machinery.

In sections 5.2.1. and 5.2.2. I have shown that delays, absences of answers as well as non-answer responses in slots for conditionally relevant next actions are considered as impinging on sequential progressivity, because these instances come in places where a next one due would be expected. In section 5.2.3., the case of within-turn delay has been illustrated with the practice of word searches that are displayed by paralinguistic and visual resources (i.e. thinking face). In this thesis, a further phenomenon at the intersection of these dimensions will be of special interest: instances where visual resources, as e.g. thinking faces, are exhibited in a systematic manner in *pre-beginning* position. Generally, pre-beginnings as e.g. inbreath, vocalizations or gestures are, by definition (*pre*), not part of the turn but are placed before the beginning of the turn (Schegloff, 1996). On the basis of such a definition, *stagings of thinking* that occur between an FPP and an SPP and in the pre-beginning position of the SPP would be considered as breaking the sequential progressivity, insofar as they retard the proper action implemented by the SPP. However, this conception may be challenged if embodied actions such as systematic gaze conducts or facial expressions are understood not only as additional resources to the vocal and verbal ones, but by contrast implementing themselves turns or actions.

6 Summary

To date, a majority of DHH children in Switzerland are mainstreamed and learn only a spoken language. Deaf and hard-of-hearing students who participate in hearing classrooms are confronted with a range of difficulties despite their augmented hearing abilities thanks to hearing aids and cochlear implants. Poor listening conditions, the high number of speakers, rapid turn-taking or a high rate of topic changes are some of the often cited features that constrain the DHH participants' interaction within the classroom. However, most of the studies on students' participation in mainstream classrooms are based on interview data. What is still missing at this stage are fine-grained descriptions of how DHH students actually participate in classroom interaction.

Students can participate in classroom interaction in multiple different ways – they can display participation by means of nodding or postural alignment, they can demonstrate their willingness to take a turn at talk in interaction or claiming that they know the answer by raising hands, and even the engagement in parallel interaction with peers can (sometimes) be a form of participation. From the multitude of forms of participation this thesis will shed light on those moments when students are constrained to participate in interaction as *speakers*, i.e. when they are other-selected by a teacher or a classmate through a first pair part of an adjacency pair. Responding to questions is a paramount issue relating not only to knowledge but also to the interactional competence of students. Being able to provide a response requires from the student first of all understanding (i.e. hearing and comprehending) the question. Furthermore, the student is held accountable for providing an answer to the request, and this in a precisely timed manner. There is a preference for progressivity in interaction, i.e. interaction is expected to unfold without pauses, repetitions, cut-offs or other elements that intervene between a

current state of talk and what is projected to come next. When such a break occurs it is import-laden, i.e. it is meaningful.

Interactional competence will be studied through the lens of progressivity in interaction. Practically I will limit the focus of analysis to two major issues:

- a) As a general issue, it appears that students have to deal with competing constraints: As recipients they have to guarantee their understanding which may necessitate regular securing procedures, but at the same time progressivity has to be promoted for the interactional and institutional goal to be accomplished. How do they deal with this task?
- b) The most pervasive adjacency pair in classroom interaction (as in other institutional interactions) is the question-answer sequence. When students are other-selected by a teacher or a classmate through a first pair part of an adjacency pair they are constrained to actively participate in interaction as speakers. This question-answer sequence presents itself as a fruitful basis for the analysis of students' interactional competence because it constitutes a locus where they have to deal with their understanding of the question, the accomplishment of a relevant next action as well as the timing of this action.

Chapter V – Data and research design

1 Aims of the study

The present study aims at investigating the *interactional competence* of hard-of-hearing plurilingual adolescents as it is deployed in *classroom interaction*. The investigation draws on a framework of Conversation Analysis and takes a holistic approach to social interaction that emphasizes participants' use of a multisemiotic set of resources for the local construction of meaning in interaction. Interactional competence has been defined in chapter II as the participants' methods for solving interactional tasks in a systematic (regular) but locally contingent manner (e.g. Hall, Hellermann & Pekarek Doehler, 2011; Pekarek Doehler, 2010). The interactional tasks at stake during a social encounter are manifold and they relate to different levels of the interaction order: they pertain to the establishment of reciprocity, the introduction of reference, the accomplishment of specific actions to the co-construction of more encompassing activities (e.g. organization of anamnesis within a medical consultation). This multitude of interactional tasks that participants are confronted with relates to a diversity of facets of interactional competence. This implies that interactional competence cannot be realistically examined in its wholeness but can usefully be empirically examined by means of the study of some specific interactional tasks and the practices that are deployed to manage these tasks.

The present study approaches interactional competence through the lens of the principle of *progressivity in interaction*. More precisely, the study *identifies and describes practices that hard-of-hearing bilingual students and their co-participants deploy in an integration classroom for dealing with issues related to progressivity*. By the term *dealing with issues related to progressivity* I refer to participants' deployment of practices for *promoting* progressivity, *minimizing* or *accounting for breaks* in progressivity as well as *re-establishing* progressivity. Based on previous findings regarding the challenges that hard-of-hearing persons have to cope with when they participate in spoken interaction (cf. chapter II, section 1; chapter III, section 4), the principle of progressivity in interaction is a particularly relevant issue. Progressivity is to a great extent interconnected with the principles of intersubjectivity, nextness and contiguity, which all lay at the heart of conversational sequencing. A more detailed description of these principles is provided in chapter IV, section 4. Suffice it to say that in mundane conversation, participants display a preference for progressivity in interaction, which is reflected for example in a preference for precision timing or a preference for contiguity (Sacks, 1987). However, students have to deal with a multitude of interactional tasks, and their competence will be described on the basis of this diversity of tasks. A special issue for them may to strike a balance between progressivity and understanding according to the situation at hand.

However, the promotion of progressivity is neither feasible nor eligible at all times in the course of an interaction. Quite contrary to this, pauses, hesitations, repetitions, as well as different types of insert sequences (e.g. repair sequences) constitute common and regular halts or breaks in progressivity. Such

more or less important impingements on progressivity are not only very common, but they are meaningful and can therefore be exploited for the local accomplishment of interaction. Hence, participants in ordinary conversation regularly make use of delays, for example, as a resource for accomplishing specific interactional tasks such as displaying doubt or disagreement (Schegloff, 1997) or flagging upcoming disagreement (Pomerantz, 1984b, 1984c; Sacks, 1987). Thus, the participants' task is not to *prevent* breaks in progressivity at any cost. However, for hard-of-hearing students in a hearing integration classroom, lacks of progressivity may be associated to their hearing loss or their incomplete language competence. Rather, they have to *handle* or *manage* the principle of progressivity in a meaningful way, and this means in a mutually accountable way, through the deployment of practices for interaction. Concretely speaking, this implies for example that participants must account for a break in progressivity so that its origin becomes publicly observable and thereby intersubjective. This in turn allows co-participants to understand this break in progressivity and to respond to it in an appropriate manner.

The overall aim of this study of investigating hard-of-hearing plurilinguals' interactional competence is subdivided into two major research objectives. The first major objective consists in demonstrating the hard-of-hearing students' forms of participation in the classroom interaction and how they deal with opportunities and constraints that are specific to the classroom under study (chapters VI). The second objective consists in *identifying and describing a set of practices* that the hard-of-hearing students deploy for *dealing with issues related to progressivity*. This analysis implies examining interaction with a focus on different levels of interactional organization: a focus on the transition space (chapters VII and VIII), a focus on sequence and course of action (chapter IX). Special attention is paid to those moments where the students display difficulties in responding and where these difficulties are displayed as being related to problematic perceptual or epistemic access to the prior turn (they did not hear or understand the previous turn), or restricted epistemic access to a projected response (they do not know). The aim of this study was not to compare the HH students' interactional practices with those deployed by the hearing students or as compared to hearing interactants more generally. This investigation is understood as an initial insight into how hard-of-hearing students design their participation in a specific classroom setting and how they manage to participate in interaction in responsive position.

Previous research on social interactions involving hard-of-hearing participants has to a large extent focused on the obstacles these participants encounter by examining conversational repair and communication breakdowns. Studies converge in highlighting that progressivity and intersubjectivity are particularly at risk in interactions with or among hard-of-hearing participants (cf. chapter II, section 2; chapter III, section 4.1.). The present investigation endeavors to enlarge the focus on hard-of-hearings' participation in interaction by means of an examination that unveils not only what the students are struggling with, but also what they are actually able to do. Such an examination provides evidence for the hard-of-hearing participants' *constant management* of the fundamental principle of progressivity. More precisely, it sheds light on the practices the students deploy not only for *breaking* but also for *promoting progressivity* as well as for *accounting for breaks in progressivity* in interaction, thereby providing a more encompassing view of the hard-of-hearing participants' interactional competence.

The study of interactional competence demonstrates how hard-of-hearing participants draw on a multisemiotic set of resources for participating in an organized and accountable manner in classroom interaction. This ordered participation in turn enables the students to portray themselves as competent interactional participants.

2 Data collection and treatment

In this section I briefly explain the characteristics of the empirical setting (section 2.1.), the data collection procedure (2.2.) as well as some issues of transcription and annotation (section 2.3.).

2.1 *The empirical setting*

2.1.1. *Choice of the setting*

In pursuing the aims of the investigation exposed above, a classroom involving deaf plurilingual students was thought of as an appropriate empirical setting. While a majority of deaf and hard-of-hearing (DHH) students are currently enrolled in mainstream classrooms, by far not all of them have knowledge of a signed language. On the basis of this, choosing a bilingual program emerged as a rational procedure for getting in contact with bilingual mainstreamed adolescents. In the Swiss German part of Switzerland only one officially labelled bilingual program existed when the current study was launched. The program was a pilot project under the heading of ‘bilingual-bimodal program for DHH students’, based on a collaboration between the local audio-pedagogical service and a local mainstream school. The educational program can be described as partial integration combined with self-contained classes (cf. chapter IV, section 2). It proposed two types of lessons:

- (1) All DHH students participate in *regular classrooms / integration classrooms*, where they are co-enrolled with hearing classmates and a hearing main teacher. In these lessons, a hearing teaching assistant (employed by the audio-pedagogical service) who mediates the students’ understanding and participation in the classroom accompanies the DHH students.
- (2) Additionally, all DHH students have specialized lessons with a deaf or a hearing teacher. These specialized lessons are referred to as *bimodal classes* because within these lessons children are taught separately either by a deaf teacher in sign language, or by a hearing teacher who uses spoken language. These lessons are also offered in the local mainstream school⁵¹.

The director of the program (the director from the audio-pedagogical service) was contacted by E-mail. She quickly gave her personal approval for the study. Because of the sensitive situation between the regular school and the audio-pedagogical service, the director required that all further negotiations with the teachers from the regular school as well as parents of the students went through her.

2.1.2. *Choice of the subject matter*

For analyzing interactional competence in hard-of-hearing plurilinguals, any subject matter could have been investigated. To achieve a certain consistency among the different classes/students, the fundamental

⁵¹ Around thirty lessons of these bimodal classes have been recorded and partially transcribed. They have however been excluded from the current study.

criterion was to record the same subject matter among all students. In agreement with the school's direction, I chose to focus on a German language classroom. It must be emphasized however that the aim of the study is not to examine the students' learning of the subject matter German, but the deployed interactional competence for managing their participation in classroom interaction. It should also be noted that the linguistic situation of Swiss German part of Switzerland is such that the students are confronted with standard German in the regular classroom lessons, but with Swiss German during the pauses or among hearing classmates⁵².

2.1.3. *Choice of the classes*

The whole program included six DHH students of three different grades (grade 4, 6 and 7). Recordings of all three grades have been made, but only the students from 6th (classroom A) and 7th grade (classroom B) have been included in this study. This decision was mainly based on initial observations of interactions of the two students in the 4th grade, making evident that their way of participating in interaction is highly different from the other students (related to activities at hand, age of students, their competence in German and Sign Language). Further investigating these differences constitutes an interesting perspective for future research on the corpus but was not a focus of the current study.

2.1.4. *The teachers*

The teachers employed especially for the *bimodal-bilingual program* were two deaf teachers, one deaf collaborator for the preparation of the school material, one hearing teacher, one hearing specialized teacher and a speech & language therapist. Within the recordings under study in this thesis, only the following hearing teaching staff were involved (all names are pseudonyms):

Name	Characteristics	Functions
Karpf	Specialized teacher, hearing, basic knowledge of Swiss German Sign Language	Teaching assistant in regular classroom lessons, teacher in bimodal classes, classroom A
Montebello	Speech & language therapist, hearing, no knowledge of Swiss German Sign Language	Speech & language therapy, replacement in regular and bimodal classes, classroom A
Micheli	Regular teacher, hearing, some vocabulary in Swiss German Sign Language	Teaching assistant in regular classroom lessons, teacher in bimodal classes, classroom B

Table 5

⁵²Which implies that the hearing students are also plurilingual (at least with German and Swiss German).

The teachers employed by the public school are referred to as the *main teachers* because they were responsible for the regular classes within which the deaf students are integrated for some lessons. The term refers therefore to an etic category chosen for the study.

Name	Characteristics	Functions
Mrs Roth	Regular main teacher, hearing, no knowledge in sign language	Teaching in 6th grade, classroom A
Mr Roth	Regular main teacher, hearing, no knowledge in sign language	Teaching in 6th grade, classroom A
Fritsche	Regular main teacher, hearing, no knowledge in sign language	Teaching in 7th grade, classroom B

Table 6

In principle, the school follows the educational approach for raising bilingual children known as the principle of *one person one language*. This approach proposes that the hard-of-hearing adolescents communicate in spoken language with all hearing participants and in sign language with the deaf teachers.

2.1.5. The students

Within the population of DHH participants studies have reported great inter-individual differences among these students' competence in spoken and signed languages (and success in developing hearing abilities). These differences have been related to the age of the person, the medical history (age of hearing loss, age of diagnosis and potentially hearing aid provision or cochlear implantation), as well as linguistic background (languages at home, in education, etc.) (Baker, Van den Bogaerde & Woll, 2009). The current study is not concerned with questions related to such factors, as the aim is to reveal and describe systematic interactional practices that the students deploy for participating in interaction. Within Conversation Analysis, researchers are generally reluctant with providing ethnographic information of the participants involved (but see Deppermann, 2000 for a discussion of this issue). According to the principles of an emic perspective, only those characteristics should be viewed as being important that are displayed and oriented to by the participants themselves (Schegloff, 1992b; cf. chapter VI, section 2.1.). For the current study, some basic information has nevertheless been collected by means of an interview with the school director. Some background information on medical history or linguistic background are integrated here for providing minimal transparency of the population, also in the interest of responding to the common scientific practice in educational and linguistic studies on DHH children. Most basically, all four adolescents are assumed to be prelingually deaf, i.e. that their hearing loss occurred before they had developed a spoken language. Diagnosed according to the WHO categories, the diagnosed hearing losses ranged from severe to profound hearing loss (61-80 dB; >81dB). Further important characteristics of the students are represented in table 7:

Name	Nora	Jacob	Nikolas	Pashali
Classroom	Classroom A	Classroom A	Classroom A	Classroom B
Type of hearing loss	-	-	Sensorineural hearing loss	Sensorineural hearing loss
Hearing loss	profound	profound	severe	profound
Age of diagnosis (years)	3	2	2	2
Implant or hearing aid	Monaural cochlear implant	Monaural cochlear implant	Binaural hearings aids	Monaural cochlear implant
Age at hearing aid provision (years)	unknown	unknown	2	unknown
Age of implantation (years)	6	10	-	5
Age at recording (years)	14	13	14	15
Use of CI (years)	8	3	-	10
Grade	6 th	6 th	6 th	7 th
Hearing status of parents	hearing	hearing	hearing	hearing
Languages at home	Rom, Albanian, some German	standard German, Swiss German, Swiss German Sign Language	Serbian, some German	Tamil, some German

Table 7

The situation of DHH students is complicated with regard to language acquisition. Chronologically, the initial contact has been with spoken language, i.e. German for Jacob, Tamil for Pashali, Serb for Nikolas and Rom for Nora. For the immigrant students, it is unsure how many contacts they had with Swiss German persons, providing a potential exposure to Swiss German. However, due to their hearing loss, the access to any spoken language has been restricted and did not allow for a natural acquisition of spoken language as a first language (L1). With regard to this complicated status of the acquisition of spoken language, Berent (2004) refers to it as L1.5 acquisition, suggesting that « (...) *even if English is the first or only language to which a deaf child is exposed, the restricted access to the AV [auditory-vocal] modality results in English knowledge that simulates L2 knowledge.* » (ibid.:317)⁵³. By contrast, the (sensorial) access to signed language is not constrained and enables children to develop competence in DSGS in an unconstrained manner (chronologically their second language, L2). This access is however late and its acquisition cannot build on a well-developed pre-existent L1 (Mayberry, 1993). Within the perspective of this study the DHH children's competence is understood as being fundamentally plurilingual, in spoken German and Swiss German Sign Language. This plurilingualism is characterized as consisting in a proper and original competence which is different from a mere addition of the monolingual competence in German and monolingual competence Swiss German Sign Language (cf. chapter II, section 3.2).

One can infer from the table above that the students Nora, Nikolas and Jacob are part of the same class in the 6th grade, while Pashali is integrated individually, without other hard-of-hearing classmates, within the 7th grade. Note also that three of four students have an immigrant background, which is reported to be characteristic of students within specialized schools by contrast to fully mainstreamed schools (Boyes Braem & Rathmannn, 2010). Finally, the period when the students got their cochlear implants was between 2000-2007, i.e. up to ten years before this study had been conducted. This is important with

⁵³ This may but must not be different for children who are diagnosed and fitted with hearing aids from an early age on.

regard to the fact that hearing aid technology is evolving very quickly, hence potentially different results might be expected with regard to participants with more recent hearing devices. A final note should be made on the fact that some students are reported to have social/familiar problems, or difficulties in learning and concentration. However, no official diagnosis had been made up to the date of the recordings⁵⁴.

2.2 Data collection procedure

After a first contact with the teaching staff (established by the director of the program), I pre-arranged all the recording dates with the teachers. This led to two unanticipated types of recordings, namely exams/dictates in classroom A and arithmetic classes in classroom B (the teacher sometimes changed the subject matter spontaneously). All lessons have nevertheless been integrated into the study. In arithmetic lessons there was substantial interaction between the teaching assistant and the student, and even during exams the hard-of-hearing students regularly interacted with the teaching assistant or the teacher.

The video corpus gathered consists in 11 lessons of classroom A, and 10 lessons of classroom B. One lesson lasts between 45 to 50 minutes. The recordings took place within 3 months in 2010. The recordings were made by the researcher, with two digital cameras mini DV as well as one to two additional Dictaphones. One camera (C1) normally recorded the hard-of-hearing students, depending on the spatial configuration of the participants most of the time also including the teaching assistant. The second camera (C2) pointed either toward the main teacher and/or in a wide angle the whole class. During each recording I attempted not to move the camera during the lesson. Furthermore, whenever possible, the disposition of the cameras has been held constant across the different days of recordings. With regard to the audio recordings, external audio recorders were used for capturing the students' speech even though one of cameras was not too far from them. This allowed having better access to the generally rather low-voiced speech and to have a backup of the recording in case of a problem with the camera. The choice of the camera angle clearly reflects that the choice to focus on the HH students' practices was preliminary to the analysis. The recordings were thereby limited and did not allow me to analyse in detail the multimodal conducts of the hearing students.

2.3 Transcription and annotation

Transcription can denote both the process and the product of a conversion from oral spoken production to a written text. The fact that spoken language has a standardized writing system that can 'translate' (Ten Have, 1999) the unfolding phonemes of the speech-chain into discrete letters allows *reflecting* rather precisely what has been presented by speech. By contrast to this, other phenomena as gestures, facial expressions or practical actions must be rendered on the written media by means of a label, which *describes* rather than reflects the element. Hence, unfolding of gestures as well as signs is commonly not (only) done with the visual picture of the element, but with a gloss in written language that describes what is visually deployed. For this process and product, one rather speaks of annotation. Annotations are enriched and interpretative labels for a phenomenon. For practical reasons, I will regularly use the term transcription as an umbrella term for both types of representations in the remainder of this study.

⁵⁴ The heterogeneity presented in this group is not exceptional. Recently, Svartholm (2010) pointed out a similar diversity in special schools where deaf and hard-of-hearing children are enrolled.

The process of transcription necessarily transforms the raw data because to render the complexity of talk-in-interaction in a written form is impossible (cf. Ochs, 1979; Erickson, 2010), and this implies that transcribers do not “*merely reproduce the spoken word in written form, but produce new texts that bear the mark of our authorship.*” (Bucholtz, 2000:1453). Consequently, transcriptions are not understood as ‘data’ but as ‘a version’ (Psathas & Anderson, 1990) or a ‘representation’ of the data (Hutchby & Woffitt, 2008; for more details cf. chapter V, section 2). The transcription will be used as a “*convenient referential tool*” for the analysis (ibid.:70), but the fine-grained examination should always include also the data, i.e. the original recordings. Transcripts and annotations by contrast present both the advantage of making the recorded data easily and repeatedly accessible and available for the researcher, as well as of providing access for other researchers who therefore can put under scrutiny the analyses of their peers (e.g. Heritage, 1984a; Gülich & Mondada, 2001).

The process of transcribing is not a straightforward process but it raises important technical and theoretical issues. Some of them are discussed in the following sections.

2.3.1. Choices regarding transcription/annotation

There are three important choices that researchers have to make when starting the transcription. The first choice concerns the *format* out of mainly three different transcription formats: the vertical transcription, the partiture transcription and the column-based transcription. Each of these formats has its advantages and disadvantages (Ochs, 1979) and it is important to note that most transcription tools impose one particular transcription format. The second choice pertains to *what phenomena* one decides to transcribe/annotate (e.g. words, pauses, intonations, laughter, gestures; *interpretive decisions*, Bucholtz, 2000). A third choice, and related to the second, is, *how* the chosen phenomena should be transcribed (for spoken elements the use of standard alphabet, either with standard orthography or rendering the words-as-spoken, or phonetic alphabet (*International Phonetic Alphabet, henceforth IPA*); for gestures the use of descriptions of the movements or a coding scheme; *representational decisions*, Bucholtz, 2000). For instance, the question arises whether phonological variations (between different participants or within a same participant) should be transcribed as such or if they should be idealized and homogenised on the transcript. If they are transcribed, the question is how these variations should be rendered on the written medium (words-as-spoken or with *IPA*). Before starting a transcription, researchers must reflect on these different possibilities and make informed decisions. This shows that transcription is not straightforward but is an *interpretative* and *representational process* that directly reflects the methodological and theoretical approach to a phenomenon as well as the purposes of the research (Green, Franquiz & Dixon, 1997; cf. also Bucholtz, 2000; Ochs, 1979). For researchers it is therefore important to bear in mind that the final transcription will be read as the reflection of underlying methodological and epistemological choices (Mondada, 2000; Ochs, 1979; Psathas & Anderson, 1990).

2.3.2. *Transcription within Conversation Analysis*

The basic importance that Conversation Analysis assigns to the principle of sequentiality of interaction (chapter III, section 1) had as a consequence that vertical transcripts became the preferred and commonly used transcription format. The transcription is presented so that the reading of the transcript sketches the sequentially unfolding speech. Thereby, the grounding question of CA, ‘what comes next’, is to some extent guided by the reading of the transcript. Commonly researchers in CA transcribe either with standard alphabet or with combined alphabet (standard and *IPA*), rendering the words as they are spoken (especially in American studies). The choice of phenomena in CA has traditionally be a range of detailed vocal speech phenomena: binary transcription of speech volume and speech rate, overlaps and pauses, intonation (final falling, final raising and continuative), vowel lengthening, as well as unintelligible words. The representation of these phenomena is by a major part of scholars following conventions that have initially been established by Jefferson (2004).

To date, an increasing number of researchers that work with Conversation Analysis also transcribe non-vocal phenomena. Most of this work has maintained the transcription in vertical format, where the annotation of gesture or gaze e.g. is either added as a separate line to the vocal line (e.g. Mondada, 2006b; Pochon-Berger, 2009), or which is represented by means of pictures that are linked to specific moments in the unfolding talk (e.g. Goodwin, 1980; Kääntä, 2010; Mortensen, 2009). While the CA tradition favors these vertical transcripts, the acceptance and use of partiture format used within CA may increase with the growing importance of a holistic approach on social interaction that goes beyond the analysis of speech as the baseline (cf. for example Mondada, 2006b). In this vein Erickson (2010) critiques the vertical format and advocates a partiture transcription that renders how the phenomena are unfolding simultaneously and not (only) sequentially.

Two further choices have to be made with respect to the transcription process, especially in the case of plurilingual and learner data: the researcher decides (1) whether, and if so, how to represent the difference between standard or a non-standard production of a type, and (2) whether, and if so, how to represent if a token belongs to language A, to language B or eventually to a non-verbal system.

- (1) A word that is produced in a non-standard manner may be transcribed either in an idealized way (where the deviation is erased) or the deviation may be rendered (by representing words-as-spoken with standard alphabet or by means of *IPA*). In sign language productions the deviation would most likely be annotated with e.g. an asterisk before the sign as a means of marking the sign as being a non-standard production, while the type of deviation would be annotated on a separate line (unless one annotates with Sign Writing or HamNoSys, cf. 2.3.3. below).
- (2) By representing each language with a different font or colour, the use of two different linguistic systems in an interaction can be highlighted. In this case a special method must be found to deal with the challenge posed by those occurrences that are not categorizable to one or the other language (Dabène & Billiez, 1989; cf. chapter IV, section 1).

Within a CA study, both of these choices have to be taken against the background of the methodological principle of the participant’s perspective. For example, should a non-standard be signalled as such from the perspective of the analyst, or only when the deviation is made relevant by the participants

themselves? One must question also whether the transcription of non-standard productions has a stigmatizing effect on the participant under study (Bucholtz, 2000; Jefferson, 1996). Especially the use of an asterisk in sign language as a symbol for ‘deviation’ or ‘error’ without indicating the type of deviation may not have the same impact than rendering a word-as-spoken (because it is explicitly foregrounded as being a deviation). With respect to the second issue as well, it must be asked whether the different linguistic systems are labelled on the basis of the analyst’s decision or a participant’s perspective. Participants to interaction can draw on two linguistic systems in a way that is locally significant or functional or not, and it is the task of the analyst to demonstrate which one of these options is relevant for the participant. Hence, the significance of language switching is an object of analysis. As a consequence, transcribing the different language systems in different manners can constitute a bias in guiding the analyst’s interpretation of the significance of these juxtapositions of different languages⁵⁵. Moreover, transcribing plurilingual discourse by means of a system that differentiates between the two languages may convey a conception of plurilingualism and code-switching as being related to one competence in language A and another competence in language B (Mondada, 2000⁵⁶). Within a holistic approach to plurilingualism however, both languages cannot be thought one separately of the other, independently of the fact whether they are only locally mixed or whether they have undergone a grammaticalization process towards fused lects (Auer, 1998). In a similar vein, in sign language transcription the question arises whether and how to represent differences between signs, deviations of signs or gestures. I will discuss this issue in section 2.3.3 below.

2.3.3. Annotation in sign language

The most common way of annotating sign language is by means of *glosses* (or ID-glosses). Glosses are words provided by the spoken language that are used as labels for the meaning of a manual sign. They are conventionally written in capitals. Although this annotation is the most convenient and widespread, there are two main problems with this system (Boyes Braem, 2012; McCleary, 2003; Pizzuto & Petrandrea, 2001):

- The gloss is only a rudimentary reference to the meaning, as non-manual components for example are not included although they bear important *linguistic meaning*. Information on space may be added with abbreviations, but they remain very basic (e.g. the gloss side-left_VEHICLE-MOVES_side-right that annotates the manual sign for a car that moves from one locus to another; Boyes Braem, 2012:419).
- The gloss itself does not make visible the form of the sign as it is based on spoken language.
- The gloss is a label deprived from its proper temporal spatial and sequential unfolding. In reality, a sign consists in a movement with a preparation phase, a stroke and a retraction phase, it can be hold over a stretch of time, produced with more or less velocity and

⁵⁵ This bias refers to the transcription made by the analyst for the analysis; this might be different for the representation of a transcript after analysis in a publication or presentation – in this case, the highlighting of different languages may be necessary for argumentation and readability by an uninformed public.

⁵⁶ « Plus radicalement, le choix des conventions de transcription semble être fortement lié à la théorie du code-switching défendue, au point de distinguer les modèles qui considèrent que le parler bilingue est descriptible comme la co-présence de deux langues qui se combinent tout en maintenant une autonomie de leurs systèmes respectifs, de ceux qui considèrent que le parler bilingue exploite un répertoire spécifique irréductible à l’une ou l’autre grammaire. » (Mondada, 2000:143)

tension. Such details of signs are commonly not annotated in a gloss (but they can of course be added with specific symbols).

A useful and manageable transcription system on the basis of glosses has been elaborated by the project *Language as cultural heritage: a pilot project with sign languages*, which was part of the European ECHO project (*European Cultural Heritage Online*, initiated in 2003). The transcription is based on the glossing of the sign language data but proposes additional annotation tiers such as for example for head, eyebrows, eye aperture, gaze direction, mouth, and cheeks (Nonhebel, Crasborn & van der Kooij, 2004). For the annotation of data within studies that aim at syntactic or discursive descriptions and analyses, these conventions seem very useful. What remains unclear in Nonhebel et al. (2004) is how transcribers deal with signs that are not lexicalized and integrated in a dictionary (as e.g. gestures but also non-lexicalized signs, i.e. productive signs). Other features potentially important for signed discourse and interaction, as e.g. the intensity or the velocity of signs, have not been annotated (yet). The transcription conventions from the ECHO project have however been sensitive to the issue of interpretative process of transcripts, as they emphasize that they have « *tried to be careful not to impose too much analysis on any tier by saying that a specific phonetic form is an instance of ‘person agreement’, for example.* » (Nonhebel, Crasborn & van der Kooij, 2004:1). Likewise one could argue that one should annotate for example eyebrows position is either r (raised) or f (furrowed) but without directly annotating and therefore interpreting it as a question marker. In a similar vein, some scholars pointed to the fact that signed languages should be documented by avoiding categorizing the elements as being standard signs or gestures:

“We considered it essential to capture these components—manual and nonmanual, conventional and gestural—without prejudging their formal linguistic status. In our opinion, we must first have a full documentation of linguistic behavior before we can ascertain whether particular types of components are standardized signs or gestural accompaniments, and whether particular forms are productive in the use of an individual signer.” (Hoiting & Slobin, 2002:56; my emphasis)

These authors are proposing a further annotation system, which is the *Berkeley Transcription System* (developed between 1998 and 2001 within the *Berkeley Sign Language Acquisition Project*). Scholars within the project attempted to elaborate a system that is appropriate for the transcription of child language as well as language learners’ interlanguage (part of the CHILDES project; MacWhinney, 2000). The aim was to render morphological and semantic units, enabling them to make lexical and conversational analyses. An interesting advantage of the BTS is that it introduces a range of notation symbols for sign modifications (e.g. [^]mod’RAP for higher rate, [^]mod’AUG augmented size, rate, intensity, [^]mod’EFF exaggerated effort, [^]mod’CARE with care/caution, [^]mod’FADE fading movement or articulation). The BTS offers the possibility to make very detailed transcriptions and to annotate not only linguistic but also gestural and actional conducts (similar to Millet & Estève, 2010; cf. chapter IV, section 1). Moreover, the authors propose that the annotation of discourse in sign language should include all type of resources, also gestures and actions, as being meaningful. By contrast, the annotation itself does not refrain from explicitly labelling the instances as signs, non-standard signs (with errors), gestures or (practical) actions. This is observable in the example below (taken from Hoiting & Slobin, 2002:68), where a boy gestures that he does not know (we do not have any further information what this

gesture looks like), then he signs *WHERE* and then looks around in the room. Conducts that are not sign language receive specific labels (%ges; %act).

Example 10

[taken from Hoiting & Slobin, 2002:68]

***CHI:** [%ges: don't know] **WHERE** [%act: looks around room] ?

***MOT:** [%act: shows pen to chi] **FIND** .

While it is evident that structural differences exist between lexicalized signs and gestures, the explicit labelling of them or the spatial separation (e.g. by annotating signs on one tier and gestures on another tier) adds to a view of these resources as fundamentally different. Whether this is relevant for participants however remains to be shown through an analysis. So as to refrain from inspire differences within the transcripts that are not relevant from participants, i.e. to transfer the holistic approach to the transcription practices, it makes sense to avoid explicit labelling of linguistic categories. Nevertheless, it is fundamental to emphasize that as long as the annotation of signed languages relies on *glosses*, the separation between conventionalized signs and gestures is inevitable for the simple reason that when a sign is not conventionalized (i.e. when it is gestural), there is no gloss available. In this case a circumscription of the conduct must be made (e.g. depicts a form x with his right hand). Consequently, the different writing style (capitals for glosses, non-capitals for the rest) flags the distinction between conventionalized vs non-conventionalized elements⁵⁷.

2.3.4. Transcription and annotation for the current study

Following the digitalisation of the recordings, the integration classroom lessons were viewed and transcribed/annotated⁵⁸ in a manner which I will describe below. As the hard-of-hearing students are in the focus of interest, their interactions were transcribed in priority. When the DHH students were engaged in long silent work but other students chatted among each other, this chatting was not transcribed unless the viewing of the recording made apparent that there is some link between this interaction and the students' future interaction. Most basically, the previous reflection on the transcription/annotation of my data confronted me with three essential challenges:

- (1) Establish transcription conventions that take into account the plurilingual competence of the students and that are in line with the underlying epistemological stance on plurilingualism (cf. chapter II)
- (2) Establish transcription conventions that categorize the students' productions as less as possible so as to be in line with a CA emic approach.
- (3) Convert the multi-layered annotation of ELAN® into a vertical transcript for the readability by the CA community.

⁵⁷ There are mainly two annotation systems that are not based on glosses. On the one hand there is Sign Writing, which allows the signs to be annotated on the phonological level. It is based on iconic symbols that replace the different basic components (hand position, movement, handshape, as well as facial expression). More recently, University of Hamburg has established a sophisticated and fine-grained system for annotating sign language in its phonological components, HamNoSys (Hamburg Notational System). These annotation systems are very detailed and are necessary for the analysis of phonological and morphological dimensions. While they have the advantage of representing clearly what the sign consists of (symbols for all four hand parameters and its features), their use is rather complicated and annotation is very time-consuming.

⁵⁸ Thanks to Sandra Sidler-Miserez and Cyril Mettler for the transcription of two lessons.

In the present thesis, I propose dealing with the issues (1) and (2) mentioned above in the following manner. Confronted with plurilinguals who use a spoken language (therefore voice and gesture) and a signed language (manual signs and gestures), an initial idea was to have three different tiers of transcription: voice (for the spoken language), gesture (for the spoken and for the sign language) and signs (for sign language; similar to Millet & Estève, 2009, 2010; Van den Bogaerde, 2000). In an endeavor to minimize a stigmatizing effect when participants heavily rely on gestures by contrast to signs, I avoided such a three-line annotation and established transcription tiers that allow transcribing/annotating conducts with respect to different *modality layers* (Mondada & Schmitt, 2010) or *channels* (Stivers & Sidnell, 2005). This means that I use one single tier named ‘hand’ for the transcription of conventional signs, productive signs and for gestures (the tier ‘hand’ is subdivided in three lines, ‘right hand’, ‘left hand’ and ‘both hands’)⁵⁹. This enables me to annotate signs and gestures on the same tier, whereby the status of the manual phenomena as linguistic or non-linguistic are not emphasized. As already mentioned in the section above however, a description that completely refrains from a categorization is impossible because lexicalized signs are annotated with glosses, i.e. conventionalized labels using words from spoken language that are used for denoting (approximately) what a sign means. Consequently, as soon as an instance gets a gloss, its linguistic or more precisely its conventional status becomes visible, by contrast to gestures, which will be annotated in an idiosyncratic manner by means of a description of e.g. handshape and hand movement. Despite this fact, I consider that the use of a single tier for manual resources does at least reduce the logocentric bias that conveys the idea of linguistic signs being the baseline and non-linguistic units being additional and secondary⁶⁰.

A similar procedure has been applied to the non-manual component. Non-manual resources that might have linguistic or non-linguistic status in sign language, or those resources that have linguistic status in sign language but not in spoken language, are annotated by means of a description that is held as neutral as possible. This means, head shakes are annotated as *head shakes* independently of their (linguistic) function as a negative marker in sign language. Likewise, raised eyebrows for instance are annotated as such independently of their functioning as an interrogative marker or a rather affective display. This is in some contrast with how head shakes are commonly annotated in sign language utterances:

<i>Common annotation</i>	<i>Annotation in this study</i>	<i>Translation</i>
neg_____	shake_____	
ICH BRUDER	ICH BRUDER	I don’t have a brother

Table 8

In this case the head shake is annotated as a negation marker, hence it has undergone an interpretation. In alignment with a CA framework I propose annotating the same instance by replacing the *neg* by a *head shake* (or the abbreviation *s*). By means of this two goals are achieved. First, it stands for a more neutral way of annotating that keeps the interpretative process as minimized as possible. Second, for the adoption of annotation conventions in bimodal discourse, this enables me to annotate without categorizing an instance as being language A or language B, or more generally without deciding on the

⁵⁹ I used these tiers for gestures and signs, but not for manual practical actions as e.g. taking a sheet. To date I would avoid doing this separation and annotate everything in one tier.

⁶⁰ Note also that the grammaticalization process may be important in signed languages, hence a gesture today may become a sign in the future.

linguistic status (non-linguistic vs linguistic). This is on the one hand in alignment with recent work on bilingualism and language alternation in CA, and on the other hand an attempt to not prioritize the verbal over the non-verbal (cf. also Millet & Estève, 2009, 2010) (cf. already chapter IV, section 1).

In sum, the tiers chosen for the study are the following:

<i>Tiers</i>	
Jac:	Articulation by the mouth, voiced or unvoiced, by participant Jacob
JAC; or RH, LH:	Manual resources by Jacob; or, when different on right and left heft one tier per hand
hd:	Movements with the head, mainly shake and nod
expr:	Facial expression, eyebrows, special eye aperture, cheeks, etc.
gz:	Gaze direction
nv:	Other conducts, mainly practical handling actions (e.g. closing a book, walking away)
comment:	Comments

Table 9

Within each of these tiers, different types of conventions were used for the transcription and annotation. These conventions are detailed in table 10 below. One important discussion pertains to the segmentation of the sign and therefore the discrimination of the unit that will be referred to with a gloss. Put differently, the question is when a sign begins and when a sign ends (Hanke, Matthes, Regen & Worssek, 2012). In a first step, I used glosses that encompass the preparation and the stroke of the sign. When gestures and signs occurred within sequences that have been analysed in more detail, then the unfolding of the sign was more precisely annotated, namely by including an annotation of the post-stroke holds and the retractions or partial retractions (when a sign is finished and is turn-final, the hands regularly go back to rest position)⁶¹. What has not been transcribed in an initial transcription are the preparation phases and the transition phases between one sign and a following sign.

⁶¹ The transcription symbols are taken from Mondada (2005)

<i>Transcription conventions for the hand tier (e.g. JAC, LH, BH)</i>	
BALL	Gloss for standardized sign of DSGS
*BALL	Unusual form of a conventionalized sign
PNT(sheet)	Pointing towards the person/object in brackets
POSS(1), POSS(2), POSS(3)	Possessive pronouns in DSGS (e.g. flat hand on thorax, 'mine')
B-A-L-L	Fingerspelling / Fingerspelled letters (B, A, L)
palm-up	Hands are hold with palms oriented upwards
FB(rectangle)	Productive sign that is a depiction of a an object by a representation of its form: FB <i>Formbeschreibung</i> (signs that depict the form of an object). Normally the comment in brackets refers to the object the hands depict (e.g. a ball, a sheet). When possible I chose to describe in brackets the form that the hands depict. Other productive signs are represented with HH <i>Handhabung</i> (signs that depict how an object is handled), Bwg <i>Bewegung</i> (signs that depict how an object moves), Sbf <i>sich-befinden</i> (signs that depict where an object is located and in what position it is; e.g. a cat sitting on the roof).
((handraising))	Idiosyncratic description of handshape / movement / of gestures
'''	Retraction of hand(s) ⁶²
...	Preparation of hand(s) ⁶³
-h	hold

Table 10

With respect to the transcription of the vocal speech I chose the transcription conventions originating from Jefferson (2004). Most of the spoken language is etically categorizable as Standard German and has been transcribed by means of German standard orthography. Note that Standard German spoken in Switzerland is characterized by phonetic variations, which I did not take into account as these variations are systematic. Additionally it must be noted that some parts of interactions occur in Swiss German (dialect) for which no standard orthography exists. In these cases the transcription followed the principle of rendering the words-as-spoken and was done idiosyncratically.

⁶² Mondada (2005)⁶³ Mondada (2005)

<i>Transcription conventions for the oral tier</i>	
>lesen<	Quicker speech rate as compared to the surrounding talk
<lesen>	Slowed down speech rate as compared to the surrounding talk
LESEN	Louder than the surrounding talk ⁶⁴
-lesen-	Unvoiced
°lesen°	Down-voiced speech
°°lesen°°	Whispered
<u>lesen</u>	Emphasis
(xxx)	Unintelligible
(lesen)	Uncertain
le:sen	Vowel lengthening
=	Latched speech
.	Falling final intonation
,	Continuing intonation
?	Raising final intonation
les-	Cut-off
(0.3)	Silences measured in seconds
(.)	Micro-pause, 0.1 seconds or less
[(xx)]	Overlap between conducts of two different participants
.h, .hh	Inbreath
mhm.	Ratifying, articulated as a first m and followed by hm

Table 11

Conducts of the head were annotated in the head tier as *shake* or *nod*. Further movements by the head were stretching the head forward (*forw.*) or backward (*backw.*). The gaze tier has been annotated by an abbreviation of the person, object or locus the participant is gazing at. The gaze transition/movement is included in the end of the previous gaze and not annotated separately. Eyebrows were annotated in a binary manner, i.e. as raised or furrowed. Further conducts were transcribed idiosyncratically (e.g. wrinkled nose). In table 12 are presented the symbols used for indicating simultaneity between different channels.

⁶⁴ In the ELAN transcription capitals were used for accentuations because the system did not allow for underlining. In this case the louder speech was transcribed with +xx+. In the word transcriptions these notations were then converted.

<i>Transcription conventions for simultaneity</i>	
"	Simultaneity within the same participant (e.g. hand and vocal conduct)
*->	Onset of a gaze conduct or facial expression ⁶⁵
->*	Conduct lasts until the next *
->>	Conduct until the end of the excerpt ⁶⁶
*(0.8)	Gaze to the sheet for 0.8 seconds, until the next indication
->sheet->	of a * ⁶⁷

Table 12

A crucial issue that emerges is whether the following simultaneous productions are to be considered as overlaps:

- between vocal and non-vocal/non-verbal conducts,
- between vocal conducts and sign language,
- between sign language productions

If they should be considered as overlaps, the question is whether all of them can be considered as having the same status. Recent discussions have shown that not only speakers but also signers orient to a ‘one speaker at a time’ model (Leite, 2008; McCleary & Leite, 2013). Leite (2008) provides a fine-grained analysis of how sign language interaction is organized. On the basis of an annotation that differentiates between preparation phase, stroke, different types of holds and retraction phases, Leite is able to show that participants orient to overlaps between two strokes as being troublesome, while the overlap between preparation or retraction phases are not. The question whether simultaneous unfolding of vocal and non-vocal (non-verbal) conducts could be seen as troublesome has not been systematically studied yet. Schmitt’s (2005) examination of ‘multimodal turn-taking’ has pinpointed the fact that co-participants may orient to different types of spatio-visual conducts as being more or less troublesome. On the basis of these insights coming from signed and from spoken interaction research, an initial idea was to transcribe different types of overlaps, taking into account the fact whether the unfolding actions are (treated as) troublesome or not. Whereas I think that this might be a concern for future research, I finally decided to refrain from such a convention in order to keep the transcription process as ‘descriptive’ as possible. Concretely speaking, I decided to maintain one simple overlap symbol (traditional square brackets) for indicating overlap/overlay between two conducts of two different participants. A different symbol has however been chosen for gaze conducts and facial expressions.

A last explanation pertains to the transcription of silences. Silences have been transcribed on a new line when it could be attributed to the next speaker (i.e. when the previous speaker has reached a TRP).

- First the ‘audible silences’ were measured (automatically in ELAN®) and noted, i.e. all sequences where no vocal speech was audible and transcribable.
- During the ‘audible silence’, other as sign, gestures and gaze changes can occur. In these cases the silence is used as an anchor for showing the duration of the spatio-visual

⁶⁵ Mondada (2005)

⁶⁶ Mondada (2005)

⁶⁷ Mondada (2005), Egbert (2009)

conducts. These segments can further be referred to as silences but not necessarily as pauses as absence of speech is not equal with absence of meaningful action.

- Note also that silences have always been measured (and not only estimated). This was initially a practical consequence of the ELAN® annotation, where the silences are measured in a precise manner.

After having established an initial transcription grid, the data were imported and synchronized in ELAN®. ELAN® has been elaborated at the Max Planck Institute and is particularly fitted to the practical needs of this research. Most importantly, it allowed for a fine synchronization of the videos as well as the opportunity to show the fine coordination between different resources (Mondada, 2008). Furthermore, ELAN transcripts were exported and further detailed in Word documents. This choice was made based on the assumption that this study is developing from a CA tradition where scholars are widely used to reading vertical transcripts in which turns at talk are deployed sequentially one after the other. The most important manual transformation that must be made when converting the partiture to the vertical transcript pertains to the decision of how to segment the unfolding action with respect to the lines. In the case of this study the following decisions were taken:

- The transcript is organized so that each line comprises a turn constructional unit (TCU), i.e. a unit that is syntactically, prosodically and pragmatically complete.
- When a pause occurs after such a TCU, the pause is transcribed on a new line.
- When the pause is occurring within the TCU, it is transcribed within the line.
- When the participant ends a TCU but directly continues with a new TCU without a pause, the beginning of the new TCU is put on a new line.
- When the participant comes to a sentential completion that does not coincide with a pragmatic completion, the TCU continues on the same line. The same applies when there is a syntactic completion but no prosodic completion.

2.4 Ethical considerations

All negotiations previous to the recording took place between the director of the bilingual-bimodal program, who is the director of the audio-pedagogical service, and me. The director was in charge of presenting the project to the teachers as well as the parents of all the students. Consent has been received orally by all but one parent for recording as well as use of video and audio material for research (and publication) purposes. The parents of the hard-of-hearing students signed a special form at the beginning the children's schooling, stating that video recordings can be made of their children for research purpose. Persons have been anonymized by changing their names (into ones that respected the syllable structures of their original names), and pictures are used as screenshots of the video-recordings.

3 Analytical principles

The methodological principles of CA studies have been explained in detail in Chapter III, section 1.4. The analyses in this study follow these quoted principles; in this section I intend to confine myself to a

short specification with regard to how the sequential analysis of actions is carried out (section 3.1.) and what type of resources/material I took into account in the analysis (section 3.2.).

3.1 Sequential analysis of actions

The basic assumption of CA is that members collaboratively accomplish meaning and order in social interaction, and that this achievement rests on the fact that participants “*display to each other their analysis, appreciation, and use of that orderliness.*” (Schegloff & Sacks, 1973:290). For analysts, this implies that a turn is never considered in isolation as meaning is not constituted by individual contributions nor is it based on a conventionalized nomenclature. By contrast, meaning is locally and collaboratively constituted. This implies a three-step interactional procedure, built by the turn-taking organization:

- Participant A accomplishes a turn T
- Participant B responds to turn T. This response necessarily *displays* how participant B understands T
- Participant A either confirms or refuses B’s understanding of T

By means of this interactional procedure, participants make each other mutually accountable, they *display* to each other, how their contributions to interactions are meant, or how they should be heard. Hence, meaning is interactionally established, confirmed and negotiated if necessary over several turns. The analysis in CA follows exactly this constitutive feature of interaction by carrying out a sequential analysis referred to as *next turn proof procedure* (Sacks et al., 1974; Hutchby & Woofiitt, 1998:13 and 1998:41). This implies that each turn is inspected for what type of understanding it displays of the prior turn, and whether this understanding is further confirmed or not. The result is a three-turn analysis, as exposed above.

Concretely speaking, the *next turn proof procedure* implies that analysts reconstruct the meaning that is displayed and constructed by the participants themselves. Consider the following example:

Example 11

01	A	can you say it louder so that we can hear it kannst du's etwas lauter sagen damit wir's hören.
02	B	yes °ja: .°
03	A	so make the question again also <u>noch</u> einmal die frage stellen.

As an analyst (and as a member of the community of German speakers), I consider A’s action in line 01 as implementing a request (cf. modal verb). However, how the action in line 01 must be heard is not to be grounded in the analyst’s judgment but in the participants’ perspective. Concretely, this implies to reveal that in line 2, participant B displays that he understands A’s turn as an information request. Furthermore, the following turn by participant A does not confirm this interpretation as he treats the response in line 02 as non-fitted by redoing his action by means of a new turn. In sum, I adopt a sequential analysis by attaching myself to carry out a three-turn analysis.

Note that the notion of ‘display’ implies that everything necessary for establishing mutual understanding is observable at the surface of interaction, i.e. that participants achieve mutual understanding alone on the basis of what they display to each other. As discussed by Deppermann (2000) however, this view is problematic as it undermines the fact that also *interpretative processes* are involved in the meaning-making of participants to social interaction. Most basically, these insufficiencies of the display-notion are e.g. that knowledge about persons, events or locations to which conversationalists refer in an interaction may be necessary for understanding what a specific action may display (Deppermann, 2007:84; cf. also Arminen, 2005).

3.2 Resources

In all analyses, special attention will be paid to the array of bodily and physical resources participants exploit for designing their actions. The participants’ set of resources include to various degrees resources stemming from spoken German as well as from Swiss German Sign Language (DSGS). As an instrument for analyzing the practices deployed by participant for the accomplishment of the two tasks presented and discussed above, the following resources are included in the analysis:

- Use of vocal, conventionalized and non-conventionalized, resources: German, Swiss German, inbreaths, prosodic features.
- Use of visual, conventionalized and non-conventionalized, resources: Swiss German Sign Language, gesture, posture, facial expressions, gaze direction, handling of objects.

4 Establishment of collections and research questions

As discussed in chapter III, conversation-analytic studies aim essentially at revealing interactional practices that participants deploy for managing specific interactional problems they are confronted with. For such an endeavor, the basic analytical procedure is to establish *collections of instances* that document the regularity and systematicity of a practice (Mondada, 2005; Hutchby & Wooffitt, 2008). A collection is a coherent ensemble of instances of a practice or phenomenon (Sidnell, 2013), i.e. a turn feature, a linguistic form, or even a sequence of actions, that occurs at specific sequential environments and accomplishes the same (course of) action (Mondada, 2008:31; Mondada, 2005 Schegloff, 1968) (cf. chapter III, section 1.4. for details on the analytical procedure in CA studies). For instance, Schegloff (1968) established a collection of *sequences*. He gathered roughly 300 summons-answer sequences that occurred at the initiation of telephone conversations and constituted their openings. A collection can also be constituted by *actions*. Sidnell reports of a collection of information requests in telephone conversations that pre-empt the personal state inquiries and which are hearable as “*issuing or projecting a complaint or accusation*” (ibid., 2013:90; e.g. *where have you been*). According to this definition of collection, the different types of *oh* that Heritage (1984b) treats under the heading of *change-of-state tokens* are attributed to different collections as the sequential embedding and the interactional task they accomplish can be very different. Furthermore, the aim of a CA study is not only to reveal the general functioning of a resource or the context-free character of practices but also their context-sensitiveness to the local contingencies of activities and participation frameworks (cf. Mondada, 2008). This implies that

for the compilation and study of collections “one important reason is that different cases reveal different aspects or features of a phenomenon” (Sidnell, 2010:16).

The establishment of collections becomes a challenging endeavor when one includes multimodal conducts within the description (Mondada, 2008), because, as Deppermann (2013) states, apparently similar cases might in fact be quite distinctive when one includes the spatio-visual aspects. With regard to the establishment of systematic collection, the question arises where one must draw the boundary between one practice and another (i.e. arrive “at adequate orders of abstraction of phenomena across several modalities for instances to be included in a collection”, *ibid.*:4)⁶⁸.

In what follows, I report on how the current research questions have been built in an empirical and bottom-up manner, out of an initial appreciation of the data. The initial research question has therefore undergone some important modifications. The analytical procedure involves four major steps: (i) an initial inspection of the data (section 4.1.), (ii) a description of the specific classroom organization (section 4.2.) and (iii) the building of two main assemblages⁶⁹ (not strictly speaking collections; section 3.3.), and (iv) the further identification and analysis of collections of practices for the management of progressivity in interaction deployed in response slots to first pair parts (section 4.3.).

4.1 Initial inspection of the data

The original intent of the present project has been to uncover the interconnection between participation, interactional competence and mutual understanding. It was planned to approach interactional competence at the intersection of the three following assumptions:

- The development of *interactional competence* requires the interactants’ *participation in social interaction*.
- In turn, *participation* in social interaction requires participants’ *interactional competence*.
- Participation can only be realized *under condition of mutual understanding* between participants. This mutual understanding may be particularly at risk for interactants presenting a hearing impairment.

This means that the study did not start with true *unmotivated looking* (Sacks, 1984a:27; Psathas, 1995:45). Rather, the study initially set out to identify and analyse practices that hard-of-hearing participants deploy for displaying, this means either claiming or demonstrating, their understanding on the one hand and for re-establishing understanding in case of lack of understanding on the other.

Because CA is concerned with how participants locally and collaboratively accomplish meaning in interaction and how each participant’s turn bears testimony of his understanding of his co-participant (cf. section 3.1. above), the examination of understanding is a key issue for CA analyses. The adjacency pair is a rather straightforward sequential locus for investigating whether students understand their co-participants and how they understand them, because of the high *projectional strength* (Auer, 2005) of the

⁶⁸ For instance, a same word with two different types of head movements may relevantly be considered two different actions; what about the occurrence of a same word and two different eyebrow configurations?

⁶⁹ Assemblage is used here as a term that refers to a collection of cases that share the same sequential position (in responsive turn position) and the same overall task, namely a) displaying epistemic (in)access, or b) completing an adjacency pair. Several other characteristics however are not shared (e.g. temporality) and we therefore do not refer to those gatherings of real collections. Collection refers to smaller groupings of instances, which share structural, sequential and actional features.

first pair part. After a first pair part produced by a speaker, a specific next action is made relevant (Schegloff & Sacks, 1973; cf. also chapter III, section 2.2.1.). The normative organization of adjacency pairs results in the fact that the recipient of the first pair part (FPP) necessarily indicates, by means of his response or lack of response, whether and how he understood the previous first pair part (the adjacency pair builds an *architecture of intersubjectivity*, Heritage, 1984a; Sidnell, 2010:66). Hence, the presence or absence of the second pair part (SPP) can be inspected by the first pair part speaker (and by the analyst) for the recipient's understanding. An **initial analytical step** in this study has therefore been the compilation of adjacency pairs that were initiated by a participant other than the hard-of-hearing student (teacher, teaching assistant or classmate) and addressed to a HH participant, and to examine each response slot that has been created for the HH participant's responsive action (cf. Ford, 2010). The transcripts have therefore been examined for such minimal sequences. The most frequent adjacency pair type collected is question-answer sequences, more precisely (a) display questions and (b) information requests, as well as request sequences with (c) requests for action (cf. chapter IV, section 3.3.). A total of 460 question-answer sequences have been collected (272 in classroom A and 188 in classroom B). Each adjacency pair has then been classified according to several features: participants, activity (desk activity with peer, desk activity with teaching assistant, plenary), type of FPP (display question, information request, request for action), resources for accomplishing the FPP and the SPP (vocal, visual, combined), absence or presence of a type-fitted relevant next (answer to a question, grant or the accomplishment of the requested action to a request), categorization of the next action when it is not a type-fitted next (absent, non-answer answer, i.e. repair initiator or ignorance account; or non-relevant response, i.e. a confirmation to a request for action instead of the accomplishment of the request), if the SPP is treated or not as an expected next (by co-participant), timing of the SPP in relation to the FPP (precision-timing, gap or overlap of the SPP)⁷⁰. On the basis of this initial description, an intriguing observation emerged from the data, namely a small number of hard-of-hearing students' repair initiations in response to FPPs (46 responses to 460 questions are repair initiations, which represents 10%; another 42 repair initiations occur at different sequential environments). This goes along with two further unexpected observations:

- In contrast to reports of previous findings on interaction with hard-of-hearing persons, students do not use a majority of open class repair initiations such as *huh* or *pardon* (*out of 46 repair initiations in response to FPPs only 9 are vocal open class repair initiations, i.e. around 19.5%*).
- In contrast to an initial intuitive expectation, there is a quasi absence of explicit claims of non-understanding such as 'I did not understand' in response to FPPs (5 occurrences).

Hence, in contrast to an expected high amount of repair initiations, the analysis of the compiled adjacency pairs has revealed a high number of *absences of responses* occurring in the slot of an expected second pair part (93 out of 460 first pair parts do not receive a response, which represents 20.2%). An absence of response is defined as a presumed inter-turn pause that occurs after the first pair part and before the expected second pair part, but that is turned into an absence of response by the fact that the co-participant launches in a redoing of his first pair part (providing a *non-first first* according to Auer, 1984). Due to the great amount of such absences and the different interactional trajectories that emerged from them, they have been put under more scrutiny in a further examination.

⁷⁰ Classifications on the basis of an Excel sheet.

This examination of absences of responses has led me to centrally focus on the *principle of progressivity*. Breaks in intersubjectivity go regularly along with breaks in progressivity and both of these principles are intimately related with the issue whether students are portrayed as competent conversationalists, competent students and competent ‘hearers’. I took the principle of progressivity as a relevant entry point for the study of the students’ interactional competence. To work primarily with the notion of progressivity in the present investigation has allowed me to include relevant data-driven observations and issues that pertain to the hard-of-hearing students’ participation in the classroom that would not be grasped with the sole notion of intersubjectivity. Nevertheless, both notions are intimately related and, in what follows, I will often discuss them together. In this sense, an initial endeavor to mainly discover practices for displaying understanding has been modified into an overall aim of looking at how participants manage progressivity in interaction. The research question has hence emerged out of “‘*noticings of initially unremarkable features of the talk or of other conduct*’”. (Schegloff, 1996:172).

4.2 Description of the classroom organization

The initial inspection of the data during the process of transcription (section 4.1.) made evident that a basic description of the classroom organization is necessary so as to grasp the complexity of the setting. The **second step of analysis** after the initial inspection consisted therefore in a description of the classroom setting (participants, resources, spatial organization) and the hard-of-hearing students’ as well as the consequentiality of the setting for the specific forms of participation exhibited by the HH students and their co-participants (chapter VI).

Working within the framework of Conversation Analysis requires from the analyst to refrain from an etic description of social realities. This concerns not only the linguistic categories (i.e. labeling a turn as a question based on pre-defined formal criteria), but also the identities of participants (i.e. teacher – student) and the overall setting or context (i.e. integration classroom). A fundamental examination has therefore been necessary that reveals what types of context the participants actually make relevant, this means whether and how participants invoke the settings *classroom* or *integration classroom*.

Additionally, the different types of activities and participation frameworks regularly occurring in the classroom have been described. This description aimed at a better understanding of the context-sensitiveness of the interactional practices that will be discussed in the analyses. With respect to the participation frameworks at stake, particular attention has been paid to the moments when, in parallel to an engagement in an activity administered by the main teacher (primary participation framework), students engage in interaction with the teaching assistant (second strand of a participation framework). Such a description provides an overview of the students’ possible *forms of participation*, the opportunities and constraints that the students are confronted with in the setting under study.

Description of the specific classroom organization (chapter VI):

- What are the settings’ stable characteristics in terms of participants, spatial organization as well as activities implemented in the classroom?
- What characteristics of the setting and of the participants are consequential for how interaction is shaped?

- What are the specific constraints and opportunities that students are faced with based on the organizational structure of the classroom?

4.3 Establishment of collections

The **third and central step of analysis** consisted in the identification and description of the hard-of-hearing students' practices for managing progressivity (chapters VII, VIII and IX). The basis for this examination was the initial compilation of the sequences initiated by FPPs that are addressed to the hard-of-hearing students (cf. section 4.1.). On the basis of this compilation, I established two main assemblages that share the same sequential environment: the response slot created by a participant's first pair part, addressed to the hard-of-hearing participant. The difference between assemblage 1 and assemblage 2 pertains to fundamentally to the *focus of analysis*, and the *methodological procedure*, as well as the *actions* that are accomplished.

Assemblage 1: Displaying (non-)understanding in next turn position: focus on the transition space.

This assemblage comprises different collections of practices by means of which students display their epistemic access (understanding or non-understanding) or perceptual access (hearing or non-hearing) to a prior turn. A special focus is put on the transition space, i.e. on how participants deal with issues of precision timing (figure 1 below), *gaps* occurring between the transition-relevance place (TRP) of an FPP and the SPP (figure 2 below) and potential absences of response (figure 3 below). These notions (gap and absence of response) have been chosen for the simplicity of demonstration at this point; the notions will be reconsidered by means of the analyses. This assemblage is described in more detail in section 4.3.1.

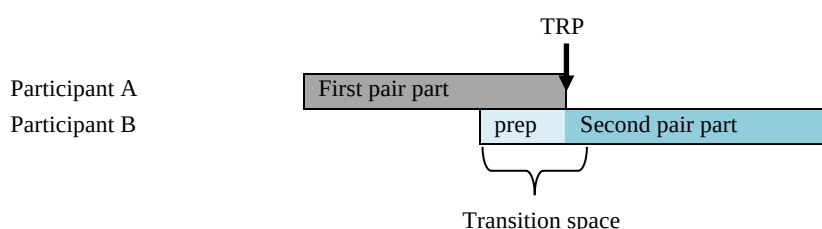


Figure 1; Based on Clayman, 2013

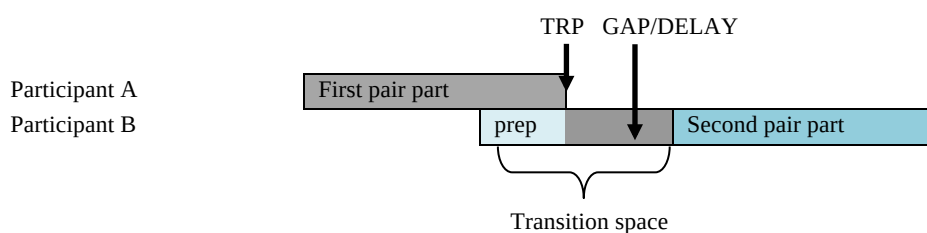


Figure 2; Based on Clayman, 2013

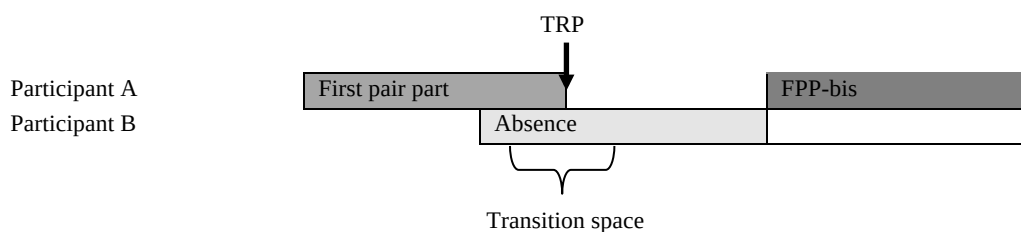


Figure 3; Based on Clayman, 2013

Assemblage 2⁷¹: Claiming a lack of understanding, hearing and knowing by means of explicit formulations: This assemblage comprises different collections as well as single cases of students' formulations of restricted epistemic access (*I don't know, I didn't understand*) or perceptual access (*I did not understand/hear*) in response to first pair parts. By contrast to assemblage 1, the focus is put on how participants make use of these disclaims for verbally filling in the slot that has been created by a first pair part, thereby managing the pressure for sequence completion.

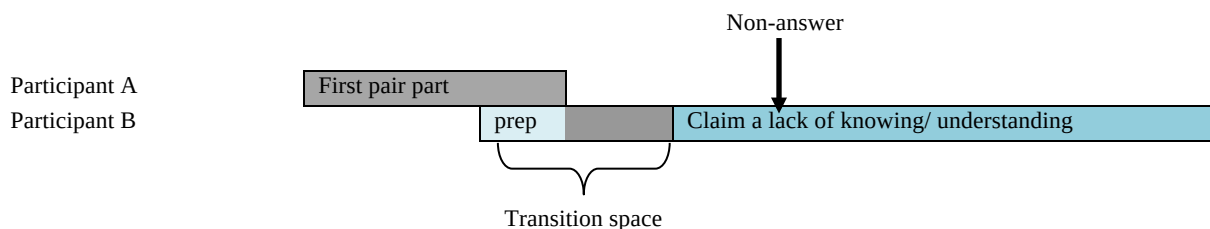


Figure 4; Based on Clayman, 2013

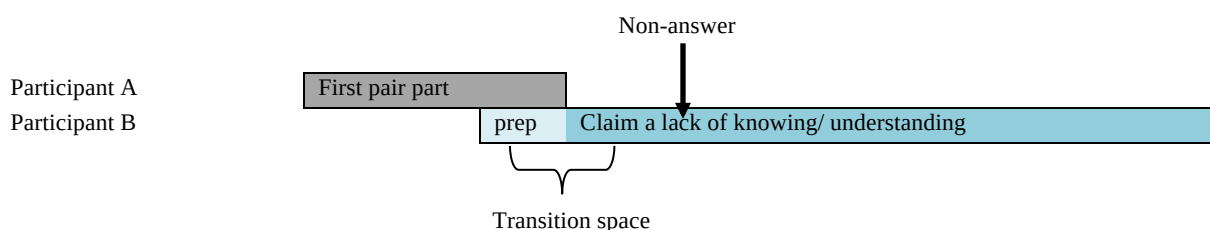


Figure 5; Based on Clayman, 2013

The methodological procedure: It has to be noted that the two quoted assemblages have been established according to two different procedures currently adopted in CA studies. The first assemblage (sections 4.3.1.) had as a starting point the *action* being accomplished. The collection started with a compilation of first pair parts (section 3.1.), and has then been narrowed down to information requests, display questions and requests for actions. The analysis has then focused on the practices for displaying understanding or hearing in transition space after the first pair part. The second assemblage (section 4.3.2.) however had as a starting point the *formal level*. An initial collection has been established based on lexical constructions comprising the verbal forms 'to hear', 'to understand' and 'to know', or possible

⁷¹ These assemblages are not strictly speaking collections because each assemblage comprises collections and instances that share the same sequential placement (SPP position) but the accomplished action and the turn design of the instances are distinct. For instance, the first assemblage comprises a collection of repair initiators displaying non-understanding of the previous turn on the one hand, and a collection of specific gaze conducts that display understanding of the previous turn on the other hand. Likewise, the second assemblage comprises a collection of claims of insufficient knowledge (*nicht wissen*) that accomplish the action of closing down sequences after substantial breaks of progressivity, as well as a collection of claims of non-understanding (*nicht verstehen*) that function has accounts for breaks of progressivity.

derivates of them (like e.g. *schnallen* or *checken*), occurring in response to first pair parts. This initial compilation has then been narrowed down to the instances that occur in response to information requests, display questions and requests for actions, that are in the first person singular and occur with the negative marker *nicht* (1 pers.sing. neg *wissen*; 1 pers.sing. neg *verstehen*).

The remainder of this section provides further details on the two ensembles of cases. For each one, a description of the action types as well as the respective challenges they pose for the hard-of-hearing students with respect to the principles of progressivity and intersubjectivity will be made. Then, I provide a brief summary of the specific procedure for the establishment of the respective collection.

4.3.1. *Assemblage 1: Displaying (non-) understanding in next turn position: focus on the transition space*

The first assemblage represents the practices that students deploy for managing a first interactional task. When students have been other-selected for a relevant next action, they are confronted with the task of displaying epistemic and perceptual access to a prior speakers' turn within the transition space. Such displays indicate whether the participant has heard/seen and understood the co-participant's first pair part or not. Whereas some displays *demonstrate* that the first pair part has been understood or not, other displays only *claim* that it has been understood or not understood (Sacks, 1992a; cf. chapter IV, section 4.1.).

In a nutshell, the students' interactional competence will be analyzed based on the practices they deploy for displaying their access or a lack of access to the previous turn in slots of high conditional relevance. Technically, the assemblage has been launched with a compilation of adjacency pairs occurring between a hearing participant (teacher, teaching assistant or student) and the hard-of-hearing students. The ensemble of cases has then been narrowed down to two action types, namely questions (information requests, display questions) and requests (for the accomplishment of an action).

What is the import of displaying (non-) understanding in responsive turns with respect to progressivity? In terms of progressivity, there is a marked and an unmarked (default) way of responding to prior turns: responding without gap (nor overlap) counts as a 'default' turn-transition, whereas responding with gap (or overlap) counts as a marked turn transition (cf. chapter IV, section 5.2.). When students are other-selected for a second pair part, they are put under *interactional pressure* to be responsive to the first pair part in some way (i.e. the response may not be type-fitted with the question, but in this case it must account for the absence of an answer). This pressure stems from the fact that if progressivity is halted through an inter-turn silence that is (momentarily) deferring the relevant expected second pair part, this silence can give raise to different diagnoses, on the co-participant's side, of the type of problem the student encounters in responding. In other terms, the silence is inference-rich and can be heard by a co-participant as for example adumbrating a disagreement, a problem in understanding or a problem in hearing. When a teacher is faced with an underdetermination of this reason for the inter-turn silence, he has two major options:

- The co-participant proposes a specific *remedial activity* (Jefferson, 1989) as e.g. repeating his turn or part of it (*post-first insert expansion*; Schegloff, 2007), eventually by rising the volume of his speech, or providing further information potentially useful for the construal

of a response (*pre-second insertion expansion*; Schegloff, 2007). The choice among the possible remedial activities is essentially emerging from and therefore reflecting the co-participant's diagnosis of the reasons for the non-response (as e.g. in upcoming disagreement, non-understanding or non-hearing). The possible reasons for a non-response are manifold, and this in turn implies a risk for the co-participant to propose a remedial activity that fails to address the genuine problem. This is the case for example when a participant proposes a repetition of his turn while addressing a problem in hearing, whereas the co-participant's 'problem' in responding straightforwardly pertains to a disagreement. The most important aspect of this is that the consequence of such an inadequacy is a further halting of the sequence progressivity: the actual problem is still not addressed and therefore no response can occur but the participant must deploy additional resources in the pursuit of a response from his co-participant.

- A second option is that the co-participant talks into being the absence of response by means of asking for example 'don't you understand?' or 'didn't you hear me?'. Such a question would constitute a new first pair part of an insert sequence and thereby it would also further break sequential progressivity.

In contrast to those two options, students can indicate and make mutually accountable the nature of the problem they encounter in responding at first possible completion, namely in transition space. Such displays in turn are helpful for the co-participant's choice of an apposite remedial activity, which in turn can reinstall the progression of the overall activity. This means, breaks in progressivity may be minimized thanks to practices that participants deploy in transition space for displaying if and what kind of epistemic or perceptual access they had to a previously accomplished first pair part. In sum, students are confronted with the challenge of managing the pressure in response slots either by not breaking progressivity or by accounting for the impingement of progressivity as a means of minimizing it by locating the exact problem source.

The first assemblage of occurrences of *displays of epistemic and perceptual access or restricted access in the transition space* comprises two different phenomena: A first line of analysis concentrated on displays of epistemic and perceptual access that are incorporated in an accomplished relevant next action (chapter VII, section 2). This is the case in precisely timed relevant and expected responses. Those responses display an understanding of the TRP, as well as an understanding of the action type (they are relevant) and the content (they are expected). A second line of analysis focused on displays of epistemic and perceptual access and non-access that come *in lieu of* a relevant next action that may be expectable. This means, when a relevant next action is either momentarily absent (either delayed or continuously absent), participants deal with this halt in progressivity by indicating their understanding of the FPP (chapter VII, section 3).

This assemblage comprises different collections: two collections of displays of understanding (chapter VII, section 3.1.) and two collections of displays of non-understanding (chapter VIII, sections 2 and 3). The analysis of these collections has the following objective and questions:

Identification and description of the practices deployed by hard-of-hearing students for displaying understanding and non-understanding with regard to preceding first pair parts when they have been other-selected by a co-participant (a hearing student, the teacher or the teaching assistant) (chapter VII and chapter VIII)

- How do students manage the interactional pressure following a first pair part?
- Do students promote progressivity by responding to first pair parts in a precision-timed manner?
- How do they display their access to prior turns when problems in responding occur?
- How do they display their lack of access to prior turns?
- How do co-participants orient to those displays?
- What interactional consequences arise from those practices?

4.3.2. *Assemblage 2: Disclaiming understanding, hearing and knowing by means of explicit formulations: focus on sequence completion*

The second assemblage represents the practices that students deploy for managing a second interactional task. When students have been other-selected for a second pair part they are held accountable for the provision of a relevant next action, consequently hard-of-hearing participants' have to deal with the pressure of providing a conditionally relevant answer. A way to deal with this pressure is the use of practices for accomplishing the sequential job of *adjacency pair completion* (Stivers & Robinson, 2006) while at the same time either deferring or replacing the expected relevant next action. Such responses are for example formulations such as 'I don't know' or 'I didn't understand'. Most instances of these formulations can be categorized as non-answer responses, but they appear also in adjacency pairs others than 'question-answer' sequences.

What is the main import of those responses for the principle of progressivity? The most important point is that these completions address the conditional relevance of a second pair part by technically filling the slot that has been opened through a first action. However, responses that are based on formulations of restricted knowledge, understanding or hearing do not properly answer a question or fulfill a request. In terms of progressivity, such responses have an ambiguous role. On the one hand, they further the progressivity of interaction by technically closing the sequence, but on the other hand a launched course of action is thereby suspended or abandoned. This implies that on a level superior to the minimal sequence, the progression of the overall course of action is not re-installed.

In the present study, such adjacency pair completions function as an instrument for promoting sequential progressivity in instances where the accomplishment of the relevant next is indicated as being problematic (by the students). This second interactional task shares with the first one described above its sequential positioning: both of them come after turns with high projectional strength (Auer, 2005) through which a student has been other-selected. In this sense, their import for progressivity is similar: in

response to a first pair part, a specific response-type is relevant. If any response is absent, this silence is inference-rich and may even more consistently compromise progressivity. However, in contrast to the practices deployed for solving the first interactional task, responses by which participants declare that they have insufficient epistemic and perceptual access are

- (a) technically closing the adjacency pair (as non-answer responses), and
- (b) *explicit* verbal formulations of epistemic and perceptual access.

Therefore, by means of the second assemblage, the students' interactional competence will be analyzed based on the practices they deploy for the sequential job of closing adjacency pairs by responses that make use of explicit formulations of non-understanding, non-hearing and non-knowing. In other words, the major issue at stake in the subsequent examination is the hearing impaired participants' practices for accomplishing the sequential job adjacency pair completion while at the same time either deferring or replacing the expected relevant next action

In sum, the establishment of this assemblage launched with a detection of all hard-of-hearing students' responsive turns comprising the verbs *verstehen* ('to understand'), *wissen* (to know) or *hören* ('to hear') or derivatives of them in responsive slots after a first pair part. The assemblage comprises two different collections. The analysis of these collections has the following objective and questions:

Identification and description of the practices deployed by hard-of-hearing participants to complete adjacency pair sequences by means of formulations of insufficient epistemic and perceptual access (chapter VIII)

- In what sequential environments do students respond to FPPs by using formulations of insufficient epistemic and perceptual access?
- How do students design these formulations?
- What interactional consequences arise from these formulations?

5 Summary

In a nutshell, the interactional tasks that the hard-of-hearing participants deal with by means of the practices I describe, are:

- Participants must handle the pressure to respond without breaking progressivity or by making mutually accountable, the origin of the break. Hence, as members of the community participants are held accountable for precision-timing; when turns are not precisely timed, their 'silences' are heard as displaying something. Participants display their understanding/non-understanding or hearing/non-hearing to a previous first pair part in transition space, i.e. slightly before or after the TRP of the FPP.
- Participants are held accountable for completing adjacency pairs. When they do not provide the relevant next action, progressivity is broken. The question arises how participants deal with such breaks.

By focusing on these two interactional tasks, the study aims at a better understanding of the fundamental interactional challenges the hard-of-hearing students are faced with in the specific classroom.

Interactional competence will be studied on the basis of how students deal with issues of *progressivity in interaction*. The first objective consists in *identifying and describing practices that* hard-of-hearing student deploy for managing the principle of progressivity in responsive turns. The second objective consists in *demonstrating the interplay between the revealed practices and the hard-of-hearing students' types of participation in the classroom as well as their status in the integration classroom*.

The management of progressivity will be discussed as a feature of *interactional competence*. The underlying questions that will be asked are: how do students use resources for accomplishing specific interactional tasks in an organized and methodic but locally contingent manner? How does a specific practice allow the participant to handle progressivity? How does a specific practice respond to the sequential and actional environment?

The management of progressivity will be discussed as a feature of *plurilingual* participants' interactional competence (in a spoken and a signed language). This is done by focusing on the synchronized and simultaneous use of a range of semiotic resources, supplied by spoken language, sign language, as well artifacts.

Aiming at a more encompassing view on the students' possible forms of participation and their status in the integration classroom, the practices deployed by the students will be discussed as a means of contributing to different *types of participation* in the integration classroom they are part of.

Chapter VI - Forms of participation in the integration classroom

The present chapter investigates and describes the basic organization of the two classrooms under study (classroom A; classroom B) and the forms of participation it makes possible for the HH students. As exposed in chapter IV, one issue that the students have to deal with is to strike a balance between ensuring that they understand (sufficiently for a current purpose) and respecting the progression of an unfolding classroom activity. Striking such a balance requires two choices: first, the participant has to decide which parts of the co-participants' contribution he necessarily must understand (and eventually what can be ignored); and second, the participant decides whether a moment and the resources used are appropriate for a clarification of understanding. These aspects vary according to the activity and the local sequential environment.

Concretely speaking, the present chapter is meant to answer the following questions. First, how are the spatial organization, the participants present and the semiotic resources used consequential for the classroom organization and for how classroom interaction is shaped? Second, what are the specific constraints and opportunities that students are faced with when they participate in the classroom? Such an empirical account of the classroom organization is key to understanding the hard-of-hearing students' forms of participation as well as specific interactional tasks they are confronted with when participating in classroom interaction. The classroom organization portrayed in this chapter builds the environment where the systematic practices for interaction described in this study are implemented and used in a context-sensitive and locally contingent way.

This chapter is organized so that section 1 offers an initial sketch of the basic classroom organization by presenting different participation frameworks of the setting. On the basis of these descriptions of the classroom organization, section 2 illustrates how the 'integration classroom' is made visible in the interactions, and how the students deal with competing constraints in different forms of participation. By focusing on how students and teaching assistant can engage in dual participation frameworks, the chapter further reveals the specific constraints and opportunities the setting offers, as well as how these are dealt with through students' competence for participation. The chapter ends with a reflection of how the students' forms of participation can be seen as actively orienting to the overall progression of the classroom activity as a normative expectation (section 3).

1 The basic classroom organization

The present section draws a picture of the basic classroom organization of the two classrooms (named Classroom A and Classroom B). It first reports on some of the participants involved and the spatial organization of the classrooms under study (section 1.1.) that builds the basis for different possible participation frameworks. Second, an overview of participation frameworks that are observed in these classrooms is provided (section 1.2.). The section ends with a short account of how teachers can explicitly divide the classroom in two groups, the regular and the integrated students (section 1.3.).

1.1 Participants and spatial organization

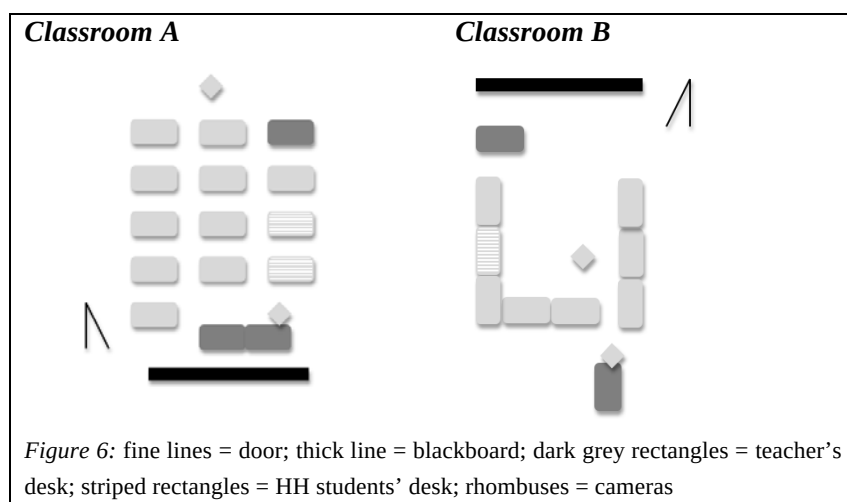
Two basic characteristics of the setting that are relatively stable in nature are the participants involved and the overall spatial organization. In the two classrooms under study, Classroom A and Classroom B, these overall characteristics vary to some extent and this may be consequential for how the students' participation in the classroom is organized.

In both classrooms, four types of participants are involved: teacher, teaching assistant, hearing/regular students and hard-of-hearing/integrated students. In the first classroom (Classroom A), 3 hard-of-hearing students are co-enrolled into a class that is composed of 15 hearing students, a hearing teacher as well as another student wearing a hearing aid (Carolyn). Carolyn however is fully mainstreamed and is not part of the 'bimodal class'. Depending on the schedule, the students are accompanied by one of three different teaching assistants. In the second classroom (Classroom B), 1 hard-of-hearing student (Pashali) is co-enrolled in a class of 14 hearing students and a hearing main teacher. In all of the lessons, the same teaching assistant, Mrs Micheli, accompanies him. All participants make use of German and/or Swiss German as a verbal resource⁷². While the hard-of-hearing students extensively draw on DSGS for interacting among each other, the teaching assistants use very few signs and only isolated lexical items (either signs alone or signs that accompany spoken language turns with syntax of spoken German, i.e. approaching Signed German). The main teachers do not sign. Despite the fact that there are a lot of students with immigrant backgrounds (hearing and hard-of-hearing), no other languages have been observed in the data.

There is a notable difference regarding the spatial organization of the two settings. The spatial arrangement of classroom A consists of four rows of tables. Two hard-of-hearing students (Jacob and Nikolas) sit in the first row of the class and one hard-of-hearing student (Nora) sits just behind them (beside a hearing student). The rest of the class is sitting behind back the hard-of-hearing students. In this classroom, the assistant is commonly sitting in front of the students, sometimes

⁷² I use the distinction verbal and non-verbal interchangeably with the distinction between linguistic and non-linguistic; thus, by verbal resources I refer to lexico-grammatical and prosodic features (cf. also Mondada & Schmitt, 2010; Ford et al., 2012) in spoken and in signed languages. Note however that the categorization of some resources as being part of the linguistic system of sign language or of the non-verbal set of resources is not straightforward (cf. chapter IV, section 1). I adopt an emic perspective on these resources by confining myself to describing how they contribute to the design of the action.

facing them and sometimes turning her back to them (see figure 6 below). The classroom B is organized so that the students' tables form a horseshoe and the main teacher is sitting or standing in front of the class (see figure 6 below). The teaching assistant is commonly sitting beside Pashali, sometimes she is standing in front of him and leaning on the table. The major difference between these two spatial arrangements is that Pashali has visual access to all of the participants, the hard-of-hearing students in the classroom A only have direct access to the teaching staff, while their visual access to the other hearing students is constrained.



Taking into account the spatial organization and present artifacts of a setting is important because it frames within what types of boundaries the participants will have to accomplish their “*joint business*” (Kendon, 1990:213) and therefore also what types of resources participants can rely upon for shaping their interaction (cf. for example Goodwin, 2000, 2007; Schmitt & Deppermann, 2007). Within the rather stable spatial formation provided by the physical environment, participants can interact with each other in different types of arrangements - for instance, people can be *vis-à-vis* or *side-by-side* (Kendon, 1990), and it appears that according to the spatial organization provided by the physical surrounding, different arrangements may be more easily implemented than others.

Differences in such spatial organization as the ones found in the two classrooms under investigation make relevant distinct *interpersonal coordination* activities (Deppermann & Schmitt, 2007) and they are therefore consequential for how participants possibly engage in interaction. Interpersonal coordination may be understood as the temporal, spatial and multimodal alignment of one's conducts with those of the co-participants (ibid.:34; cf. also chapter III, section 3). The underlying condition for interpersonal coordination is the participants' *mutual monitoring* (M. Goodwin, 1980). For example, the participants' coordination of their turn-beginnings with the end of a previous speaker's turn, or the participants' gaze orientation towards a locus where a co-participant is pointing to, rest fundamentally on their monitoring of the co-participants' conducts. When limited visual access to one another hinders such monitoring, the possible coordination between participants may in turn be affected. Upstream, difficulties of coordination may then also

have a bearing on the interaction because coordination is a fundamental activity that participants have to carry out as a basis for the cooperative work (Deppermann & Schmitt, 2007). Overall, while the spatial organization of a setting has an important impact on the participants' possible visual monitoring activities, their interpersonal coordination and in turn their possible forms of participation are affected. This is an important assumption for the spatial organization of classrooms, because it results in the fact that according to the seated position of the student, his opportunities to participate in plenary interaction may be either maximized or minimized (cf. Koole & Berenst, 2008). This recalls McHoul's (1978) interpretation of the prototypical seating positions in classrooms as an attempt to minimize the students' opportunities to interact among each other.

One important bearing of the spatial organization is that it engenders both opportunities and constraints for the hard-of-hearing students to engage in interaction with other participants. In classroom A, the spatial organization affords the hard-of-hearing students with the opportunity to simultaneously monitor the plenary activity (typically administered in front of the blackboard) and the teaching assistant (see fig. 6 and fig. 7 below). The teaching assistant is sitting between the students and the main teacher, and her torso is oriented partly towards the class (and not towards the blackboard and the main teacher). This seating arrangement implies that the hard-of-hearing students can monitor, by means of their peripheral vision, both the teacher and the teaching assistant without modifying their posture or even head orientation. Moreover, the possible monitoring of both teaching persons enables the students to engage in interaction with the teaching assistant simultaneously to an ongoing plenary in a subtle and silent manner (cf. section 3). Potentially negative is that the students' seating positions prevent them from having easily visual access to the other students, unless they shift their torsos towards the rest of the class at their back. Whereas in hearing classrooms such a spatial organization may be unproblematic for the students' participation, the constraint on the hard-of-hearing students' perception may be quite important, given the fact that they depend also on visual access to lip movements (which is true for all participants but may be enhanced for participants with difficult auditory access to the spoken language).



Figure 7

The spatial organization of classroom B in contrast constrains the student's (Pashali) possibility to simultaneously monitor the teaching assistant and the teacher because of the sitting arrangement

(see fig. 6 and fig. 8 below). He and the teaching assistant are sitting beside one another, which results in the fact that the monitoring of their precise gaze direction for example is very challenging in the sense that it necessitates a clear modification of the participants' posture. This implies that the participants' *interpersonal coordination* (Deppermann & Schmitt, 2007) is a difficult undertaking. Concretely, Pashali's position implies that if he interacts for example with the main teacher, the angle between his head and gaze direction and the position of the teaching assistant is very wide, and this in turn hinders the perception of the teaching assistant's conducts through peripheral vision (and inversely). Nevertheless, the sitting arrangement has the advantage that it enables Pashali's visual access to the other students without turning his whole body, and it facilitates access to a shared space of relevant artifacts when he and the teaching assistant collaborate on a work sheet for example (an overlap of *transactional segments* according to Kendon, 1990; cf. Goodwin, 2007 or Pochon-Berger, 2010 for the importance of mutual visual and physical access to a map in work group sessions).



Figure 8

The abovementioned spatial organizations of classroom A and classroom B are typical and recurrent configurations in which different participation frameworks can emerge and evolve. However, within the physical limits of the classroom, participants can of course build a multitude of distinct interactional spaces. This is particularly the case for the main teachers and to some extent also for the teaching assistants who regularly move around in the classroom and build new spatial arrangements.

1.2 Classroom activities and participation frameworks

Broadly speaking, the classroom activities can be carried out either as *plenary classroom interaction*, as *desk interaction* (Sahlström, 1999; cf. also chapter IV, section 3.2.) or silent individual work. By activity I mean for example explaining a task, doing an exercise on the simple past or correcting an exercise. While some activities are rather occurring in plenary interaction and others rather in desk interaction, each pedagogical activity is further related to different types of participation frameworks (cf. chapter III, section 3.2.). In what follows I provide a non-exhaustive sketch of what participation frameworks are occurring in the two classrooms under study.

In classroom A a great amount of activities is accomplished in plenary interaction, while in classroom B plenary interaction is less frequent than desk interaction or individual work. An important difference between commonly described classroom interaction and the specific setting

of this study is that the classrooms involve a second person assuming a teacher role, namely the teaching assistant. Her presence makes possible new forms of participation not only for the students but also for the main teacher (who can address the teaching assistant). In both classrooms there is a lot of desk interaction between the students and the teaching assistant. However, these possibilities cannot be simply assumed by the mere presence of a teaching assistant - they are also related to the spatial organization of the classroom, the sharing of resources as well as to the interactional order that is co-constructed by the participants themselves. Section 2.4. will provide more details on this question. In classroom A, HH students and the teaching assistant also regularly engage in subordinate interaction that unfolds in parallel to the plenary activity. By contrast, the recordings of classroom B make observable that there is nearly no interaction between the HH student and the teaching assistant during plenary activities. These differences are important because the students' engagement in desk, plenary or subordinate interactions requires from them different competencies relative to participation, and especially to the turn-taking practices. For example, while in desk interaction the participants may rely on practices for self-selection for getting a turn at talk, in plenary interaction the students are rather required to display at appropriate moments their reciprocity and their readiness to get a turn at talk (Fasel Lauzon & Pochon-Berger, 2010; Koole, 2007; Mortensen, 2009; Sahlström, 1999, 2002).

For a more detailed picture of the different participation frameworks that are implemented in the two classrooms, a look at the different classroom activities constitutes a first step. The different classroom activities and participation frameworks require or make possible different forms of participation. As an initial step for describing the classroom activities I rely on Seedhouse's (2004) pedagogical contexts (chapter IV, section 3.2.). Seedhouse's proposition of four different classroom *contexts* reflects the existing interplay between the *pedagogical focus* and the *interaction organization* (turn-taking, repair and sequence organization), which are mutually reflexive. Basically, the procedural context, form-and-accuracy context and task-based context are characterized by a rather straight turn-taking organization guided through the teacher, content-and-fluency contexts by contrast can involve turn-taking management close to that of ordinary conversation. Moreover, Seedhouse (2004) has demonstrated how not only turn-taking, but also sequence and repair organization are sensitive to these four different types of contexts. With respect to such contexts the two classrooms under investigation present some variations. In classroom A, a high amount of *procedural* and *form-and-accuracy contexts* as well as *task-based contexts* are represented. In classroom B, the most frequent type of pedagogical focus is the *task-based context*. *Procedural* and *form-and-accuracy contexts* are also present, but to a much lesser extent. This is a result of the teacher's way of teaching: the students receive a workplan containing all the tasks they have to accomplish during a week, and then they can rather freely organize how they proceed and work individually. The various contexts have not only consequences on the expected competencies required for the participation, but the other way round, the contexts present in a classroom have direct consequences on the students' possibilities for engaging in different types of interaction organization, and thereby potentially also in learning different types of participation.

A closer look at the different contexts and the different ways of participating in these contexts reveals that in a same context very different participation frameworks can emerge and be sustained. Thus, important details are not caught with the three-way model of context. In what follows I provide a non-exhaustive list of the different participation frameworks that have emerged in the data and that are implemented within the different pedagogical contexts:

- *Procedural context*: the teacher is speaker and the students the recipient (*lecturing*); a student is reading aloud an assignment and the class and the teacher build a recipient; the teacher is writing at the blackboard and the students read and/or write down.
- *Form-and-accuracy contexts*: teachers can be *lecturing* on a new topic or explaining it; the teacher can correct an exercise on the basis of assigning each task to a different student by means of question-answer sequences; or participants can correct an exercise by going around the table.
- *Content-and-fluency contexts*: the teacher moderates and each student contributes by going around the table; the teacher provides a topic and students discuss by self-negotiating turn-taking while the teacher is a bystander.
- *Task-based context*: students work in pairs or in groups; some students are working silently and others discuss in pairs.

It appears also that some activities cannot be accounted for with either of the contexts; this is the case for the following activities:

- students present their results in front of the class and the rest of the class builds the audience
- the teacher is doing a dictate

From what precedes it can be suggested that the possible forms of participation by the students are not only depending on the pedagogical contexts but on the very specific participation frameworks that are related to different institutional sub-goals.

It is also important to highlight that participation framework can be very complexe in the sense that it includes all co-present participants that inhabit a same social situation where they are “*in sight and sound of one another*” (Goffman, 1981:136). The first excerpt illustrates this complexity at one particular moment.

Excerpt 2

Corpus SG, [JNV_IN_100624 ; #263-#265]

		the next one
01	Rot	*das nächst*e?
	Rot_gz	*nor->*
02	Nor_gz	*->rot->*
03	Rot	nora?
		*(1.0)

- 04 Nor_gz *->blackboard->*
- 05 Rot what do you have after 'to have'
 Rot_gz *"was hast du nach [haben].
 Nor_gz *->blackboard->*
 AYL *->sheet->*
 "extends her hand towards the sheet of nora
- 06 AYL "(0.4)
 "points on Nora's sheet
- 07 AYL which verb
 Rot "points on nora's sheet
 "für ein verb.
- 08 (0.63)
- 09 Nor to laugh
 Nor_gz *"lachen.
 AYL *->blackboard->*
 "retracts pointing



Figure 9

The activity at hand consists in correcting an exercise in plenary interaction by means of question-answer sequences initiated by the teacher and addressed to several students who are other-selected by the teacher (after bids for turns or not bids for turns). The participation framework represented in the picture can be described as follows: Nora is an incipient speaker who has the obligation to take the next turn (1.01-03). The main teacher as well as the other hearing students are actively taking the role of recipients by being silent. As can be seen in the picture, the hearing students display their reciprocity in different manners: while Besian is silent and oriented to his sheet, Loris is gazing at the sheet of Nora. Aylan, the student besides Nora is pointing to Nora's sheet for indicating where they are in the exercise – she thereby addresses Nora as a recipient (1.06-07). As the picture shows (but not the transcript), parallel to this course of action Micheli is addressing Jacob and Nikolas in a subordinate interaction. At the same time she occupies a recipient role in the whole plenary. This moment reflects the complexity of the possible participation frameworks in this type of setting, where all co-present participants have a particular interactional status with respect to each other. For the analyses of this study, it is important that one bears in mind that the participation framework always involves the totality of co-present participants. However, to bring greater focus on the participants I will analyze in particular for each excerpt, I will never provide

all the details on the participation frameworks at stake. This implies for example that the specific state of participation of the hearing children will regularly be omitted when the focus is on analyzing the participation of the hard-of-hearing students. This type of choice is reflected also in the transcripts – in excerpt 2 for example the gaze conducts of Besian and Loris are not annotated, because for the analysis of the question-answer sequence addressed to Nora by the teacher these conducts are not important. This practical limitation has to be kept in mind for the remainder of this study.

The description of the spatial and interaction organization in this section clearly points to the fact that the hard-of-hearing students present some significant differences from their classmates. First, the students are observably ‘bilingual’ because they regularly interact with each other in a spatio-visual modality, namely by using Swiss German Sign Language (DSGS). Second, the students are observably ‘integrated’ students because a teaching assistant accompanies them in all of their regular classroom lessons; she sits right next to them and initiates help sequences also in plenary activities. Third, the students are observably ‘hard-of-hearing’ students because they wear a visible hearing aid, either a cochlear implant or an external hearing aid, and they make use of an FM system. In sum, the abovementioned observable characteristics of the setting can engender an etic description of the students as ‘hard-of-hearing’, ‘integrated’ or ‘bilingual’.

1.3 Regular vs integrated students

The setting of the current study has been characterized as ‘integration classroom’. This categorization is based on the institution’s official communication and labeling of their schooling system, offering a bilingual education program for hard-of-hearing students (cf. chapter V, section 2). Concretely speaking, the program consists in the students’ participation in two types of classes, denoted by the participants themselves as ‘bimodal classes’ and ‘integration classes’. The ‘integration classes’ refer to the hard-of-hearing students’ co-enrollment in mainstream or regular classes with a majority of hearing students and a hearing teacher instructing in spoken language. ‘Bimodal classes’ denote specialized lessons where the hard-of-hearing students are separated from the ‘regular students’ and form a small classroom that is instructed in signed and/or spoken language by a hearing or a deaf teacher. The hard-of-hearing students are thus part of a ‘bimodal class’ and of an ‘integration class’.

Integration classrooms are fundamentally ambivalent settings because of an existing tension for the ‘integrated participants’ between ‘being different’ from the rest of the class and ‘being similar’ to the rest of the class. In the current study, this tension pertains to the fact that on the one hand, the mainstreaming of the hard-of-hearing students has as its objective to even out the differences between them and the hearing students, by providing a similar social and educational environment to both groups. Through this mainstreaming, it could be argued, the hard-of-hearing are treated as being identical or at least similar to the hearing ‘regular’ students. On the other hand, however, precisely the labeling of the students as the ‘integrated’ students highlights their difference from the other students who are not ‘integrated’ but who are just part of the class. And in fact, as a

means of differentiating them from the ‘regular students’, teachers and teaching assistants regularly speak of the ‘integrated students’ (this observation is based on informal discussions with teaching staff and the so established ethnographic field notes). Within the classroom interaction data, there is little explicit mention of the fact that the HH participants are integrated or bimodal students. One rare case is provided in the excerpt below, where the teaching assistant creates two groups within the integration classroom, the students from the bimodal class and the students from the class 2f, the regular class. This sequence is unfolding in a plenary activity.

Excerpt 3

Corpus SG, [JNV_IN_100621]

01 Mic and you don't want to say that you are nora
u:nd (..) ihr wollt nicht sagen dass ihr nora
jacob and nikolas from the bimodal class
02 jacob und nikolas aus der bimodalklasse °seid.°

((some lines omitted))

29 Mic the other students also said they
die anderen schüler haben auch gesagt die
said their names and then they said
30 haben ihren namen gesagt und dann haben sie
that they are from the class two f
31 gesagt dass sie aus der klasse zwei f sind.

[Mic teaching assistant]

Also in moments where the HH student's are not explicitly referred to as being different from the hearing students, their differences are in fact publicly visible because of their hearing aids and cochlear implants, the accompaniment by the teaching assistants and also by the regular use of sign language. Rather implicit indexes for their difference are the presence of specific features of recipient design that potentially highlight that the hard-of-hearing students are not addressed in an identical manner than the hearing participants. An example is the next excerpt where the HH students are singled out from the other students by means of a pointing towards them (l.01), prosodic features and several partial repetitions (l.02-04), as well as the explicit creation of two groups (l.08).

Excerpt 4

Corpus SG, [JNV_IN_100603]

01 Rot those who finished (..) if you have finished in the booklet
wer fertig ist (0.6) "+wenn ihr fertig seid im heft, (0.4)
((staccato))+&
ROT "PNT(nik/jac) PNT(sheet)
you can take a supplementary sheet (..) and
02 Rot &könnt ihr ein blatt holen als zusatzblatt, (0.3) und in
this supplementary sheet also in the booklet also in the language booklet
03 dieses zusatzblatt auch im heft, (.) +auch im sprachheft
right when you have finished
04 ((staccato))+ hä (0.5) wenn ihr fertig seid.
05 (0.6)

- 06 Rot that clear
 07 (.) +klar. ((se tourne vers le reste de la classe))+
- 08 Rot did the others understand also
 >haben die andern auch verstanden?<

[Rot Roth main teacher]

Neither the visible differences nor the explicit creations of two groups within the classroom represent however a sufficient criterion for assuming that the classroom setting as such is an ‘integration classroom’, i.e. that it is organized in a different manner than common classroom interaction. In fact, it might well be that the classroom organization including the hard-of-hearing students is in no way distinct from classrooms previously described in CA studies. Whether, when and to what extent the classroom organization is specifically an ‘integration classroom’ will be shown in the next section.

2 Participation and dealing with competing constraints

This section demonstrates how the HH, the teaching assistant and the hearing teacher engage in different forms of participation. The focus of analyses will be twofold: first, the analyses show how participants co-construct the setting as a regular classroom or an integration classroom; second, the analyses also demonstrate how students deal with two competing constraints, namely the necessity to understand and the preference for progressivity (sections 2.2., 2.3. and 2.4.).

2.1 Context with a CA approach

Conversation Analysis objects to etically constituted categorizations of participants and settings. It advocates for the scrutinizing of how participants *talk into being* a specific context (Arminen, 2005; Schegloff, 1987a, 1992; Llewellyn, 2010; see Drew & Heritage, 1992 or Ten Have, 1999 for an overview) or social identity (e.g. Antaki, Condor & Levine, 1996; Kasper, 2004; Sacks, 1972; 1979; 1995a; 1995b; Widdicombe, 1998). According to such a perspective on context and identity, the setting under study cannot be conceived as an ‘integration classroom’ that co-enrolls ‘hard-of-hearing’ participants simply because the school direction is labeling it this way. By contrast, it must be shown that the social reality of context and identity is made recognizable by the participants themselves, in their moment-by-moment accomplishment of the interaction. This is what Button (1987) states regarding the specific context ‘interview’:

“What makes an interview recognizable? It is not the sign on the door, nor just the gathering together of certain people. It is, rather, what those people do, and how they structure and organize their interactions with one another, that achieves for some social settings its characterizability as an interview.” (Button, 1987:170)

Hence, the context cannot be understood as resulting from a physical environment or from the mere presence of specific persons. Consequently, as analysts we cannot use such etically described contexts for explaining “*parties’ actions (why such-and-such is done then) without scrutinizing the*

endogenous dynamics of interaction” (Arminen, 2005:33). For example, as an analyst I may be tempted to explain the fact that students solicit the teaching assistant when they have problems in understanding as being determined by the institutional context of the integration classroom that stipulates that assistant’s function is to help the students. If one would assume this, the question arises how one should interpret those instances where students do not seek help from the teaching assistant. Based on an etic conception of the context ‘integration classroom’ that is determining the social interaction, such instances would be qualified either as exceptions or as departures of the students’ normative conduct in the integration classroom. Concretely speaking, when the student does not solicit the teaching assistant, his conduct may be considered as being uncooperative or incompetent because he does not take advantage from the fact that the schooling system provides him with the opportunity to solve understanding problems with the teaching assistant.

However, on condition that we adopt a “*dynamic approach in which ‘context’ is treated as both the project and product of the participants’ own actions and therefore as inherently locally produced and transformable at any moment*” (Drew & Heritage, 1992:19), an empirical account of the students’ solicitations must be explained as themselves creating the context of ‘integration classroom’ rather than being the result of it⁷³. Nevertheless, of course, the opportunities for this solicitation and hence for this creation of ‘integration classroom’ are provided by the structural opportunities of the setting (i.e. the presence of the teaching assistant). This means, the absence or presence of students’ initiations as well as the form of initiations of interactions with the teaching assistant are locally managed and are tied to the participation framework at hand; when the student occupies the role of an other-selected participant in plenary interaction for example, he regularly omits to call for the assistant’s help. This means that by not soliciting the teaching assistant, the student actively constructs the local situation as a setting where the ‘integration classroom’ is not a relevant social reality (cf. section 2.3.2.).

In his discussions on the relation between talk and social structure, Schegloff (1987, 1992b) explains how researchers can provide valid descriptions of social contexts and of the participants (as being male, German, deaf, child). First, the descriptions of a context and a participant must be *relevant* for the participants (Schegloff, 1991b, 1992b) and the participants themselves must make this relevance observable. This is the case when a participant makes observable that he relies on a specific context or an identity for producing and interpreting what is going on in interaction (ibid.). Second, the description of a context must be shown to be *procedurally consequential* for the interaction (Schegloff, 1992b). Methodologically this implies that one examines the speech exchange system that is operating in a specific moment and observes how it affects “*shape, form, trajectory, content, or character of the interaction that the parties conduct*” (Schegloff, 1992b:111). Hence, the unfolding of an interaction in a setting as a medical practice does not automatically warrant it as an institutional interaction or a medical consultation because

⁷³ Note that the label ‘integration classroom’ remains an etic label that I chose for designing the interactional format where the teaching assistant actively intervenes in the students’ participation.

participants may, in the same setting, engage in ordinary conversation (Sacks et al., 1974) and thereby talk out of being the setting ‘medical practice’.

Especially studies on institutional interaction are concerned with demonstrating whether and how context is relevant for the participants and influences the shape of interaction. Several studies have shown how context is shaped through and reflected in specific turn designs, lexical choices and sequence organization (Drew & Heritage, 1992). It is these interactional practices that characterize the specific form of interaction related to an institutional setting, in other words they display the procedural consequentiality of a context (“*procedural consequentiality is displayed in practices*”, Schegloff, 1992b:117a). These practices in turn form together the “*unique fingerprint*” (Drew & Heritage, 1992:26) of a setting, differentiating thereby a specific institutional interaction (e.g. medical consultation) from ordinary conversation, as well as institutional interactions among each others (e.g. classroom interaction from integration classroom interaction). One example is the IRE (initiation, reply and evaluation) sequence.

In what follows, the different ways of participating in classroom interaction are illustrated and discussed, highlighting in what moments the classroom organization can be shown to be specifically ‘integration classroom’.

2.2 Relying on the teaching assistant during individual work

The student’s form of participation is specific to the integration classroom in moments where the presence of a teaching assistant is locally exploited by the hard-of-hearing students: when a hard-of-hearing student initiates a question-answer sequence with the teaching assistant, he aligns to a form of participation that is specific to the hard-of-hearing students (at least in classroom A). Thereby, in such moments students are made visible as those who are supported by a teaching assistant, by contrast to those moments where they do not initiate such help sequences despite the structural opportunity they would have. Cases where the students initiate sequences addressed to the teaching assistant are very common during individual desk work. An illustration is provided in excerpt 5. The segment starts when Jacob turns his head away from a sheet he was writing on. The teaching assistant Karpf is sitting near Jacob, but with her back facing the student; the rest of the class is working individually and silently.

Excerpt 5

Corpus SG, [JNV_IN_100614]

		miss karpf
01	Jac	*°°frau *kar(pf)°°
	Jac_gz	*->kar->* *->blackboard->*
	Kar_nv	*karpf is sitting with the back turned to jacob
	Kar_gz	*->blackboard->*
02	Jac_gz	*(0.6) *(0.9)
	Kar_gz	*->kar->* *->sheet(nik)->*
		*->laptop(kar)

03 Jac → ^{miss karpf} °°(frau) kar(pf)°°



Figure 10

04 (0.7)

05 Kar_nv ^{*(0.3)}
Jac_gz *starts turning her head to jac
->kar->

06 JAC ^{*(0.9)}
Jac_exp *“(moves hands up and down)
Jac_gz *“(lip corners down
Kar_gz *->sheet(jac)->
->sheet(jac)->



Figure 11

Jac_gz
->kar->

07 Kar_nv *leaning a bit forward and gazing at jac's sheet

08 Kar >°gut?°<

09 Kar ^{think about it thoroughly}
KAR [*°und (j)etzt *überle*gen.°°-
Kar_gz “...(DENKEN) DENKEN
->jac-> *->sheet(jac)->>

JAC ^{here}
Jac [*“PNT(sheet)
Jac “(x)
Jac_gz *->sheet(jac)

10 KAR ^{wait}
JAC *tap(jac) [tap(jac) tap(jac)
Jac_gz [WARTEN
->kar->



Figure 12

11 Jac ^{(x) to forget/forgot also a verb}
JAC °°(x) vergessen. “auch “verb.°°
“AUCH “VERB

12 Kar_hd ^{yes}
Kar “nod
“-ja-

13 Jac_nv starts writing
 Jac_gz *->sheet(jac)->>

Jacob solicits the teaching assistant by means of two whispered summonses (l.01-03). The use of German (in contrast to DSGS) at this moment responds to the specific constraints the sitting arrangement of Karpf is putting on the *interpersonal coordination* (Deppermann & Schmitt, 2007). Before Jacob can ask a question, *mutual orientation* (Goodwin, 1980) has to be achieved between him and the teaching assistant, and this implies that Karpf has to turn around at least her head to some extent. Karpf reacts to Jacob's second whispered summons (l.03) by re-orienting her whole body towards Jacob who is sitting diagonally behind her. Jacob gazes at his sheet and pulls the mouth corners down; at the same time he lifts and drops both of his hands, which are partly open and have a palm-down orientation (cf. figure 11). Karpf orients to Jacob's action as an indication of not knowing the answer (l.06), as she launches an encouragement by saying that he has to think about it thoroughly (l.08). Simultaneously, Jacob is oriented to his sheet and starts a turn by pointing it. The momentary overlap between Jacob's pointing and Karpf's *DENKEN* 'to think' is first treated by means of Karpf's touching Jacob to ask for his attention, but Jacob also asks her to wait and continues his turn. His question whether *vergessen* (l.11, 'to forget') is a verb is then ratified by the teacher by a nod (l.12).

The fragment highlights that collaboration between these participants is granted and must not be accounted for and that Karpf mediates the students' engagement in the classroom activities (in this case through an encouragement and then an answer to a lexical question). Jacob initiates a sequence by indicating that he has some problem with the task at hand (l.06) and this initiation is not contextualized or accounted for. Jacob embodies an expectation that Karpf knows what exercise he is doing and that he is allowed to solicit her if necessary (without accounting for it). It can be added that Jacob shows no hesitancy in interrupting Karpf's engagement in an individual activity (she worked on her laptop, with her back turned to Jacob), i.e. he is not waiting for the teaching assistant finishing her writing and eventually checking whether the students are successfully engaged in the accomplishment of the exercise.

Excerpt 5 illustrates to what extent the presence of the assistant has a direct bearing on how the classroom interaction may unfold, insofar as the hard-of-hearing student not only initiates clarification sequences with peers and the main teacher, but also with the teaching assistant (which may e.g. not be the case with an interpreter). In contrast to the regular students, the 'assisted' student can therefore turn to an additional party who can mediate his understanding. The fact that the hearing participants of the same class do not normally engage in interaction with the teaching assistant supports this interpretation. However, in classroom B, where Pashali is individually integrated, two hearing students actually regularly initiate interaction with Micheli (Jonas and Mario, sitting beside Micheli and Pashali respectively). As a consequence, the presence of the teaching assistant can momentarily re-shape the overall classroom interaction. It is worth noting that in such cases, when a teaching assistant intervenes in a supportive manner for all students present in a classroom, and not only for a specific subgroup, the classroom organization converges

with what is referred to as ‘inclusive classroom’ (e.g. Hinz, 2002; cf. chapter IV, section 2). In contrast to the model of integration, inclusion is characterized by a ‘one-group’ vision of the class where several heterogeneities are relevantly taken into account, such as e.g. gender, race and competencies. Classroom *inclusion* is therefore seen as avoiding a two-group vision of the class where ‘regular’ and ‘integrated’ students are labelled and marked and thereby again newly stigmatized as being different.

It can be noted also that the participants’ (medical) characteristics (hard-of-hearing; CI-wearer) is not a relevant aspect in this excerpt. While the local engagement between student and the teaching assistant suggests the students’ status as ‘assisted participants’, their status as being hard-of-hearing is however not made visible through this. The meaningfulness of these solicitations of the teaching assistant are further enhanced by the fact that students have a choice between soliciting and refraining from soliciting the teaching assistant. This case is discussed in the following section.

2.3 Participation without the teaching assistant

There are a lot of instances where the hard-of-hearing students participate in classroom interaction as any other ‘regular student’. This observation is especially important in the light of the integration’s overall aim, namely the socialization in a hearing community of practice. Basically, students regularly exhibit *displays of participation* through bodily resources such as body posture and gaze (Bezemer, 2008; Goodwin, 2000; Sahlström, 1999) during plenary activities. This is illustrated in the picture below where Nikolas, Jacob and Nora as well as the teaching assistant (in circles) are visibly orienting to the main teacher Roth by means of body posture, head and gaze direction.



Figure 13

When students are displaying participation in plenary interaction through such embodied displays, the classroom organization has no observable consequences on how interaction is shaped. In these specific moments therefore, neither the students’ characteristics nor the organizational structure of the classroom (presence of a teaching assistant) influences the way classroom interaction unfolds. As a consequence, in such cases the whole setting is not instantiated as an ‘integration classroom’ but as a ‘classroom’.

There are two different participation frameworks that reflect perfectly how the HH students align to a form of participation that is in no way different from ‘common’ classroom interaction

participation (as that exhibited by the hearing classmates): when they solicit the main teacher (section 2.3.1.) and when they actively participate in plenary interaction as speakers after having been other-selected by the main teacher (section 2.3.2.).

2.3.1. *Soliciting the main teacher*

When hearing students encounter problems in understanding they seek for help from the main teacher. By contrast, the hard-of-hearing students extensively rely on the teaching assistant's help and only very few cases occur where the HH student addresses a question to the main teacher. These initiations are embedded in moments where students are working individually or during transitions from plenary to individual work, as is the case in excerpt 6. This excerpt shows a moment where 'integration classroom' or 'integrated student' cannot be considered as relevant because the student relies on a form of participation that is identical to the one of the hearing students. The HH student Nikolas opens a sequence with the main teacher for resolving an understanding problem (l.07).

Excerpt 6

Corpus SG, [JNV_IN_100506]

01 Rot *now you can take your booklet*
**jetzt könnt ihr euer heft "nehmen,*
->class->
 Rot_gz
 Rot_nv "steps back from OP⁷⁴
 Nik_gz **->rot->**

02 Nik_nv **(0.7)*
**starts turning towards his backpack*
 Nik_gz **starts gazing towards his backpack*

03 Nik_gz **(0.4)*
**glances at roth*



Figure 14

04 NIK **(0.5)*
**raises hand*

05 Rot_gz **(0.2)*
 NIK **->nik->**
,,,

06 Rot *yes*
 [>]a.<

⁷⁴ Overhead projector

07	Nik NIK	→	language workbook [sprach"heft? "HEFT(1h)
08	Rot Rot_hd Rot_gz Nik_gz		language workbook yes "sprach*heft *>ja?< "big nod *->class->> *->sheet->> yes *nod
09	Mic		

When HH students open sequences the main teacher they make use of the same resources as the other regular students (e.g. handraising, German). Nikolas' reorientation of gaze and body to his backpack is precisely timed to the end of Roth's completion of her request (l.01-02). This suggests Nikolas' fine monitoring of the teacher's unfolding actions and his understanding of Roth's request (l.01). By monitoring the teacher and orienting to her talk as the relevant action in the classroom, Nikolas embodies his role as one student among others. This alignment to a regular classroom participation becomes further apparent when Nikolas addresses a question to the main teacher (l.07), seeking for confirmation if he has to take the *sprachheft* ('language workbook'). Notice however that this reference is designed by means of a code-blend, namely the simultaneous use of the German word and the DSGS sign *HEFT* (l.07, 'workbook'; cf. chapter IV, section 1). Hence, the specific question makes also apparent Nikolas' membership in the bilingual community (German-DSGS). Concretely in this example, the use of a sign may be responsive to the relative distance between Nikolas and the teacher and thereby prevent possible auditory disturbance. It is noteworthy that the teacher addresses Nikolas in a canonical way, i.e. she does not rely on signs or gestures, she does not speak louder or pronounce clearer as compared to other moments in classroom interaction. In this moment Nikolas is conducting and oriented to as any other student in the classroom.

It is crucial to note that Nikolas could have solicited the teaching assistant who is sitting just beside him and working on her laptop. Students regularly address questions to the teaching assistant even in moments when she is engaged in an individual activity (cf. excerpt 5). Nikolas' choice to solicit the main teacher instead of the teaching assistant in this specific case is rather exceptional. It can be suggested that Nikolas exploits the local contingencies of the interaction by clarifying an understanding problem in such a way that is minimally disruptive, as it is placed at a transitory moment between two activities. In fact, Nikolas' question arises in a moment where the interactional structure (the pause after Roth's turn) as well as the spatial structure (Roth is standing at some distance vis-à-vis of Nikolas) of the classroom interaction is especially opportune for such an initiation. All in all, Nikolas manages to be provided with a self-repair in a minimally disruptive manner, on the basis of his fine monitoring of the participants around him and the formulation of a candidate understanding that only needs ratification).

In this specific moment, Nikolas' way of participating in the classroom does not portray him as being different from other students. In other words, the example represents an instance where the

(etic) setting ‘integration classroom’ has no consequences on how the classroom interaction is actually shaped. Though, while Micheli maintains her postural orientation towards her laptop, she also confirms Nikolas’ polar question through a nod (1.9). By means of this, she accomplishes two things. First, while Nikolas aligned to a ‘regular classroom’ participation and achieved to establish understanding in this manner, Micheli makes observable that the HH students are accompanied by a teaching assistant. Second, by answering Nikolas’ question as an unaddressed participant, Micheli intervenes on the sequence organization of the classroom. As a matter of fact, minimal question-answer sequences between the student and the main teacher are regularly expanded through the teaching assistant. Another example is provided in excerpt 23 in chapter VII where the third-turn evaluation is doubled because it is not only accomplished by the teacher (canonical format I-R-E) but also by the assistant (resulting in a format I-R-E-E). This is a compelling example of how the setting ‘integration classroom’ becomes procedurally consequential for the interaction organization, observable at the surface of sequential organization of the interaction.

2.3.2. *Refraining from opening assistance sequences in plenary interaction*

The HH students regularly initiate sequences with the teaching assistant (section 2.2.) and occasionally also with the main teacher (2.3.1.). Neither of these cases occurs however when they are speakers in a plenary activity and the rest of the class building the audience. When the main teacher other-selects them, two concurrent conducts by the student and the teaching assistant are observable (similarly to what has been described in excerpt 6). On the one hand, the teaching assistant launches coordination activities so as to render focused interaction between her and the student possible. This consists for example in reorientation of her body, head and gaze towards the student, displaying thereby her availability (Heath, 1984) and embodying her readiness to support the student. On the other hand however, the student’s form of responding does not align to this proposed form of participation, and he may refrain from engaging in interaction with the teaching assistant in such moments. In sum, teaching assistant and student may orient to two different forms of participation as being relevant for the specific moment in interaction.

Excerpt 7 presents the case where Nora, the student, has been selected for an exercise in plenary, but she encounters considerable difficulty in responding. The teaching assistant (Micheli) displays her availability; nonetheless, the student does not call for her help and gazes steadily to the blackboard⁷⁵ (1.07-11).

Excerpt 7

Corpus SG, [JNV_IN_100506]⁷⁶

		and now we have a second part here nora
01	Rot	*UND JETZT (..) haben wir einen zweiten <u>teil</u> hier, (..)
02		nora?
	Nor_gz	*blackboard->*

⁷⁵ This excerpt has been previously analyzed in Groeber (2012).

⁷⁶ Roth is out of the camera angle.

- 03 Nor_nv Nor_gz *(1.1)
*passes hair behind her ear
->roth->
- 04 Rot Nor_gz got on (a horse) fully armoured and
stieg in *>voller rüstung auf? und<&
->blackboard->
- 04b Rot Mic_gz Nor_gz chased them amongst the enemies
&*jagt*e es unter die feinde.
->nor->
->blackboard->
- 05 (0.2)
- 06 Rot Nor_gz 'amongst the enemies' you have to specify
<unter die feinde> musst du bestimme*n.
->blackboard->
- 07 (3.0)
- 08 Nor Nor *(2.2)
*mouth partings
- 09 (3.4)
- 10 Nor_ex *(1.6)
*corners of mouth down / smiling

11 (1.1)



Figure 15

- 12 Mic (nora) ...WAVE *WAVE(nor) how do you have to ask
Nor_gz "FRAGEN palm-up
"°wie musst du fragen.°
->mic->



Figure 16

13	Nor NOR Nor_gz	(yes) (xxx) "(-ja-) (-xxx-) "palm-up *->blackboard->*
14		(0.4)
15	NOR	*(1.5) *scratches her ear->>
16	Nor Nor_gz	but where am I -aber wo bin *ich- *->mic->>

The spatial organization of the classroom allows for a clear illustration of how Micheli embodies her role as a teaching assistant. With respect to the overall classroom, Nora is sitting in the back of Micheli and the *home position* (Sacks & Schegloff, 2002[1975]) of the participants' arrangements does not allow for mutual gaze. Roth solicits Nora (l.01-02) and after an initial lack of response (l.03), Micheli rotates her upper body towards Nora simultaneously to the teacher's reformulation of her question (l.04). This spatial-bodily reconfiguration prevents a difficulty that Nora could encounter in case she tried to solicit the teaching assistant. However, despite Micheli's displayed availability, Nora does not solicit her for an assistance sequence despite the apparent problem she encounters (cf. the considerable long gap, l.05-11; see figure 15). This is finally turned into a lack of response through the teaching assistant who initiates herself an assistance sequence (see figure 16).

This excerpt reflects one way of how students deal with the competing constraints between clarifying understanding and letting the activity progress: Nora's problem in responding grounds in the fact that she does not know which part of the exercise she has been assigned to (l.16), and this despite the fact that the teacher makes it explicit in lines 01-06. In the light of this, it gets evident that Nora first favours progressivity over the immediate clarification of a problem in understanding: she lets pass two potential completions of Roth (l.03, l.05) without initiating repair. Then, when Roth does not further expand (from line 07 on), Nora's answer is made relevant but she cannot progress to the completion of the course of action (provide the answer) because she is missing fundamental information. This lack of understanding results in a longish pause of 11.3 seconds and the question arises why Nora, at least at this moment, did not ask officially where she is – it can be suggested that when Nora would have addressed a repair initiation to the main teacher, either her non-hearing or her non-attentiveness would have been put to the fore. This may be especially delicate when several opportunities to initiate repair have been missed. The way out of the disruption of progressivity is initiated by Micheli who attempts to help Nora with a reformulation. The teaching assistant's support bears testimony to the fact that she attempts to re-install progressivity of the activity at the same time as she orients to the preference for the selected participant to respond (Stivers & Robinson, 2006). By providing Nora with an "*off-record assistance*" (Hosoda & Aline, 2013:79; here manual signs, whispering), Micheli further qualifies

the preference for selected-speaker to answer (cf. Hosoda & Aline, 2013, for this observation in tutor-tutee interaction in parallel to plenary).

The excerpt shows that the student does whether attempt to re-establish understanding nor to promote the progressivity of the activity in a different manner (e.g. by saying that she does not know). The example suggests that for the HH student, not only understanding and progressivity but also the self-portrayal in the specific setting is of great importance. Excerpt 7 is just one illustration of a systematically deployed conduct by the hard-of-hearing participants when they are other-selected for responding in plenary interaction, namely refraining from opening assistance sequences with the teaching assistant. It points to the fact that the students adopt a form of participation that is convergent with that of the regular students. Thereby the students exhibit their socialization into the hearing community of practice (Lave & Wenger, 1991). Note however that once Micheli has initiated a sequence with Nora during this course of action, Nora then also addresses a further question to the teaching assistant (l.16). The initial engagement however is always launched by the teaching assistant.

A further example points to the students' option to prompt the assistant's help by means of a display of non-understanding but without explicitly addressing it to any participant (l.08). In the excerpt below, Nikolas has been selected by the main teacher (Roth) for accomplishing a task in plenary. After an initial response, Roth provides a reformulation and makes thereby relevant a second response attempt by Nikolas. This is where the fragment starts. Despite the availability of Micheli, Nikolas refrains from opening a sequence with her (l.08).

Excerpt 8

Corpus SG, [JNV_IN_100506]⁷⁷

01	Nik Nik_gz Mic_gz	because [*weil *blackboard->* *blackboard->*
	Rot	yes [>ja.<
02	Nik_gz	*(0.9) *->rot->* ((quick)
03	Rot	the donkey and the horse would be the title and then der e:sel und das pferd wäre der <u>ti:tel</u> ,
04	Nik_gz	*(0.5) *und dann? *blackboard->* *->rot->*
05	(0.4)	
06	Rot Nik_gz	read the assignment what do you have to do lies den <u>auftr</u> *ag, (.) was müsst ihr <u>tun</u> ? *blackboard->*

⁷⁷ Roth is out of the camera angle.

07 Mic_gz *(0.2) starts turning her head towards nik->*

08 Nik_ex → *(1.1)
Mic_gz *+frown eyebrows, moves head backwards
->nik->



Figure 17

09 Mic on the top there
MIC *-obendrüber-
Mic_gz "...PNT(wall) *PNT(wall) [-h
Nik_gz *->blackboard->*
Rot *>mic->*
look
[schau.



Figure 18

10 MIC on the top there
Mic "PNT(wall)_flathand
Mic_gz "°oben*drüber.°
Nik_gz *->nik->*
->blackboard->

11a MIC (where) the title (is)
Mic "*...(xx) *FB-rectangle
Mic_gz "*°>bei der [*überschri* t.°<
Nik_gz *->BB->* *->nik->* *->blackboard->*

11b Nik oh (at)
[-ah (auf-)-

11c Rot there
ROT ["da.
"PNT(slide overhead projector)



Figure 19

12 Rot this is (.) the assignment read that too
Nik_gz [das ist (.) der auftrag lies das *auch.
->blackboard->

13 Nik determine the c- determine the cases
Nik_gz *(1.8)
Mic_gz *-bestimme die f- (0.8) bestimme die *f*älle.=
*->rot->>
*->rot->>

14 Rot exactly
=genau.

The excerpt begins with the teacher interrupting Nikolas (l.01) and reformulating her request to read the title of a story and the assignment projected on the blackboard (l.03-04). Nikolas and the teaching assistant next to him are gazing at the blackboard (l.01). Following a noticeable absence of a response (of either reading the assignment aloud or reading it silently and then answer the question what they have to do; l.05) and Roth's renewed request (l.06), Micheli shifts her head towards Nikolas (l.07). Just when the shifting movement is finished and Micheli finally gazes at Nikolas, he adumbrates a problem in understanding by two means: he furrows his eyebrows and moves his head backwards⁷⁸ (l.08; see figure 17). Based on Nikolas' gaze oriented toward the blackboard, this display of a problem in understanding is not addressed to a particular participant and consequently it does not explicitly solicit help from either the teacher or the teaching assistant. Nevertheless, its local embedding in a moment where Micheli has previously oriented to him (l.07) is crucial as it makes relevant an assistance provided by the teaching assistant. This is actually what happens, as Micheli finally intervenes in the activity by providing spatial information of the element Nikolas has to read (l.09-11). This intervention helps Nikolas accomplishing the action that has been made relevant by the teacher (cf. *change-of-state token* l.11b, overlapped with Roth's localization of the relevant place, l.11c). In the further development of the activity, Nikolas encounters several new problems in understanding. In these subsequent cases however, he explicitly addresses his displays of non-understanding to the teaching assistant. As in the other instances of the corpus, it is solely the first assistance sequence during an activity that is initiated by the teaching assistant. This implies that once the fact that the student is accompanied by an assistant has come to the interactional surface, the student does not by all means try to attach himself to a form of participation similar to the hearing participants.

All in all, the example illustrates how the student who displays difficulty in responding does not initiate an assistance sequence by himself, despite the official function of the teaching assistant to mediate and sustain his understanding and participation. However, the student's finely tuned and subtle use of visual resources (eyebrows frown, head movement) that precedes the teaching assistant's initiation of a help sequence is also actively contributing to the design of the lack of response. Moreover, there are initially two concurrent forms of participation where the student aligns to a similar mode of participation as other regular students, while the assistant's conduct displays her orientation to the same student as 'the assisted' student. These divergent orientations are however not maintained but dissolve as soon as the first assistance sequence has been initiated.

2.4 Managing dual participation frameworks in integration classroom: interaction with the assistant in parallel to plenary interaction

The organizational structure of the classroom under study, i.e. the participants involved and the spatial organization, provides the students with the opportunity to engage in a very specific form of participation: HH students can initiate and sustain 'subordinate' interaction with the teaching assistant that unfolds simultaneously to the ongoing main plenary interaction administered by the

⁷⁸ This head movement backwards contrasts with the cases of repair initiations where participants put the head forwards, sometimes leaning with the whole upper body forwards (cf. chapter VIII; e.g. excerpt 33).

main teacher. This possibility rests to a large extent on the spatial organization of the classrooms as an *interaction room* (*Interaktionsraum*, Mondada, 2007b; Schmitt & Deppermann, 2007) characterized by the assistant sitting near the students at their eyelevel (by contrast to other *forms of presence* as for example a standing position in front of the sitting students; *Präsenzform*, Mondada & Schmitt, 2010). This arrangement and to some extent also the proximity between student and assistant is crucial for this form of interaction.

This form of participation is particularly relevant for the way how HH student can deal with the competing constraints. They can clarify an understanding problem immediately when it is emerging, in order to be able to further follow the plenary activity, and at the same time they can refrain from interrupting the progression of the plenary activity. However, the environmental features only build a basis for *possible* simultaneous and non-disruptive interaction with the teaching assistant. The actual unfolding of such simultaneous interaction rests fundamentally on the local contingencies of interaction as well as on the multiple semiotic resources that the participants deploy for establishing a new participation framework and sustaining the interaction without disrupting the ongoing plenary. The analysis of how students and teaching assistants establish an interaction that unfolds simultaneously to the plenary interaction provides insights into the subtle interactional competencies the students and the assistants deploy for shaping this form of participation, and into how participants thereby co-construct the setting ‘integration classroom’.

2.4.1. Brief dual participation framework

Interaction between the student and the teaching assistant parallel to the plenary consists to a large extent of question-answer sequences initiated by the student (mostly repair); less frequently, comments or noticings followed by acknowledgements occur. The question-answer sequences can be simple and unexpanded, in which case the duration of the parallel engagement is minimal. The excerpt below shows a case in point. Simultaneously to an explanation of a task provided by the main teacher in plenary, Nikolas addresses a candidate repair to the teaching assistant Karpf (1.07) who answers through a nod (1.08).

Excerpt 9

Corpus SG, [JNV_IN_100617]

01	Rot Rot_nv Kar_gz Nik_gz	and now you will *und jetzt werdet ihr& *oriented to the blackboard *blackboard-> *blackboard->
02	Rot Rot_nv	think ‘well on these small sheets’ no &“denken hö auf diesen kleinen zetteln “nein. “returns towards class “puts hand in a small box->“

(0.5)


```

04  Rot      you will do per sheet one letter
      +ihr macht "pro zettel (0.8) einen
      buchstaben.
      Rot_nv  "**shows a small sheet

      *(1.0)
05  Rot_nv  *first orients to blackboard at her right, then to the left

      and we will then stick this as a collage
06  Rot      "un*d (0.4) [wir kleben das dann als collage.
      Rot_nv  "walks to her right side
      Kar_gz  *->students
07  NIK      → ["*EINS FB_rectangle1&
      Nik      "-ein b-
      Nik_ex   "slightly raised brows
      Nik_gz   *->kar->>

```



Figure 20a



Figure 20b

```

08  NIK      &"EINS FB_rectangle2 *(0.7)-h *,,,(FB_rectangle2)
      Nik      "-ein (xxx)e-
      Kar_hd   *nod      *nod
      Kar_gz   *->roth->*

09  Nik_gz   *(1.2)
      *->kar->>

```



Figure 21

[Rot main teacher, Kar teaching assistant, Nik HH student]

The students and the teaching assistant display their attentiveness to the plenary activity during the explanation sequence provided by Roth (gaze l.01-04). In overlap with a teacher's expansion (l.06), the teaching assistant turns her head in direction of Nikolas (and Jacob), followed immediately by Nikolas' gaze reorientation towards her (see figure 20). Simultaneously to his gaze reorientation towards Karpf, Nikolas launches an Y/N-question in DSGS (l.07). The question addresses Roth's previous turn that is highlighted as especially relevant by means of several accentuations (l.02, l.04) as well as the reported speech (l.02). Nikolas' question is a candidate understanding that is designed by means of two different handshapes that represent two objects with a rectangular shape and two different sizes, presumably a letter and a sheet (l.07 and l.08;

figures 20b and 21)⁷⁹. His eyebrows are slightly raised (this constitutes an interrogative marker in DSGS for Y/N-questions). Karpf confirms Nikolas' understanding by means of two nods (l.08) and simultaneously to the second nod she reorients her gaze to the teacher.

The excerpt shows that from line 6 to 7, Nikolas and Karpf momentarily disengage from the plenary activity and establish a new participation framework. *New participation framework* must not be understood as a new or additional parallel conversation or turn exchange system. According to Goffman's definition of participation framework as the relation among all participants at a given moment (cf. chapter II, section 4.2.), a new participation framework is at stake when the status of one or more participants has changed from one moment to the other. This occurs for example when the student as an addressed participant changes his status to a speaker who addresses the teaching assistant. Hence, the idea is that there was a participation framework 1 at moment 1, and there is a new participation framework 2 at moment 2. The term *dual participation framework* has been chosen in this study for referring to the fact that when the second participation framework is instantiated, the second one does not *remove* the first one. Rather they must be understood as being (timely) overlapping, which entails that when the student initiates interaction with the teaching assistant he is an addressed participant (within the plenary) and a speaker (within the dyadic interaction with the teaching assistant) at exactly the same time. The teaching assistant by contrast is an addressed participant within the plenary and within the dyadic interaction with the student.

In fact, the sequential unfolding as well as the use of resources for the design of this dual participation framework demonstrates the continuous relation between the two strands of interactions. This is similar to what Egbert (1997) describes under the heading of *schisming*. Schisming is understood as the splitting of one into two conversations within a participation framework, resulting in the sustainment of two turn-taking systems by at least four speakers. In this regard the author reports that the two conversations may entertain some interrelation. On the basis of a fine-grained analysis of the sequential moments where the participants induce schisming in ordinary dinnertable conversations, Egbert (1997) highlights that:

- The turns that initiate schisming are accomplished when an ongoing sequence has not yet come to sequential completion;
- The turns that initiate schisming are built as FPPs;
- The schisming-inducing turns are occurring during a TRP or when the participants manifest perturbations (hesitations, pauses). Thereby the schisming-inducing turns may be intrusive but not competitive for turn-taking.

The sequential position of the initiations of a dual participation framework in this study is similar but not identical to Egbert's data. The exact placement of Nikolas' question indicates that the moment of his initiation and the ongoing plenary activity are interrelated. There are two noteworthy observations with regard to the sequential placement of such initiations. First, between

⁷⁹ In signed languages such handshapes are part of the *productive signs*, i.e. signs that represent the size and shape or the handling of an object. The meaning of these signs is not lexicalized but depends on the specific context of production, in this case this context is Roth's turn (cf. for example König et al., 2012).

the apparent trouble source (l.04) and Nikolas' question lies a pause in which he could have initiated a sequence with the teaching assistant (l.05). However, Nikolas only opens a sequence when Roth re-launches a next turn, the continuation of her explanation (l.06). Through the delay between the trouble source and the initiation, Nikolas' question unfolds simultaneously to a teacher's turn (l.06), consequently it does not occur at a TRP. This precise timing of the initiation of a dual participation framework might be a practice for clearly addressing the turn to the teaching assistant and not to the main teacher. As a matter of fact, the latter could also orient to the students' movements as either bids for turns or gestural turn launchings. By locating their initiations within unfolding turns, students potentially avoid such interpretations. Second, up to line 06, Karpf is gazing in the direction of the blackboard and the main teacher. This implies that if Nikolas had opened a sequence immediately after the trouble source, namely Roth's turn at line 04, he would have been constrained to explicitly summon the teaching assistant and to establish mutual orientation with her. In contrast to this, Nikolas takes advantage of Karpf's following gaze shift into his direction so as to initiate a sequence. Consequently, this initiation is accomplished very subtly and without any pre-sequence (summons-answer sequence) concerned with mutual engagement.

Likewise, in excerpt 10, the sequential embedding of Nora's initiation shows that it is fine-tuned to the teaching assistant's and to the main teacher's vocal and visual conducts (l.05). Moreover, the excerpt demonstrates that despite an increased distance between Nora and the teaching assistant, these participants can engage in a dual participation that allows re-establishing understanding without disrupting the plenary activity.

Excerpt 10

Corpus SG, [JNV_IN_100617]

		<i>this means clean copy</i>
01	Rot	*"das heisst, (2.0) reinschrift?
	ROT	*"writing on the blackboard
	Kar_gz	*blackboard->*
	Nor_gz	*blackboard->*
		"(3.5)
02	ROT	"writing on the blackboard
		<i>this clean copy one can then</i>
03	Rot	"diese reinschrift kann man dann&
	Rot_nv	"reorienting upper body towards class

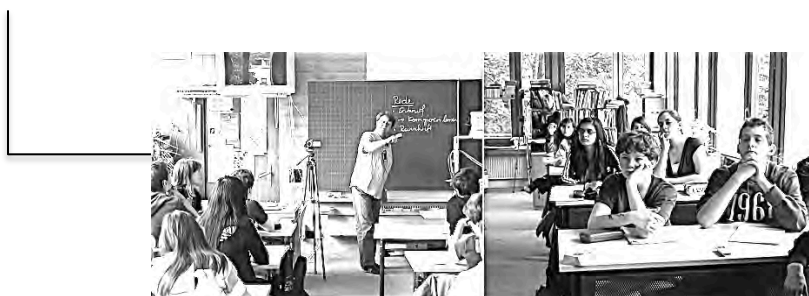


Figure 22

04 Rot copy so that you both
 ROT &kop"ieren, damit ihr bei*de (.)&
 Rot_nv "PNT(loc1)PNT(loc2) *->blackboard
 Kar_gz *->class->>
 Nor_gz *->kar->*



Figure 23

05 NOR → what's that clean copy
 Nor "PNT(blackboard)
 Nor_exp "-reinschrift-
 "furrowed brows



Figure 24

06 Kar to write properly
 KAR "-schön schreiben-=
 "GUT

07 Nor *=nod
 Nor_gz *->blackboard->>

Rot &könnt,&

[Rot main teacher, Kar teaching assistant, Nor HH student]

The activity at hand is a procedural explanation where Roth writes a series of tasks on the blackboard that the students will have to accomplish during the lesson. One task is to make a 'clean copy' (*reinschrift*) of a written text. The teacher writes this assignment on the blackboard (l.01-02) and then she turns to the classroom while expanding the explanation (l.03-04⁸⁰). During this expansion, the teaching assistant (Karpf) shifts her head towards the students (l.04; see figures 22 and 23) and Nora still gazes in direction of the blackboard. Then, just at the moment when Karpf's gaze reaches Nora, the latter starts moving her head towards the teaching assistant and she

⁸⁰ The students prepare a discourse in dyadic groups that they should exercise reading aloud.

launches a question concerning the meaning of ‘clean copy’ written on the blackboard (l.05; see figure 24). The question is designed as an unvoiced repetition of the word, a pointing to the blackboard where the word is written and furrowed brows (interrogative marker in DSGS for wh-questions). By contrast to excerpt 9 this is not a candidate understanding but similar to a wh-question, but it is also clearly localizing the item that is not understood. Karpf answers in DSGS accompanied by mouthings (l.06) and Nora ratifies through a nod while simultaneously disengaging from the dual participation framework through a gaze shift towards the blackboard (l.07) and orienting to the previous participation framework.

As in excerpt 9, Nora’s sequence initiation is clearly related to a teacher’s action (l.01; reference to *reinschrift* in her turn and/or written on the blackboard), but temporally it is deferred to a moment past TRP of the teacher’s turn. The example supports the observation that the students place their initiations at moments where the main teacher may be less likely to see the student’s action as being addressed to her: Roth is orienting towards the class after having written and pronounced *reinschrift*, but the initiation occurs when Roth is again turned to the blackboard (l.04; see also figure 24), which is, in sequential terms of her turn, not a relevant point for initiating a turn/action. Furthermore, the example again shows that the moment of initiation is related to the teaching assistant’s conducts: the moment converges with the end of Karpf’s gaze reorientation towards Nora.

With regards to the resources used by participants, the interaction between the student and the teaching assistant unfolds in an unvoiced manner, as both Nora and Karpf make use of the spatio-visual modality (sign, gesture and mouthings). This modality enables the participants to interact without interfering with the plenary activity, and to do so even when they are not sitting near to each other (as Karpf and Jacob and Nikolas). However, it has to be highlighted that in the quoted case, Nora’s initiation rests on the initial *availability display* provided by Karpf (Heath, 1984). If the teaching assistant had not oriented head and gaze towards the class, the engagement between Nora and her would have been more challenging. Nora would have been required to summons the teaching assistant either with a ‘big’ visual attention-getting devices (waving hand, glossed *WAVE*) or with a voiced summons. Note also that Nora would have to use ‘bigger’ attention-getting devices than Jacob or Nikolas who can, thanks to the spatial arrangement, rely on much ‘finer’ or smaller waves or taps on the arm or the table for getting the teaching assistant’s attention (these are also common summonses in signed languages).

This section on brief dual participation frameworks has shown how studentes and teaching assistants can deal with the *competing constraints* during plenary activities. In both excerpts cited, the clarification sought by the student is of crucial importance for the upcoming accomplishment of the task and it is successfully resolved. For clarifying their understanding problem, the students rely on the teacher’s and teaching assistant’s conduct in interaction; they delay the moment of their repair initiations (which are not timely latched to the reparable; putting words on sheets in excerpt 9, the word *reinschrift* in excerpt 10) but manage to localize the trouble by means of specific repair initiators. The form of participation clearly differs from what has been shown in the previous

sections: students do not initiate a sequence with the main teacher by interrupting the plenary and the student does not explicitly solicit the teaching assistant's attention for engaging in subordinate interaction. By contrast, the student takes advantage of the opportunity to engage in a dual participation framework for both clarifying his understanding and not breaking the plenary activity. This form of participation in the integration classroom is made possible through an interplay between the organization of the classroom's setting and co-present participants on the one hand, and the participants' competence of monitoring the conducts of all participants present, and of interacting in a visuo-spatial modality on the other hand.

By contrast to such brief dual participation frameworks, there are also instances where the subordinate interaction is much lengthier because participants struggle in establishing understanding for various reasons. In such cases it happens that the teaching assistant finally shuts down the dual participation framework. The next section illustrates how such lengthy dual participation frameworks evolve.

2.4.2. *Lengthy dual participation framework*

Question-answer sequences between student and assistant that are unfolding simultaneously to the plenary can be expanded and thereby result in a prolonged dual participation framework. Such expansions occur when the clarification sought by the student proves to be a difficult undertaking requiring some negotiation. The reasons for this difficulty are diverse; a recurrent problem is that student and teaching assistant do not share a common understanding of what actually the student's problem is. A case in point is shown in excerpt 11⁸¹. The fragment starts when Mr. Roth launches a transition from desk interaction to plenary interaction⁸².

Excerpt 11a

Corpus SG, [JNV_IN_100603]

01	MIC	[*(holds jacob's paper in her hand, looks at it and hands it back to him))] <i>Mic_gz</i> *jac-> <i>Rot_gz</i> *mic-> can you also listen silvia
02	Rot	[kannst du (x) äh silvia rasch auch mithören],& so that you can explain it
03	Rot	[&damit du's] "erklären kannst. (...)] okay (be quiet)
04	Mic MIC	[<-okay->] "index on her mouth]

Previously to the fragment, the main teacher Roth introduced a transition from desk to plenary interaction by requesting the class to listen to him. The teaching assistant Micheli and Jacob however continued interacting on an assignment, when Roth explicitly calls for the assistant's

⁸¹ The excerpt has also been analyzed in Groeber & Pekarek Doehler, 2012 with a somewhat different focus.

⁸² Note that Mr. Roth is not the usual main teacher of the class but the husband of Mrs. Roth who is absent this day. All students know him however, as he is the teacher of other classes and the director of the school.

attention (Silvia, l.02) and accounts for this by the fact that she will need to be able to re-explain the assignment (l.03). By doing so, Roth frames the upcoming activity as a two-party participation framework where he has the status of speaker and the rest of the class, including Micheli, the status of the addressed participant. This initial framing is consequential for how the further interaction unfolds. During Roth's explanation, Jacob indicates several times that he has a problem in understanding (from line 23 on). The first indication occurs when he sees that Micheli raises her brows in response to Roth's explanation (cf. figure 25, l.21).

Excerpt 11b

Corpus SG, [JNV_IN_100603]

((omission of 5 lines))

- 09 Rot *so that I don't have to explain it to each person individually*
**>damit ich nicht je:de*r person einze*ln erklären *muss.<*
 Mic_gz **class->**
 Mic_gz **jac->** **->rot->** **->jac->**
 Jac_gz **table->** **->rot->**
 Jac_nv **leans back on his chair*
- 10 Rot *in the assignment it is said one needs to*
**(x) es *heisst bei der auf"*gabe man muss zwanzig wörter&*
 Jac_gz **->bes->** **->rot>finger->**
 Mic_gz **->rot->**
 Mic_nv **postural shift from students to main teacher roth*
- 11 Rot *underline twenty words (which) (.) with which one*
&unterstreichen bei (die:.) (.) bei denen man&*
 Jac_gz **->rot->**
- 12 Rot *could have difficulties*
*&schwierigkeiten haben *könnte.*
 Jac_gz **->bes->**
- 13 Rot *you have to imagine the following*
*.hh müsst ihr euch f*olgendes vor*stellen,*
 Jac_gz **->rot->** **->finger->**
- 14 Rot *your neighbor (masc.) or neighbor (fem.)*
 NIK *&.hh euer nachbar oder eure "nachbarin&*
"brings hand in front of his nose
- 15 Rot *dictates this text to you*
*&diktiert *euch diesen *text,&*
 Mic_gz **->nik->**
 Jac_gz **->mic->**
- 16 Mic_gz **&(0.9)*
->rot->
- 17 Jac_gz **(1.0)*
->finger->
- 18 Jac_gz **(1.6)*
->rot->
- and with which word are you a hundred percent sure*

19 Rot that you (pl.) don't make a spelling error
 20 &und bei welchem wort seid ihr hundert prozentig sicher
 Rot_gz *dass ihr keinen schreibfehler ma*cht,&
 Mic_gz *->mic/jac->* *->class->* *->rot->*

21 Rot *(1.0)&
 Mic_exp *raises eyebrows->*
 Mic_hd *lowers head



Figure 25

22 Rot this word
 Rot_gz &*die*ses *wort&
 Jac_gz *->class->* *->finger->* *->mic->*

23 Rot you don't underline or you don't write down
 Mic_exp [&sch- ["übermalt ihr "oder schreibt *ihr nicht *auf.
 JAC → what
 Jac_nv → ["WAS
 Jac_gz "bends forward "leans back
 ->rot-> *->air->*



Figure 26

24 Rot_ all words with which there is the danger that
 Jac_gz *alle wörter *bei (der) die gefa:hr best*eht (0.9) *dass&
 Mic_gz *->sheet->* *->mic->* *->sheet->* *->rot->*

25 Rot at a dictation you write the word wrong, could write it wrong,
 Rot_gz &ihr beim diktat (.) das wort (.) falsch *schreiben,
 Rot_gz könnt, (0.4) *>könntet<*, &
 ->mic->

interaction is organized. Finally, Micheli orients her gaze towards the class and displays her availability exactly at the moment where Roth's turn reaches a TRP (l. 23-24). This suggests that she continued monitoring Roth as long as the relevant information was still under way (namely up to line 29).

The continuation of the excerpt shows the second and third attempt of Jacob to establish a dual participation framework (l.33, l.35-36). The initiation is again launched at a moment where Micheli indicates her attentiveness to the plenary through the acknowledgement of a piece of information (nod, l.31).

Excerpt 11c

Corpus SG, [JNV_IN_100603]

30 (0.4)

31 Rot *and I think you will quickly reach twenty words*
 Rot_gz **und ich denke da kommt ihr ra*sch auf *zw[anzig *wörter.*
 Jac_gz **->class->** **->mic->**
 Mic_hd **->sheet->** *[*nod_____*
 Mic_gz **->in front of*
*herself->**

32 Rot *you will soon reach twenty words right?*
 Rot_gz **seid ihr *schnell bei zwanzig wörtern hä?*
 Mic_hd **->class->**
 Jac_gz **->mic->**

33 Jac_hd → shake

(0.6)

34 (.)

35 Jac_RH → *(I) don't/didn't* NICHT (WAVE) "[*((hand on right
 Jac_LH side of head))
 Mic_gz " *WAVE(mic)
 " *>jac->*

someone underlined three words and (said)
 Rot >hat jemand
 drei wörter
 unterstrichen
 und
 (>>ges(x)<<)&

36 Jac_RH → NICHT "VERSTEHEN
Jac "-ve(r)sta-



Figure 27

37 Jac_RH there is a sheet (on the overhead projector)
Mic ((hand on right side of head))
MIC ("°es ist ein (x)blatt "(vorne°°)"
"PNT(OP),,,,"



Figure 28

38 Jac "(0.9)
JAC "shake
"(lifts hand with index stretched)

39 (0.8)

40 Mic_gz *(0.5)
->rot->

41 Mic_gz *(1.5)
->jac->
Jac_gz *->rot->*

42 Jac_gz *(0.4)
->mic->

43 Jac_gz *(0.6)
->mic->

Rot (>xx<)

these three words are
difficult for me

Rot (d-) die
drei *wörter
machen mir
schwierig-
keiten.

Gz *->mic->*
(0.7)

this means that when I

Rot *das heißt
dann wenn
ich&

Gz *->class->*

dictate the whole text

Rot den ganzen
text
diktiere

the this student (m.) or this
student (fem.) has

Rot hat das: (.)
dieser
schüler oder
diese
schülerin&

44	Mic MIC	don't you hear "°hörst du *nicht?° "PNT(ohr) NEIN	only three errors Rot &nur drei fehler .
45	Jac Mic_gz Mic_hd	sure I do -do::*:(ch)- *->rot-> *nod	all other words are written correctly Rot *alle anderen wörter sind richtig geschrieben. Gz *->mic- >class->*
46	Jac Jac_RH Jac_gz Mic_hd Mic_gz	I didn't understand -hab(e) (habe) *"nich(t) "verstand(en)- "NICHT "VERSTEHEN+ [*(. .) -h *,,,+ *->rot->* [*nod *->students->*	I have some "(1.2) ROT "UNGEFAHR Rot "hab ich so& ROT "UNGEFAHR
47	Mic	okay -okay-	Rot "meine:& ROT "UNGEFAHR,,,
48	Mic_gz	*(1.5) *->rot->*	slight doubts Rot leichten *zweifel. Gz *->mic->*
49	Mic_hd	yes *(1.7) *nod	hm? one reaches quickly twenty Rot hm? Rot *kommt man bald auf zwanzig. Gz *->class->>
50	Jac_hd	no shake	so think thoroughly Rot also überlegt euch
51	MIC Mic_gz Jac_gz	wait *WARTEN *-h *->rot->> *->rot->>	If he or she dictates that to me, do I write it correctly? if not, highlight. Rot wenn DER oder DIE mir das diktiert, schreib ich das fehlerfrei (0.7) nicht sicher (.) übermalen.

After a first attempt to establish a participation framework with the teaching assistant, Jacob adopted a recipient position and did not further try to initiate a sequence with Micheli. He therefore finally favoured progressivity over the clarification of a problem he apparently encountered (l.23). However, from line 33 on, Jacob accomplishes some renewed trials. The sequential embedding of these attempts is important as it demonstrates Jacob's fine monitoring of the teaching assistant's conducts. Roth provides an evaluation of the number of words that

students may struggle with. During this, Micheli gazes at him and when Roth establishes mutual gaze with her in mid-turn (l.31), she acknowledges his evaluation (nod, l.31). During this nodding, she turns her head towards the students but without gazing at them. Jacob however seems to capture Micheli's conduct in his peripheral vision, as he looks up towards Micheli just when she has shifted her head and started nodding. At this moment, Jacob orients to the assistant's nodding and makes renewed attempts for establishing a new participation framework (l.33, l.35-36). Note that these initiations occur in a similar sequential environment as the first one (l.23), namely when the teaching assistant reacts to the teacher's turn in a manner, and thereby tags some piece of information as potentially being of special importance for Jacob. This potential relevance is enhanced through the teacher Roth who accompanies his turn with gaze towards the assistant. As a consequence, Jacob makes observable that his understanding may not be sufficient at the current moment.

The design of Jacob's initiations for interaction with the teaching assistant is increasingly dense in terms of the number of sequentially deployed resources. At the very first attempt, Jacob did not launch any pre-sequence (l.23) and also the second attempt consists in a sole head shake (l.33) to which Micheli does not orient (her gaze was in the direction of her knees). After this second attempt, Jacob launches a turn (l.35) and he initially ensures whether mutual gaze is established; he then restarts his initiation by first summoning Micheli (WAVE 'attention-getting device', l.35) and finally completes his turn. This time the initiation is successful and Micheli responds to Jacob's claim of non-understanding. However, her response consists in a mere reference to the assignment sheet that Roth is commenting on (l.37; see figure 28). Micheli neither restates what Roth explained nor does she make explicit to what kind of information provided by Roth she reacted through her embodied displays (eyebrows, nod). In fact, Jacob indicates that Micheli's help has not been successful in re-establishing understanding by means of a head shake (l.38). His problem in understanding is however not immediately re-addressed by Micheli, as she is also monitoring Roth's explanation (and who is glancing at Micheli during her repair attempt, l.37). Finally, at line 44, Micheli re-addresses Jacob's problem by opening a negotiation sequence regarding Jacob's hearing. Practically speaking, Micheli suggests an account for why Jacob has problems in understanding and maybe also why Micheli's 'repair' has not been successful. Jacob's counters this account by stating that the understanding problem he has is to understand in terms of 'grasping' and not of hearing. Micheli acknowledges this and reorients to the main teacher. Importantly, the repair initially launched by Jacob, thematizing a problem in understanding (part of) Roth's explanation, is actually still pending. However, further negotiation must be postponed to a later moment in classroom, namely when the plenary interaction is finished. The dual participation framework is explicitly closed down by Micheli at line 51, when she requests Jacob to wait by means of the sign *WARTEN* ('wait') (l.51).

Clearly, the quoted excerpt shows how student and teaching assistant collaboratively establish a participation framework in a manner that is sensitive to at least three important features of the classroom interaction organization. First, the establishment is sensitive to the *moment* in the course

of the plenary activity that unfolds in the first participation framework. The sequential environment of Jacob's first attempt and its failure suggest that in moments where the main teacher provides new important information, the teaching assistant gives priority to the already established official participation framework over the establishment of a second and more subordinate framework with the student. This may have been made particularly relevant by the main teacher's initial framing of the interaction. Second, the course of action within the second participation framework unfolds in a manner that does not disturb the official plenary activity. Spatio-visual resources such as signs, gestures, as well as voiceless speaking are prevalent resources for such an endeavor. These resources must be mutually understandable by the participants so as to enhance the chances of successful negotiation. Third, the 'subordinate' interaction is limited in time, it is therefore not an appropriate place for explanations or negotiations that necessitate extended sequences. With this respect it might be expected that open class repair initiators are less acceptable forms than sequence initiating actions that specify and locate the problem of understanding. Note that in excerpts 9 and 10, students initiated repair by specific repair initiations, either a candidate understanding or a visual turn that functions as a wh-question. Both initiations clearly localized the trouble source and the teaching assistant was able to provide repair in one short responsive turn. However, open class initiators do actually also occur in these dual participation frameworks and they can be successful. In this regard, note that Micheli did orient to the initial OCRI in excerpt 11 as an appropriate way of requesting help. It is only when her candidate repair⁸³ has not been successful that she disengages from an explanation by making an explicit reference to Jacob's hearing capacity and then by abandoning the dual participation framework.

A further excerpt illustrates that the problematic character of a sequence unfolding simultaneously to the plenary activity can rest on the limited sharing of the DSGS resources by the student and the teaching assistant. The excerpt stems from a moment where Nikolas actively participates in the plenary by bidding for a turn and providing the answer to a teacher's question. The pedagogical focus is on form-and-accuracy and the students have to provide different adjectival forms (e.g. big, bigger, the biggest). After having provided the right answers, Nikolas initiates interaction with the teaching assistant (Micheli) in an endeavor to clarify the meaning of a word (l.16).

Excerpt 12

Corpus SG, [JNV_IN_100623_1ereheure]

		and now brave
01	Rot	und jetzt *tapfer?
	Rot_gz	*->class->*
	Nik_gz	*->blackboard->*
	Mic_gz	*->blackboard->*
		*(1.1)
02	Mic_gz	*->students->*

⁸³ Note that Micheli's turn is treated here as repair of Roth's turn, which is not a prototypical repair sequence. Similarly, Egbert (2004) describes how a participant other than the addressed one can carry out the repair. The difference is that in my cases the student addresses the repair to a person other than the trouble source speaker.

- 03 Rot Mic_gz NIK brave and valiant this is
tapfer und wack*er [das ist&
->blackboard->
[handraising
- 04 Rot Mic_gz Rot_hd related with respect to their significance
&von der bedeut*ung her verw"andt?
->nik-> "PNT(nik)_head
- 05 NIK *(0.4)
*releases handraising
- 06 Rot Nik NIK Mic_gz braver
[nikolas?
[<tapf"*er"er.>
"R "R
->blackboard->
- 07 Rot_nv "(0.3)
"turns to the blackboard and starts writing
- 08 Rot gu:t?
good
- 09 (1.6)
- 10 Nik NIK the (before superlative)
"-am-
"(XX)
- 11 (0.9)
- 12 MIC Mic_gz Nik "*palm-up(nik) ((exactly when Roth has finished writing))
->nik->
"-a-
- 13 Nik NIK Rot_gz Mic_gz Mic_hd the bravest
"*am *(0.3) "tapf (1.7) *er (0.3) sten.=
"*-A- (XX)
->nik-> *->blackboard->*
->blackboard->
"nod_____
- 14 Rot Rot_nv exactly
"=genau:?
"writing on BB
- 15 Rot Rot_nv the bravest
am tapfersten.
"writing on BB

- 16 NIK → tap(mic) "palm-up PNT(blackboard) -h
Nik "was bedeu-
- Rot_nv *(2.6)
*writing
on BB



Figure 29

- 17 Mic well done
MIC "-super gemacht -
"SUPER
- 18 NIK what's that
Nik "palm-up PNT(blackboard) -h
Nik_nv "was is da-
"shrug shoulders
- well
Rot so:?
(1.2)



Figure 30

- 19 NIK brave
Nik "-F-P-R- +(0.5) -h+
Mic_gz "-tapfer-
->blackboard
- 20 MIC a small thing
Mic_gz "... (PNT(blackboard))",,, PNT(blackboard)
"->nik->"
- 21 Nik what means brave
NIK °°was heisst "tapfer°°
"-T-F-T-A-P-F-R-
- This would be to the 7th
text
Rot das wäre zum
siebten text
etwas&
a small thing
Rot &kleines
gewesen,&
And now we have this
part
Rot &(0.6) und
jetzt haben
wir noch
diesen teil,&

22	NIK Nik	what does that mean "palm-up PNT(blackboard) "°°wa heisst da°°	maiana read Rot &maiana lies?
23	MIC Mic	(the bravest) "-R-S-T-N- -ta"pferst-	please don't (pl.) believe that if you do (pl.) you will Mai glaubt das bitte nicht sonst werdet euch& Mai &(xxxx)
24	Nik NIK	no what does brave mean °nein "was heisst tapfer=°° "PNT(blackboard)	Mai &(xxxx)&
25	Mic NIK Nik_hd	what is brave °was ist ta"pfer° "palm-up "nod	Mai &(xxxx)
26	Mic Mic_hd	oh °ah°& nod_____	exactly, here Rot genau HIER&
27	Mic	okay later &°okay später°	I would like Rot &(0.6) hätte ich gerne ((continuation))
28	MIC Nik_gz	wait *WARTEN *->blackboard->*	

Just previous to the excerpt, Micheli has summoned Jacob and Nikolas to actively participate in the classroom. Nikolas responds to this summons by bidding for a turn (l.03) when Roth announces the next adjective the students have to work on, namely *tapfer* ('brave'; l.01 and l.03). Nikolas provides the first form (*tapferer*, 'braver', l.06), followed by Roth's positive evaluation and writing the form on the blackboard (l.07-l.09). While she is still writing, Nikolas starts articulating the third adjectival form in an unvoiced manner (l.10), thereby already projecting that he will presumably provide also this form. Nevertheless, Micheli at l.12 points towards Nikolas and thereby mediates his participation by soliciting him to continue. When the answer is provided (l.13) and explicitly positively assessed (l.14), the teacher again turns towards the blackboard. In the meantime, Nikolas attempts to shift to a new participation framework with the teaching assistant by establishing reciprocity (cf. *tap*, l.16) and asking her the meaning of 'brave' (palm-up and pointing to blackboard, l.16). Nikolas' question is a construction making use of the palm-up sign for wh-questions, a pointing towards the blackboard, as well as mouth movements identifiable as *-was bedeu-* ('what signi-', l.16). Additionally, Nikolas frowns his eyebrows and thereby clearly enhances the interrogative character of this wh-question (Boyes Braem, 1990). The framework is successfully established through the tap and Micheli assesses Nikolas' previous answer (l.17; note that this doubled assessments constitutes the sequential *fingerprint* of the

integration classroom, cf. also excerpt 23) while Nikolas' question remains unaddressed. Nikolas reformulates his question by recycling the same manual resources (*palm-up, pointing*), but with two important modifications. First, the interrogative part ('what signif-') is changed into 'what is' (l.18). Second, as a means of localizing the word he does not know, Nikolas adds an unvoiced production of 'brave' and part of the word in fingerspelled letters (l.19). When Micheli does not display understanding of this turn either (preparing and aborting a pointing, l.20), Nikolas again provides some essential modifications. He first articulates *-was heisst-* ('what means') in an isolated manner and without any gesture or sign (l.21), he then goes on with the fingerspelling of the consonants of *-tapfer-* while the whole word is produced in a whispered manner (l.21), and finally he restates the interrogative part 'what means' in a whispered manner backed up by the manual resources palm-up and pointing (l.22). Micheli's response consists in the provision of the superlative form, but Nikolas does not orient to this as a being relevant for him as he restates the question a fourth time at line 24. This time, Nikolas explicitly disaligns from Micheli's answer, he further augments the volume of his voice while he reduces the manual resources (l.24). He points to the blackboard and pronounces *tapfer*; interestingly the two-syllable structure of the word is depicted through a double pointing in direction of the blackboard. Micheli then displays her understanding of this question by offering confirmation request (l.25) and then an explicit change-of-state token that closes the repair sequence (*-ah-*, Heritage, 1984b; cf. Golato & Betz, 2008 on *ach so* for the same function), but she requests Nikolas to wait (*WARTEN*) as she will explain it at a later moment. Thereby the teaching assistant orients to this lack of knowledge as not being necessary for the further plenary activity.

The second participation framework is in this case extended over a long time span and finally Micheli closes it down by deferring the clarification of the question to a later moment (similarly to excerpt 11). The example is significant for at least two important points. First, it provides a compelling illustration of how Nikolas designs the resources of his questions in response to the situated context of the interaction. In his re-doings of his questions addressed to Micheli, Nikolas enhances the spoken (language) resources by slightly raising the volume and by articulating the entire words (by contrast to l.16 where only part of the word is articulated, as it is usually done when German words are accompanying DSGS as mouthings, Boyes Braem, 2001). However, all these adaptations are done in a manner that does not disrupt the plenary activity. The instance therefore bears testimony of the student's situated and contextualized competence (e.g. Pekarek Doehler, 2006a), as the student deploys competence in interacting that is finely adapted to the local contingencies of the situation (i.e. the problem in intersubjectivity between him and Micheli, the activity in plenary as the main activity). Moreover, the instance illustrates that the students' competence for participating is not only depending on him as an individual. Instead, the student's deployed competence for participation is clearly intrinsically tied to the teaching assistant's (deployed) competence. In other words, the achievement of the clarification of the word *tapfer* is not just an issue of Nikolas' use of correct resources in absolute terms. By contrast, the resources must be fitted to the co-participants competence, and this fitting in turn is regularly the result of a local negotiation and adaptation of the participants within a given interaction (cf. chapter II,

section 3.3., e.g. Pekarek Doehler, 2006a for a discussion of a *collective* and a *contextualized* competence). It should be noted that in this specific case, the students' initiation of a parallel interaction for clarifying a word is not a necessary condition for him to remain involved in the achievement of the activity. This means, the initiation can be interpreted as an initiative for learning that arises out of the teaching situation. Maybe it is also this absence of immediate necessity of understanding the word that have blocked Micheli's understanding in what type of information Nikolas has been seeking.

Given these examples, this section has demonstrated in what manner the engagement of students and teaching assistants in a dual participation framework allows for dealing with the competing constraints. The student can make an effort in order to understand and follow the class and thereby display being a 'good student'. In the case of a dual participation framework, the student can at the same time open an assistance sequence with the teaching assistant. Hence, by engaging in a dual participation framework with the teaching assistant, the students can minimize the disruptions of the plenary and attempt to secure their understanding. Importantly however, subordinate interaction does not automatically imply non-disruptive interaction. The students have to make appropriate choices with regard to the moment *when* they initiate interaction, what resources they use for interacting with the teaching assistant, and how to design their question so as to clearly localize their understanding problem.

2.4.3. Discussion of progressivity and dual participation frameworks

In chapter IV I have outlined the notion of progressivity as Schegloff initially described it and how it has been further referred to in different studies. Fundamentally, progressivity is related to the principles of sequentiality and temporality. Different scholars focused on different levels of progressivity and while some were strictly speaking in terms of sequentiality and temporality, other used *progressivity* and *progression* similarly and referred also to disruptions of progressivity when an overall activity has been disrupted. This is the case for example of Keevallik (2012) who mentions breaks in the progression of dance as an activity. The heterogeneity of types of progressivity resonates also in Schegloff's (2006:77) subtitle of a publication's section: "*How to Deal with Trouble in Speaking, Hearing, or Understanding the Talk or Other Conduct such that the Interaction does not Freeze in Place; that Intersubjectivity is Maintained or Restored; and that the Turn, Sequence, and Activity can Progress to Possible Completion.*"

The fact that the students notably orient to the plenary activity as an activity that should not be interrupted may however also be understood as promoting the progressivity of the overall activity. *Activity progressivity* is not directly related to issues of sequentiality, but still it is tied to the fact that the main teacher is engaged in an unfolding activity that progresses towards a potential completion. The fact that progressivity of the plenary activity is not disrupted is not a mere result of the presence of the teaching assistant. Contrary to this, the *students actively promote and preserve the progressivity of the classroom activity*. This is observable in the fact that when the

students initiate interaction with the teaching assistant, they deploy practices that are minimally disruptive to the ongoing activity. This implies:

- The students regularly monitor the teaching assistant's conduct and initiate a sequence with an FPP when the teaching assistant is observably turning her upper body or her head to them (excerpts 9 and 10).
- When they initiate interaction with the teaching assistant in parallel to plenary interactions, the students opt for *silent* initiations: the use of hand waves or slight taps of the teaching assistant (excerpt 11). Regularly, students even initiate signing without having established mutual engagement before. In this case they recycle their turn beginning as soon as mutual gaze has been established. These silent initiations are in contrast with the use of vocal address terms that the students regularly deploy during desk interaction or when they solicit the teaching assistant during a transition between desk and plenary interaction.
- The students finely monitor also the teacher's conduct; they address FPPs to the teaching assistants when the main teacher's gaze is not directed to them (e.g. when the teacher is turned to the blackboard). Additionally, the students initiate sequences when the main teacher is in mid-turn (by contrast to TRPs).

Dual participation frameworks can be very short and consist of a minimal question-answer sequence initiated by student. In other instances, the basic question-answer sequence initiated by the student can be extended with several insert sequences when the student's problem at the origin of his initiation has not been solved. In these cases it appears that the negotiations by means of sole visual resources may be limited, partly as a consequence of the lack of shared sign language competence between the students and the teaching assistant(s). These cases are important because the data reveals that despite the fact that the subordinate interaction between the students and the teaching assistant does not impinge on the progressivity of the plenary activity, the dual participation frameworks can nevertheless not be extended over an unlimited timespan. At a certain point, the teaching assistant closes down the parallel interaction by explicitly requesting the student to wait, and by paying attention again to the plenary interaction in order to be able to further explain to the student what he has to do (see for example excerpts 12 and 39). The precise sequential embedding of these requests for interrupting the dual participation framework is noteworthy because they occur in when:

- The main teacher has either just previously gazed in direction of the teaching assistant (excerpt 11 and 39);
- The main teacher has flagged an important information of the procedural context by prosodic cues (volume, accentuation) (excerpt 12);
- The main teacher has flagged important information by means of a discourse marker *jetzt* ('now') or a deictic marker *hier* ('here') (excerpt 12).

This observation is important in two respects. First, it shows that the teaching assistant finely monitors the student and the teacher on the one hand, and that the main teacher monitors the

teaching assistant (and the students) on the other hand. Second, the teaching assistant's closing of the dual participation framework at these specific moments further establishes the plenary activity as the main activity (Koole, 2007).

3 Chapter summary

In this chapter I provided a description of the organization of the two different classrooms under study. This analysis aimed at an empirically based description of the setting and the participants by investigating whether the presence of a teaching assistant had actual consequences on how the classroom interaction unfolds. To show whether or not this is the case is an important part for the current investigation because it provides a basis for understanding the different issues that participants have to deal with when they are engaged in classroom interactions. Furthermore, this description provides insight into the complexity of the setting with regard to the students' possibilities and constraints for participation. Thereby, the findings of this chapter shed light not only on the competencies that are required from the students (and the teachers), but also on the competencies that these participants actually bring along.

The analyses clearly show that the students' participation in interaction is not merely determined by the setting (spatial arrangements, activities) and the participants' characteristics (hearing status, language competence, institutional roles). By contrast, different characteristics are relevant at different moments in interaction and participants make active use of these characteristics as resources for shaping their participation in a local and contingent manner. This means that, for instance, engaging in interaction with the teaching assistant is a *possibility* that is provided by the institutional setting (policy of accompanying the children with teaching assistants) - however, the effective engagement of such interaction is not automatic but it is tied to the local participation framework at stake and it is collaboratively negotiated. The chapter has shown that the students' engagement in different participation frameworks makes also relevant different ways of how they deal with the competing constraints. During desk interaction the hard-of-hearing students engage regularly in interaction with the teaching assistant, interrupting her in her activities in order to negotiate their own understanding problems. To a much lesser extent the HH students initiate a sequence with hearing teacher; the moment of these initiations are typically transitions between different activities, where their initiation is not disrupting an ongoing activity. During plenary interaction the hard-of-hearing students make apparent different forms of participation depending on whether they occupy the role of recipient or whether they have been other-selected by the teacher for contributing to the interaction as a speaker:

- As *recipients* in plenary interaction students regularly display their participation in the classroom in a manner that is similar to the members of the hearing community of practice. At occasions, the HH students initiate sequences with the teaching assistant in parallel to the plenary so as to clarify problems in understanding related to what is being explained or what is going on in plenary. This subordinate

interaction constitutes a specific opportunity for the HH students to favour both their understanding and the progression of the overall plenary activity.

- When the main teacher *other-selects* a hard-of-hearing student for responding to a question during the plenary interaction, issues of divergent orientations become relevant. In these moments, the students themselves work hard in orienting to a form of participation that is identical to that of the rest of the class, refraining from opening sequences with the teaching assistants (lack of repair initiation, absence of initiative to establish mutual gaze). By contrast, the teaching assistants embody their availability for interaction as soon as the student has been other-selected by the main teacher, and they finally open assistance sequences by helping the students out in dealing with displayed problems in responding. In these cases, the students appear to accept both the break of progressivity and the lack of understanding, somehow ‘waiting’ for (but not soliciting) the provision of a solution by the teaching assistant (or eventually the teacher).

It is important to note that through the students’ alignment to a regular participation in the classroom interaction, the ‘integration classroom’ is not made visible as a relevant entity. It may be assumed that such moments are of particular relevance as they demonstrate the students’ membership in the regular classroom, being an indicator of their socialization in the hearing community of practice (Lave & Wenger, 1991; Wenger, 1998). At the same time, their regular use of DSGS or interaction with the teaching assistant also indicates that they do not avoid being observable as being different from the rest of the class at any cost.

The students’ engagement in interaction with the teaching assistants during plenary (when not other-selected) constitutes the specific *fingerprint* of the ‘integration classroom’ on the interactional organization. This interactional organization provides important insights into the competencies that are required and deployed by the participants for participating in plenary interaction. When a participation framework is established in plenary, a *new participation framework* can be proposed and collaboratively established among the student and the teaching assistant. This framework is new in the sense that both participants change their status – the student shifts from recipient to potential speaker, and the teaching assistant from a recipient of the plenary to a recipient of the students’ initiation. However, this new participation framework is not removing the first one, reason for which we refer to these instances as a *dual participation framework*. These instances bear testimony to the students’ ability to monitor co-participants’ conducts as well as the competence for engaging in interactional in a silent and non-disturbing manner. Students monitor teacher and teaching assistant, perceiving bodily changes in their peripheral vision and taking advantage of assistants’ orientations towards them to initiate sequences in a smooth and silent manner. The dual participation framework can be short and successful, or it can be extended and finally stopped without having allowed the re-establishment of understanding.

Chapter VII – Dealing with progressivity I: Displaying understanding in response to first pair parts

The present chapter investigates the participants' management of progressivity by concentrating on the hard-of-hearing students' practices for participating under interactional pressure, i.e. when they have been other-selected by co-participants for providing a second pair part in response to a first pair part. The focus is put on the transition space between the co-participant's FPP and the student's expected SPP. Transition space is defined as "*the 'beat' that potentially follows the possible completion point of a turn.*" (Schegloff et al., 1977:366; cf. chapter I). This transition space constitutes a delicate sequential environment in consideration of the principle of progressivity: sequential progressivity is promoted when the next turn is occurring at the first possible completion of the prior turn and tied precisely to its transition relevance place (TRP). In the excerpt below, this is the case in line 06. By contrast, there is a break in progressivity when the responsive turn is not coming in a precision-timed manner, as it illustrated by lines 02 and 05 in the excerpt below.

Excerpt 13

Corpus SG, [JNV_IN_100614]

01	Rot	<i>which of the five tenses is that now</i> *welche dieser fünf zeiten ist das jetzt. *->blackboard->*
	Nik_gz	
02	(0.4)	
		<i>has beaten</i>
03	Rot	hat (.) geschlagen.
		*(3.2)
04	NIK	*brings hand to chin
		<i>perfect tense</i>
05	Nik	perfekt.
		<i>this is perfect tense right</i>
06	Rot	das ist perfekt jawoll.

Such breaks reflect that there is trouble with the provision of an answer, trouble that may be associated with a lack of hearing, understanding, or knowing the answer. In the case of the excerpt above, the student displays at line 04 that he has understood the question and, more precisely, that he is thinking of a response. Thereby the reason for the break in progressivity is made observable.

The attention to visual practices in interaction shows that when students encounter troubles with providing an SPP, they do not simply ‘not respond’. By contrast, they actively deploy interactional practices as a means of making mutually recognizable their epistemic and perceptual access or lack of access (i.e. (non-) understanding and (non-) knowledge). These displays potentially help in localizing and overcoming troubles in the progression of the interaction.

The analyses in this chapter aim at identifying and describing the practices the students deploy for promoting progressivity through precisely timed responses or for dealing with breaks of progressivity by means of displays of hearing/understanding the previous turn (i.e. epistemic and perceptual access the previous turn). Such a display is for example the hand to chin as in excerpt 13. To address this issue, this chapter proposes an examination of the following questions: (a) Do students promote progressivity by accomplishing second pair parts in a precision-timed manner? (b) How do students display their hearing and understanding of previous turns when they encounter troubles in providing a second pair part? (c) How do co-participants orient to those displays? (d) What interactional consequences arise from those practices? On the basis of these questions, this chapter unveils the students’ *practices for managing the interactional pressure and progressivity of interaction through displays of their epistemic and perceptual access to previous turns*. This in turn enables them to be offered specific remedial actions by their co-participants. On a more encompassing level, these practices are discussed as a means by students for portraying themselves as regular students and competent interactants.

The chapter is organized as follows. Section 1 briefly recalls the issue of participating under pressure at the completion of speakers’ first pair parts (question or request for action) and provides an overview of the number of adjacency pairs found in the corpus under study. Section 2 examines how students comply with progressivity in interaction in response to first pair parts, and the analysis demonstrates to what extent not only speech (section 2.1.) but also visual resources (sign, gesture) can be finely tuned to potential turn completions (section 2.2.). This section frames the subsequent analyses of inter-turn delays by demonstrating how precision timing may be conceived in a multimodal perspective. Section 3 then presents the students’ *practices for displaying understanding of the previous turn* as a means of managing impingements on sequential progressivity. Finally, section 4 provides a summary of the findings.

1 The issue of participating under pressure

When the hard-of-hearing student is other-selected for the accomplishment of an SPP, his participation status changes and he is held responsible for shifting from a status of addressed recipient to a status of speaker. More precisely, through a co-participant’s other-selection, the student is obliged to participate in a specific manner, namely by actively contributing an action to the ongoing interaction. Additionally, the action he has to perform is partially pre-specified through the first action type, its turn design as well as its content (cf. preference organization,

chapter III, section 2.2.). As a consequence of this, the issue for the selected participant is that he must fundamentally rely on his actual understanding of the talk in progress. However, it is important to emphasize that despite this constraint for participation, the normative organization of adjacency pairs does not force a student to answer a question, to accomplish a requested action or to provide requested information. He is constrained to provide *some* response – if the student does not provide any response, co-participants may hear this as being deviant and therefore sanctionable. Thus, the slot ensuing from a first pair part will necessarily be interpreted as being to some extent responsive to the FPP (*relevance rule*; Schegloff, 2007). As a result, when a participant is not responding in a precision-timed fashion or not responding at all, the pause occurring after the FPP is charged with significance and it has been suggested that co-participants attempt to interpret this pause on the basis of the sequential context, the local setting and identities at hand (Heritage, 1984a). In sum, what is at stake for interactants in general is that they have to understand FPPs, that they have to promote progressivity by providing SPPs in precisely-timed manner, and that their delays or absences of answers are oriented to as meaningful. One way of dealing with lacks of answers is to minimally indicate whether the problem is related to a trouble in hearing or understanding the question or knowing the answer. This may be of special relevance for hard-of-hearing students, whose hearing loss and status as language learners may induce participants to interpret lacks of answers as due to troubles in hearing or understanding.

The aim of this chapter is to provide an overview of how the HH students respond to questions. The following table is an overview of the number of adjacency pairs and the distribution of precision-timed and delayed answers or non-answer responses:

	Occurrences	%		Occurrences	%
Absences	93	20.2		93	20.2
SPP	295	64.1	Precision-timed	162	35.2
			Delayed	100	21.7
			Overlap	33	7.2
Non-answer responses	72	15.7	Precision-timed	43	9.3
			Delayed	26	5.7
			Overlap	3	0.7
Total FPPs	460	100		460	100

Table 13: Response types and turn-beginnings after FPPs

The types of adjacency pairs are question-answer sequences as well as requests for action and the respective accomplishment of action (cf. chapter V, section 4). It has to be noted, that the different action types (display questions, information requests, requests for action) put also different constraints and requirements on the accomplishment of relevant SPPs. Requests for action, for example, make primarily relevant that the participant understands the request itself and that he has the ability to execute the request. A relevant response to display questions, in contrast, requires

from the participants that they remember a piece of information, in addition to the required understanding of the question, of course. Such differences in requirements may have an effect on how well participants can manage relevant responses to different action types. It may be hypothesized for example that information requests are more easily responded to than display questions; which in turn could have an influence on the distribution of precision-timed responses and action type. However, the data under analysis did not reveal a clear tendency between precision timing and a specific type of adjacency pairs (e.g. suggesting that display questions are rarely delayed, while information requests are rather precision-timed). Thus, based on this observation, the adjacency pairs are discussed in this chapter without separating between action types.

The following sections show how students promote progressivity in response to first pair parts by providing answers and requested actions in a precision-timed manner. The analysis demonstrates to what extent not only speech but also visual resources (sign as verbal resource, gesture as non-verbal resource) can be finely tuned to potential turn completions, providing therefore for a reconsideration of precision timing within a holistic perspective on interaction that takes seriously the idea that not only vocal but also visual resources and, more importantly, also non-verbal resources contribute in an equal manner to the meaning-making in interaction.

2 Demonstrating understanding by means of precision-timed second pair parts

This section identifies the hard-of-hearing students' competence to precisely time their turn-beginnings to the TRPs of previous speaker's turn and to provide relevant responses. The focus is put on those moments where students comply entirely with the principle of progressivity. When students fine-tune their turn beginnings to the end of the preceding turn, they demonstrate their understanding of the turn completion and for this they potentially draw on prosodic, syntactic and pragmatic (Sacks, Schegloff & Jefferson, 1974) as well as gestural features (Ford, Fox & Thompson, 1996; cf. chapter III, section 2.1.). Demonstrating that the *action* of a turn has been understood however is only achieved through the unfolding responsive action.

The analyses of the data under scrutiny reveal two main types of precision timing. There is *vocal precision timing* (section 2.1.) that consists in a fine-tuning of the vocal speech turn to a TRP, and there is *visual precision timing* (section 2.2.). Visual precision timing can be divided into two sub-categories, the first one being precision timing of manual movements (section 2.2.1.), consisting in the fine-tuning of a preparation phase of a sign or a gesture to the TRP of a prior turn, and the second one being precision timing of other bodily-visual conducts (section 2.2.1.), consisting in the fine-tuning of other channels like head nods, head shakes or management of artifacts to a TRP. The specific organization as well as similarities and differences among these types are presented in what follows.

2.1 *Vocally precision-timed second pair parts*

The precision-timed relevant responses provided by the hard-of-hearing students (and accepted by the co-participants) consist of answers to display questions, responses to information requests, as well as confirmations of requests and accomplishments of requested actions. Students thereby participate in the interaction by satisfying the principle of simultaneously maintaining intersubjectivity and progressivity. At the same time, they portray themselves as competent conversationalists who are able to understand and accomplish actions in a normative way, including the dimension of timing.

Excerpt 14 demonstrates that the hard-of-hearing student Pashali is able to finely tune his vocal turn-beginnings of his SPPs (l.02, l.03) to the teacher's questions.

Excerpt 14

[PA_IN_100604_2eheure]

01	Fri		did you get a medal hast du eine medaille bekommen.
02	Pas	→	yes ja:.
03	Fri		where is it wo hast du sie.
04	Pas	→	at home zu Hause.

[Fri main teacher, Pas HI student]

The excerpt shows two instances of how the student Pashali promotes progressivity through precision timing of his responsive turns. The precision timing consists in the launching of the answer (SPP) at first possible completion of the FPP (l.01, l.03). There is no problem in understanding and therefore no insertion sequences are necessary. With respect to the demonstration of understanding, a difference appears between the sequence at lines 01-02 and at lines 03-04. The response to the polar question (l.01) demonstrates understanding of the TRP (cf. precision-timing) as well as of the type of answer it makes relevant (Y/N-answer). The understanding of the content however is not demonstrated but only claimed through a minimal confirmation. By contrast, the second FPP (l.03) makes relevant an answer that goes beyond (dis-)confirmation, and the answer (l.04) not only claims but also demonstrates Pashali's understanding of the action type and the content of the FPP.

This excerpt is an illustration of *vocal precision timing*, more precisely the fine-tuning of vocal resources of an SPP to the completion of an FPP. Such fine-tuned turn beginnings are regularly observable in the data under analysis – around one third of all provided SPPs are accomplished in

a vocally precisely timed manner (32.9%; 97 cases of 295 provided SPPs). This is an important observation for mainly two reasons. First, the great amount of precision-timed turns attests to the students' competence of monitoring turns in progress and of successfully projecting TRPs, as part of their interactional competence. Second, when students are able to subtly tie their turn-beginnings to the end of previous turns, this implies that when inter-turn pauses occur, they will have special interactional import. With respect to inter-turn pauses, Schegloff et al. (2002:6) state that "*the unmarked value of the transition space is one beat of silence*". In cases where this gap is extended, the principle of progressivity is compromised and the transition marked or "*import-laden*" (Schegloff et al.; cf. also chapter IV, section 5).

The hard-of-hearing participants under study are competent in a spoken and a signed language. Potentially, their actions in response to FPPs may therefore also be accomplished by means of sign language. Moreover, taking seriously the assumption that meaning-making in social interaction draws on a multitude of resources, also in spoken interaction, implies considering not only speech but also those actions as precision-timed that are not making use of the vocal tract but of other bodily movements. This is what I discuss in the next section.

2.2 Visually precision-timed second pair parts

2.2.1 Precision timing of the preparation phase of signs/gestures

Precision timing is not exclusively accomplished through straightforward vocal turn-beginnings as exposed in section 2.1. Participants can also fine-tune their turn beginnings by latching the *preparation phase* of an upcoming sign or gesture to the TRP of a previous turn.

Whereas gesture and signs can be differentiated with respect to conventionalization and grammatical structure, they share an important common feature that is relevant for the discussion of precision timing and interactional competence. As spatio-visual entities, gestures and signs both necessitate a *preparation phase*. The preparation phase for signs refers to the movement of the hands out of their *rest position* (e.g. Baker, 1977 for sign language or Kendon, 1980 for gesture) or *home position* (Sacks et al., 2002), while at the same time preparing the configuration of the hand(s) for the accomplishment of a specific linguistic sign or a gesture's stroke.

Participants to spoken interaction often make use of turn constructions in which vocal and visual resources are produced simultaneously. In terms of the respective coordination between these two modalities, it has been shown that the gestural part often anticipates the vocal part (Schegloff, 1984; Kendon, 1980). Excerpts 15 and 16 illustrate how students finely tune their visual turn beginnings to a TRP. In excerpt 15, Pashali responds to a display question through a hybrid turn⁸⁴,

⁸⁴ I do not refer to hybrid turns as described by Olsher (2004) and Mori & Hayashi (2006). Their examples consisted in turns composed of a vocal turn beginning that is completed with a gesture, therefore referring to a sequential combination of voice and gesture. I use the term 'hybrid turns' to refer to turns that are composed of vocal and gestural/sign production simultaneously. Some of the hybrid turns may be considered code-blends.

i.e. a turn consisting of a vocal and a visual part. The excerpt stems from a moment in the classroom where Pashali is reading a journal article projected on the wall by means of an overhead projector (l.01-05). During his reading, the main teacher Fritsche interrupts the activity and addresses a display question to Pashali (l.06), which he answers in vocally precision-timed manner (l.07).

Excerpt 15

Corpus SG, [PA_IN_100528_2eheure]⁸⁵

- 01 Pas the suspected people aged from twenty-five
Pas_gz *die verdächtigen im alter von >°fünf°undzwanzig&
->on the wall projected text->
- 02 Pas comma (three six; thirty) (..) and
&komma< (drei se(ch)s; dreizig) (0.3) und
- 03 forty-five years (0.4) would have (m)eanwhile
vierundfünfzig ja:hren (0.4) würden <(m)ittlerweile>
- 04 (0.2) arrested (0.4) communicated the pol(i)ce on
(0.2) FE:STgenommen. (0.4) teilte die pol(i)zei am
- 05 wednesday (.hh)
mittwoch mit, (.hh)
- 06 Fri pashali what means arrested
Pas_gz pas*hali was heisst festgenommen?
->fri->



Figure 31

- 07 Pas → to hold (someone)
PAS → *"(0.6) "FESThalten.=
Pas_gz → *"... "HH(halten) ,,,
->blackboard-fritsche->



Figure 32



⁸⁵ The main teacher is not in the camera angle; at the end of the excerpt however gestures were visible because he raises the arms and makes them observable in the recording.

08	Fri	yes =>ja.<	
09	(.)		
10	Fri	arrested huh like this. (0.6) handcuffs fe[stgenommen hä "so. [(0.6)	**handschellen. ⁸⁶
	FRI	"(crosses his hands)	",,,
	Pas_hd	[(slight nod)	[(slight nods)
	Pas_gz	*->blackboard->*	*->fri->>

[Fri main teacher, Pas HI student]

Pashali is reading aloud part of the article that is projected on the wall (l.01-05). At line 05, he produces a short inbreath (which is not audible but visible on the video) after a syntactically (but not prosodically marked) complete unit. Fritsche exploits this (syntactic) boundary and addresses a display question to Pashali (l.06). By using the address term *Pashali*, the teacher proposes a new participation framework where Pashali is the addressed person (instead of being the speaker addressing an audience). Following the address term, Pashali directs his gaze from the projected text to the teacher, who continues straightforwardly with his question. Precisely timed to the end of Fritsche's turn (*festgenommen*, l.06), Pashali starts the preparation of a manual sign by raising his hands out of rest position (l.07; figure 31) and bringing them in front of him at the height of his upper thorax. The final hand configuration consists in both hands depicting 'holding something' (figure 32).

Following the manual preparation phase, Pashali starts the vocal production of the German verb *festhalten*, backed up with a forward-backward shaking movement (l.07). Note that the beginning of the vocal part is also finely coordinated with the deployment of the sign (after the preparation phase). The German verb *festhalten* combined with a productive sign of 'holding someone' rephrases the initial verb *festgenommen* (past of *festnehmen*). By means of this reformulation of the initial verb *festnehmen*, Pashali's answer demonstrates his understanding of the question and of the lexical unit *festnehmen*. It is significant for the follow-up, however, that these verbs are not equivalent in their usage. *Festnehmen* specifically invokes the domain of police and stands for the action of arresting someone. In contrast to this, *festhalten* refers to 'holding someone' or 'retaining something'. Its usage is more expanded, applicable to persons, concrete and also abstract objects (e.g. holding a box or maintaining an idea). Fritsche first positively assesses Pashali's turn (l.08; qualifying the question as a display question), then he repeats the initial form *festgenommen*, and finally produces a gesture with a vocal deictic (*so*; l.10). He then expands on this with the noun *handschellen* ('handcuffs'). Through this turn Fritsche specifies the meaning of *festnehmen* by associating it to another referent of police reality.

⁸⁶ Note that the turn may be potentially complete after the crossing hands, but Fritsche adds the lexical affiliate by explicitly stating *handschellen* ('handcuffs'). As this expansion unfolds simultaneously to the retraction phase of the gesture I treat it as being part of the same turn.

All in all, this excerpt demonstrates the promotion of progressivity by the student and by the teacher. Pashali launches a response at the exact moment where the teacher's turn has reached its syntactic, pragmatic and prosodic completion. The accomplishment of Pashali's responsive action promotes progressivity through a precisely timed launching of the spatio-visual deployment of a sign that is then backed up with a vocal part. Precision timing may therefore be conceived as going beyond *vocal precision timing* by including *visual precision timing*. By means of this *visual precision timing*, Pashali exhibits his understanding of a TRP and of his status as an other-selected participant at first possible completion. The teacher additionally promotes progressivity and intersubjectivity by exploiting the third evaluative turn of Pashali's answer as an opportunity to further reformulate and specify the answer.

A further example of a similar visual precision timing is provided in excerpt 16. The fragment is taken from a moment where Jacob requests Micheli to explain an assignment. This assignment consists in reading a text and highlighting difficult words. During this explanation of the assignment, Micheli asks Jacob what 'to read' means by pointing to the assignment on a sheet (l.01). Jacob answers by subtly tying the preparation phase of the answering sign to the TRP of the question (l.02).

Excerpt 16

Corpus SG, [JNV_IN_100603]

01 Mic what means read
MIC was heisst *lies.
MIC PNT(sheet_jac)->*
Mic_gz jac->*
Jac_gz mic->* *->sheet->*

02 Jac → read (in german and swiss german sign language)
JAC → "(0.4) "*li*es,
Jac_gz → "... "*LESEN
Mic_gz *->mic->*
Mic_gz *->sheet->*



Figure 33

03 Mic read (in german and swiss german sign language)
MIC "(0.6) "*<l*ies,>
MIC "... "*LESEN
Mic_hd "nod
Jac_gz *->sheet->>
Mic_gz *->sheet->>
04 (0.6)

- 05 Jac the text
den text?
- 06 (0.3)
- 07 Mic where is the text?
wo ist der text?

[Mic teaching assistant, Jac HI student]

After the assistant's display question 'what means read' (l. 01), Jacob provides an answer by means of a simultaneous production of a sign and a word (l.02), which is further ratified by the teaching assistant by means of a response repeat (l.03; Koole, 2012a). With regard to the promotion of progressivity, the following observations can be made. Jacob straightforwardly moves his right hand out of home position where it was positioned at the end of Micheli's question. The very beginning of his hand movement comes without gap or overlap after the completion of Micheli's turn (l.02). This again demonstrates the student's ability to monitor ongoing turns and to recognize TRPs. This sign preparation (transcribed by means of three dots) extends over 0.4 seconds. The preparation is followed by the proper deployment of the sign *LESEN*, backed up with the onset of the German word *lies*. It is the specific turn design of this action that makes it recognizable as an answer and not a mere repetition: by blending the German word with the DSGS sign, Jacob provides like a simultaneous translation of the word. Moreover, this specific turn design enables Jacob to demonstrate his understanding. Jacob modifies the conventionalized sign *LESEN* by directing it to the assignment sheet instead of producing it in a neutral signing space, i.e. before his torso. This modification results in the proposition 'to read the sheet'. Thus, the simultaneous production of the conventionalized sign for 'read', combined with the relevant embedding of this sign in the material environment, contributes to an answer of the question that provides a clear demonstration of understanding. In other words, as Jacob's turn is not a mere vocal repetition of the verb but includes some modification, it not only claims but demonstrates that Jacob a) understood the question and b) knows the answer (cf. Sack's 1992 examples; cf. also part IV, chapter 4.1.), and more generally that he is able to accomplish relevant second pair parts that are further accepted by the teachers.

Both excerpts 15 and 16 provide examples of the students' fine-tuned coordination between the manual deployment of a sign and a vocal part of the turn. In both cases, the preparation phase of the sign precedes the speech whereas the lexical sign proper is deployed in synchronization with the accentuated syllables: *festnehmen* (excerpt 15, l.07) and *lies* (excerpt 16, l.02). Similar synchronizations have been described in spoken interaction where gesture and speech regularly exhibit an "on-stress" organization (Schegloff, 1984:275; Kendon, 1980; McNeill, 1985), which means that the stroke of the gesture is produced simultaneously with the stress of the talk⁸⁷. The

⁸⁷ Unlike Schegloff (1984:275) I do not consider the gesture as being "affiliated to the talk component on which the stress falls" but view those elements as forming a hybrid construction without ranking the resources in primary and secondary. Mondada (2005) observed retarding the vocal element in the turn as a way to synchronize it with a pointing gesture. Or the other way round: "(...) on ne peut que constater que le pointage commence un peu avant l'apparition du déictique et qu'il l'anticipe donc (...)." (ibid.: 100).

specific on-stress organization, which involves a coincidence between the stroke of the sign/gesture and the accentuation of the vocal part of the turn goes along with the fact that the preparation phase of the sign/gesture is produced in anticipation to the vocal resources.

It is worth noting that this is not exactly what Schegloff (ibid.) refers to by the anticipated deployment of iconic gestures before their *lexical affiliates* in the upcoming turn (cf. also Ehlich & Rehbein, 1982; Streeck, 1995). These pre-positionings of iconic gestures (e.g., manually depicting a round object) imply that a lexical affiliate (e.g., ‘football’) is part of the projection space “*at least as early as the thrust/acme or perhaps even the onset of the gesture selected or constructed by reference to it.*” (ibid.: 278). The interactional import of such anticipations lies in the fact that they bring into play a ‘word’ or an action before it (verbally) occurs, and they therefore foreshadow or project upcoming elements. In contrast to such cases, the preparation phases of *HALTEN* and of *LESEN* of the previously discussed excerpts display that the participants take a turn at talk, but they do not have (yet) enough projectional strength (Auer, 2005) to indicate the shape or the content of the upcoming turn or TCU.

In sum, the preparation phase of signs and gestures as exposed in excerpt 15 and 16 are considered in this study as finely tuned turn-beginnings even if the stroke of the gesture or the proper linguistic sign comes up later as well as the vocal part of the turn come later. Participants who precisely time the preparation phase to a TRP promote progressivity. Such preparation phases apparently resemble ‘pre-beginnings’, which are described by Schegloff (1996:92) as “*elements which project the onset of talk, or the beginning of a (next) TCU or turn, but are not yet proper recognizable beginnings*”. Among these pre-beginnings, Schegloff cites head and gaze reorientations to potential recipients, lip parting, inbreaths, and also preparation phases of gestures. As a physical preparation for the production of signs and gestures, preparation phases may best be compared to inbreaths in spoken interaction, which is a necessary preparation for speaking and therefore, at its basis, not interactional in nature. Schmitt & Deppermann (2010) for example state that it is only through its specific sequential position that inbreaths can become interactionally relevant, for example as summoning resources and a resource for projecting an upcoming turn (ibid.:350-351; see also Schegloff 1996:105). There is however one fundamental difference between inbreaths and manual preparation phases: inbreaths are necessary but not always audible, and they may be exaggerated and therefore exploited in the service of interaction. Preparation phases of signs and gestures by contrast are necessary and their production cannot be rendered invisible. This implies that co-participants have necessarily access to these preparation phases when mutual orientation is established. On the basis of this reflection, it may be difficult to argue that preparation phases are used as practices (such as inbreaths) as they may be more accurately described as a necessary physical conduct⁸⁸.

⁸⁸ This is in contrast with cases where at the end of a preparation phase the further deployment of the sign is withheld, resulting in a freezing of the hands for a moment, before the sign or gesture is finally deployed. In such a case however, it is not the preparation in itself but rather the management of the temporality of the unfolding gesture/sign that can be

Nevertheless, preparation phases of signs and gestures, even as obligatory conducts for the preparation of the turn-beginning, make mutually observable that the participant launches a turn and thereby promotes progressivity. Our discussion of precision timing as being promoted not only by vocal but also by visual conducts highlights the relevance of a holistic approach to talk in interaction. It is in line also with the coding scheme proposed by Stivers & Enfield (2010) who state that the preparation phase of a gesture that can be understood as the beginning of the response is coded as the *response onset*. Moreover, the demonstration of visual precision timing contributes to current discussions on the status of so-called *non-verbal pre-elements* and calls into question the relevance of a fundamentally syntactic view of turns at talk that considers e.g. hesitation markers ('euhs') or inbreaths ('.hh') as not making part of the proper turn (Hazel, Mortensen & Rasmussen, 2013).

2.2.2. Precision timing of practical actions and non-manual visual actions

Yet another type of *visual precision timing* is observable in responses that draw on bodily-visual resources other than manual gestures/signs. These responses differ from gestures and signs in their internal structure as their deployment cannot be broken down into a preparation phase, a stroke and a retraction phase. Schegloff (1987) provides an early example of actions that consist of an exclusive use of visual resources: in his account on sequence openings, Schegloff considered gaze reorientation by participant B as a response to a summons by participant A. While such non-verbal and non-vocal conducts can be considered as relevant *moves* that contribute to the sequence organization, Schegloff (1999:426) however states that it would be "*analytically ill-conceived*" to interpret such conducts as turns-at-talk. In the present study, I use the term *visual responses* to refer to types of responses that are cast in terms of:

- Head shakes, head nods, facial expressions as well as gazes that are oriented to by co-participants as recognizable contributions to the sequence at hand.
- Responses to requests for action, i.e. *practical actions*, to which co-participants orient as recognizable sequence-completing actions.

In principle, requests or orders make relevant a grant or a refusal. However, in requests for action explicit grants are regularly absent and it is the accomplishment of a requested action that is considered as implying a grant⁸⁹, as for example reading a sentence, passing the salt, or closing the door. It is crucial to note that the interpretation of actions as relevant nexts must be based on the co-participants' orientation to a next action as effectively accomplishing an SPP and closing the adjacency pair (or not). The task for participants who provide an SPP through a practical action

referred to as an interactional resource. For holds in gestures De Stefani (2005) observes for example that post-stroke holds are deployed as an overlap resolution device.

⁸⁹ In this study, I did not consider those SPPs whose appropriateness could not be analyzed by means of the next proof procedure, i.e. through the orientation of the recipient to the accomplished SPP. If a request consists for example in 'writing down number a', the gathered data only allows for stating if the participant starts writing down *something* or not. Whether or not he writes down the precise number however is not observable. Such examples have therefore been excluded from the collection.

consists in displaying in a recognizable manner that their conduct is in fact designed for responding to the previous FPP.

Instances of non-vocal responses constitute an important object of analysis with respect to the progressivity of interaction. In fact, these instances highlight that practical actions that constitute meaningful moves in a sequence are subtly tied to the TRPs of previous FPPs. Excerpt 17 is a case in point. During an explanation of a written assignment, Micheli addresses a question to Jacob which he responds to by grasping a relevant object in precision-timed manner (l.02).

Excerpt 17

Corpus SG, [JNV_IN_100603]

01	Mic		what is a high&
	Mic_gz	->jac->*	[was ist ein <leuch*t (0.3)&
	Jac_gz	->mic->*	*->desk->*
02	Mic	&lighter	
	Jac_nv →	&st*ift.>	st*(0.4) ((puts his hand in pencil case))+
	Mic_gz	*->desk->*	
03	Jac_gz	*(0.5)	
		->mic->	
04	Jac_gz	*(0.8)	
		->desk->	
05	Jac_gz	*(0.5)	
	Jac_nv →	*->mic->>	*shows a highlighter
06	Mic	a:*>ha.<	
	Mic_gz	*->jac->>	
07	(0.3)		
08	Mic	good	
		>gut.<	

[Mic teaching assistant, Jac HI student]

The teaching assistants' display question is cast in terms of a wh-question with a very neat pronunciation and reduced speech rate on *leuchtstift* (l.01). Jacob withdraws his gaze after the first part of the German compound (i.e. *leucht* of the compound *leucht-stift*), showing that his is able to project the completion of the question in progress. This projection is made possible by the fact that the word *leuchtstift* has already been brought into play previously by Jacob himself. After his gaze withdrawal (l.01), Jacob orients to his pencil case (l.02). When Jacob is directing his hand to the pencil case, Micheli joins his action by gazing in the direction of the desk and thereby monitoring Jacob's handling. The answer to Micheli's question could relevantly consist in a definition or a description, for example 'a color pen to highlight text'. Jacob in contrast makes use of the immediate material environment, which allows him to efficiently answer the question. He puts his

hand in his pencil box and takes out the highlighter (l.02-05). Micheli orients to this action as an appropriate response to her question, by confirming with *aha* at line 06 ('oh' with final falling intonation, described for German data as basically marking a problem solving, Imo, 2009), followed by a positive evaluation of it (l.08). As already observed in excerpt 3, Jacob is creatively exploiting physically present material as a resource for responding in a way that is further treated by the teaching assistant as being appropriate.

If we take the example of Jacob taking out his highlighter of his pencil case, it is mainly on the basis of its sequential placement that his action is presumably responding to the FPP. Additionally however, and maybe even more importantly, the action is also embedded in a context of continued mutual engagement and joint focus on the pencil case (cf. Jacob's changing glances to the desk and Micheli, l.03-l.05). In this sense, practical actions can be framed as SPPs just as gestures through the exploitation of sequence organization as well as the display of a specific participation framework and common focus of attention. With respect to gestures, Goodwin stated:

"(...) the relevant framework for the analysis of Chil's gesture is not his hand in isolation, or even the entire body of the party performing the gesture, but instead a multi-party participation framework organized so as to constitute a common focus of attention." (Goodwin, 2000: 89)

It is by means of these resources (sequentiality, mutual attention, joint focus), that a practical action can be meaningfully understood as a sequentially relevant (vs. a serial and random) action (cf. also Hougaard & Hougaard, 2009). Note that in this specific case, the responsive practical action even comes in short overlap with the FPP. Jacob's anticipated response attests to his understanding of the turn in progress and his ability to anticipate the approaching turn completion. If we consider Jacob's manual handling of the pencil case as the beginning of his response, his second pair part comes without any delay. In this sense, Jacob promotes progressivity through his early start of a response to the first pair part.

Further visual second pair parts in the data consist in head shakes and head nods or facial expressions alone. Head movements are frequently combined with minimal vocal turns (*yes*, *no*). However, the *dual participation frameworks* (i.e. assistance sequence in parallel to plenary activity), as exposed in chapter VI, make especially relevant the constitution of visual turns that are silent and do not disturb the ongoing plenary. In excerpt 18, both Nikolas and Jacob respond with a visual response that is precisely timed.

Excerpt 18a

Corpus SG, [JNV_IN_100624]

01	Mic	[((laughing))
02	Rot	now who can summarize that in two sentences [jetzt wer kann das in zwei sätzen zusammenfassen]

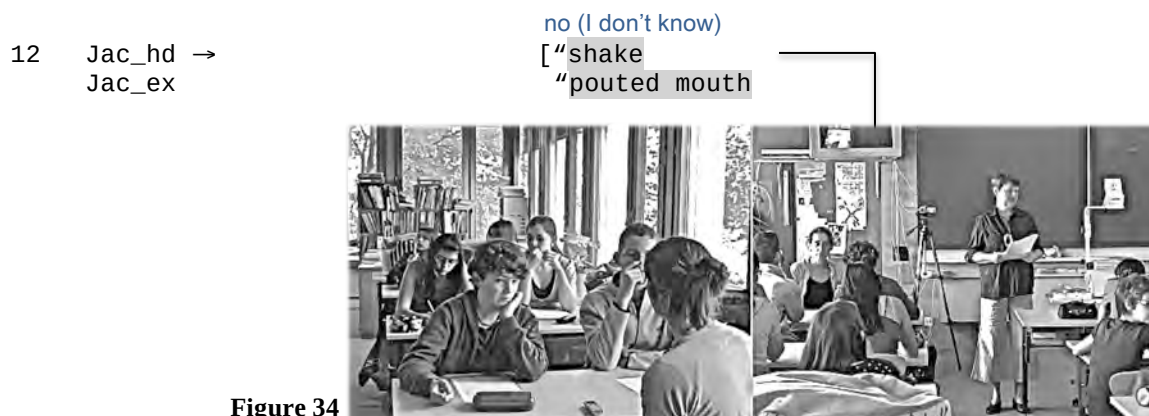
03		<i>what is written here as a short story</i> was hie:r (0.7) als kleine geschichte geschrie-	
04		<i>who has already heard about till owlglass</i> <u>wer</u> hat schon von till eulenspiegel gehört?	
05	(0.9)		
06	Rot	<i>yes</i> ja?	
07	(.)		
08	Rot	<i>how do we have to imagine this person</i> wie muss man sich diese person vorstellen.	
09	(0.7)		
10	MIC Mic	<i>have you ever heard of</i> "palm-up PNT(ear) "-hast du schon [einmal von&	<i>have you ever seen a picture</i> Rot (1.4) [hast du schon ein <u>bild</u> &
11	MIC Mic	<i>till owlglass</i> "PNT(sheet) "till eulenspiegel&	<i>of that silvia</i> Rot gesehen davon silvia.=
12	Mic Jac_hd Jac_ex	<i>(heard)</i> &gehö[rt=- ["shake "pouted mouth	<i>no</i> Sil [=nein. <i>no</i> Rot nein?=-
13	Nik_hd	<i>no</i> =shake	

[Rot main teacher, Mic teaching assistant, Jac HI student, Sil H student]

The segment stems from an activity in plenary. By means of a question addressed to the whole class, the main teacher Roth checks the knowledge about the protagonist of a future lecture, *Till Eulenspiegel* ('Till Owlglass', l.02-04). After several noticeable absences of a response (l.05, l.07 and l.09), the teaching assistant solicits Jacob and Nikolas (l.10) who are sitting in front of her in a non-disruptive manner for the plenary. For reasons of legibility, the adjacency pair between the teaching assistant and Jacob and Nikolas is represented in what follows without the simultaneous turns occurring in the plenary, but with specifications regarding the participants' gaze.

Excerpt 18b

10	MIC Mic Mic_gz	<i>have you ever heard of</i> "palm-up PNT(ear) **"-hast du schon einmal etwas *->nik->*	<i>"PNT(sheet)</i> *von "till *->sheet->
11	Mic Mic_gz	<i>till owlglass</i> &*eulenspie*gel gehö[rt=- *->jac->* *->nik->*	



- 13 Mic_gz no
Nik_hd → *->jac->*
=shake
- 14 Mic_gz no
Nik_hd *->nik->*
shake
- 15 Mic_ex *frown eyebrows
- 16 Nik_hd slight shake

[Rot main teacher, Mic teaching assistant, Jac HI student, Sil H student]

By means of a German but unvoiced turn, accompanied by pointing to her ear and then to the sheet, Micheli asks Jacob and Nikolas if they have ever heard of *till eulenspiegel* ('Till Owlglass'; l.10-11). Jacob responds in overlap with the end of this question by means of a visual turn: he shakes his head and pulls down the corners of his mouth (l.12; see also figure 34). The timing of Jacob's answer is noteworthy, as Jacob starts his responsive action exactly at a point where Micheli's question can be easily anticipated, namely after *eulenspiegel* (l.11). This is so because the content of *hören* ('hear') has already been 'brought into play' (Schegloff, 1984) by means of the anticipated pointing gesture to the ear, followed by a horizontal movement away from the ear⁹⁰ (l.10), despite the fact that on the level of German syntax, the turn only reaches its completion at the end of the verb *gehört* ('heard'; l.11; cf. also Schegloff, 1984 and Streeck, 1995 for gesture projection). Thereby, this example demonstrates Jacob's competence of taking into account the whole ecology of resources that his co-participants deploy, and furthermore it indicates how Jacob builds his own action on this interpretation.

Additionally, this example also highlights the specific challenges that are put on the participants when responsive actions consist of visual resources only. The transcription of the three participants' gaze behavior unveils that Micheli addresses the question to both of the students (despite the use of a second person singular reference in German). Hence, she has the task of monitoring both of them so as to capture their visual response. During her turn-beginning (l.10)

⁹⁰ This is an idiosyncratic version of *HOEREN*.

she gazes at Nikolas, and during the second part of her turn she gazes at Jacob and then again at Nikolas. When Jacob answers by shaking his head (l.12), Micheli is again gazing at Nikolas. Apparently perceiving Jacob's head movement in her peripheral vision, she redirects her gaze to Jacob (l.13), and at the same time it is Nikolas who responds with a head shake (l.13). This shake is presumably not seen by Micheli, and Nikolas repeats it when Micheli is gazing back at him (l.14). The teaching assistant's facial expression indicates some doubt about Nikolas' claim of absence of knowledge about the protagonist (l.15). Nikolas then repeats his embodied turn by again slightly shaking his head (l.16).

Visual resources are especially fruitful during dual participation frameworks (cf. chapter VI) as means of maintaining the students' involvement in the classroom interaction. However, the use of visual resources also puts specific constraints on the participants with respect to their monitoring activities. The fragment above demonstrates that the teaching assistant has to monitor two parallel participation frameworks as well as both students sitting in front of her and responding in a visual modality only. The students also have to finely monitor the teaching assistant's conducts so as to guarantee that their visual actions are perceived by her. In fact, providing visual responses requires the students' monitoring of the assistant's gaze behavior as a means of guaranteeing that she perceives the response – when she does not receive the response because she is not gazing at the student, from her perspective the sequence remains incomplete and progressivity (again, from her perspective) is broken. In excerpt 18, Nikolas manages this constraint in a competent manner, by prolonging his head shake (l.13-14) up to the moment where mutual gaze is established between him and Micheli⁹¹. For all participants, therefore, fine monitoring of several participants and participation frameworks is of crucial importance for the management of progressivity.

2.3 Summary

In the present section we have been concerned with the question whether the hard-of-hearing students are able to promote progressivity by responding to first pair parts in a precision-timed manner. The analyses of several excerpts stemming from a larger collection have demonstrated that students regularly provide SPPs without any gaps that would break sequential progressivity of interaction. This finding holds on condition that the analysis is based on a holistic approach to social interaction, taking into account all embodied resources that participants draw upon beyond speech.

The section began with the illustration of *vocal precision timing*, showing that the student's answer is finely tuned to the TRP of the previous question or request, orienting therefore to its syntactic, prosodic and pragmatic completion. The remainder of the section provided evidence for the fact that not only vocal but also visually-deployed actions are subtly tied to potential completion points. Excerpts 15 and 16 demonstrated the form that this visual precision timing

⁹¹ The excerpt thereby also pinpoints the previously stated difficulty of managing a participation framework evolving in parallel to an ongoing plenary (part VI).

takes when the response is designed in terms of symbolic resources based on hand movements (signs, gestures). The particularity of hand movements is that they can be segmented because they are sequentially organized in the preparation phase, the stroke and the retraction phase. While the stroke is often seen as the unit gesture/sign, its preparation is a necessary part of it, and it is this preparation of the manual movement that is launched at the TRP. The analyses have shown that beyond this precision timing of the preparation phase, also the signs/gestures and the vocal part of the turn are coordinated with each other. Excerpts 17 and 18 show other *visual responses* than manual gestures and signs that can be precision-timed. Excerpt 17 has demonstrated the precision timing of a practical action and how its recognizability as implementing an SPP is sustained by the student's gaze. Excerpt 18 has shown how movements or facial expressions are precision-timed. Additionally, the example highlights that the students not only use a diversity of semiotic resources but also that they attend to actions as being built of resources "*that mutually elaborate each other to create a whole that is not only greater than, but different from, any of its component parts.*" (Goodwin, 2010:94).

The analysis of the two different types of precision-timing, vocal and visual precision timing, provides compelling evidence for the students' orientation to and promotion of progressivity in interaction. This ability for precision timing is part of the students' interactional competence (Gardner, 2004; Carroll, 2000; Sacks et al., 1974), and more specifically their 'turn-taking competence' (Schegloff, 1999). This competence lies in finely monitoring the turns-in-progress as well as projecting current speaker's upcoming turn completions on the basis of their understanding of syntactic, pragmatic, prosodic as well as gestural features (Ford, Fox & Thompson, 1996; Ford & Thompson, 1996). At the same time, the examples discussed provide evidence for the fact that students promote progressivity while tacitly reaffirming intersubjectivity by responding not only with precision timing but also by providing answers which are highly fitted – they are type-fitted, type-conforming, and provided by the selected speaker (Stivers, 2010).

The analyses have demonstrated the importance of a conception of precision timing from a holistic perspective on social interaction, taking seriously the assumption that speech and verbal conducts more generally (i.e. also sign language) should not be prioritized over conducts making use of other non-verbal resources. Such a focus allows for observing fine-tuning in turn beginnings through preparation phases of sign and gesture as well as in practical responsive actions. Thus, despite the fact that preparation phases are not part of the proper verbal part of the sign, their deployment is an indication of the students' ability for precision-timing.

In fact, preparation phases of signs and gestures are recognizable launchings of a response. Likewise, practical actions as well as specific head movements or mouth configuration do not only foreshadow an answer but implement in themselves the second pair part, thus *next one due* is recognizably under way, in progress, even if there is no audible response. It is on the basis of this argument that these responses are precision-timed answers to the first pair parts, and that there is

no gap between the FPP and the SPP. In the table below, the different types of visually precision-timed second pair parts are illustrated:

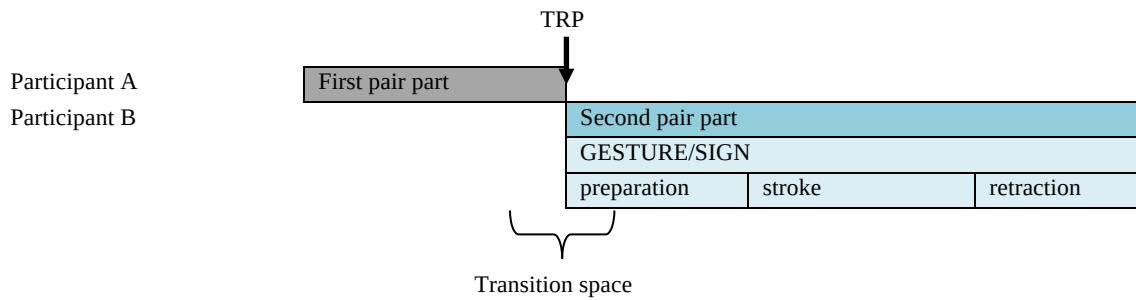


Figure 35: Gesture/sign implements the second pair part

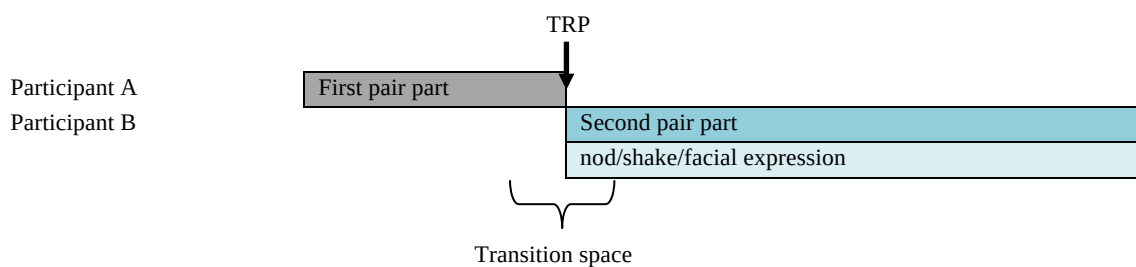


Figure 36: Non-manual bodily resource implements the second pair part

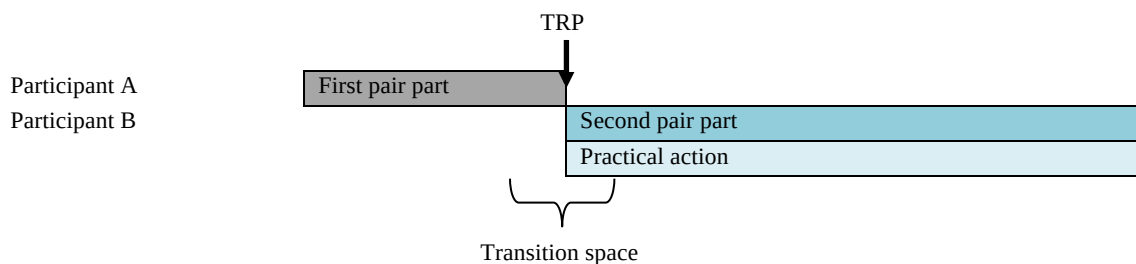


Figure 37: A practical action implements the second pair part

The table below illustrates in a detailed manner the timing of the turn-beginnings of the SPPs provided by the HH students.

Turn-beginning of SPP	Occurrences	%
Vocal precision-timed	97	32.9
Visual precision-timed	65	22.0
Delayed	100	33.9
Overlap	33	11.2
	295	100

Table 14

As the table shows, a large amount of SPPs is delayed. In what follows, delayed and absent answers are put under more scrutiny. This examination aims at demonstrating to what phenomena these delays are related.

3 Displaying understanding of the prior turn while indicating trouble with providing the second pair part

When participants fail to launch a relevant next action in a straightforward manner, sequential progressivity is not entirely promoted⁹². This absence of relevant next action can be the absence of any recognizable action, as in the example below:

Excerpt 19

Corpus SG, [JNV_IN_100614]

01	Rot	the last one die letzte?= (1.8) ← Pause past perfect <plu(s)quam>perfekt.= ← SPP
02		
03	Jac	

During the question of participant Roth, participant Jac gazes at him. At the TRP (after *letzte*), a *pause* of 1.4 seconds occurs; during this pause, participants gaze at each other, but no recognizable action that implements a response to Roth is in progress. The answer is coming in line 03 by means of head shake, it is delayed by the pause between the FPP and the SPP. This contrasts with the cases discussed in section 2, where visual turns or visual part of turns (gesture, sign, head nod, practical action) that implemented the SPP are precisely timed to the completion of the FPP and where no *pause* or delay occurs. Sequence progressivity is also compromised when the SPP-speaker launches a response with pre-beginning elements such as hesitation markers, as they do not properly implement the FPP (inter-turn delay).

Excerpt 20

Corpus SG, [JNV_IN_100614]

01	Rot	who still knows that wer weiss das noch martin. ← FPP
02	Mar	erm well (xx) that it not (.) that it is not severe anymore (xxx) äh aso: (xx) dass es nicht me:hr (.) dass es nicht streng ist (xxx) ← Hesitation marker - SPP

⁹² I am only concerned with the turn beginning and its fine-tuning to the previous TRP. We do not consider here delays on the turn level, for example displacing the refusal of an offer at the end of a turn or non-contiguous turns.

In both cases the time span between the end of the FPP and the SPP compromises sequence progressivity. In this section and in the example quoted above, progressivity is effectively halted and a delay is occurring, because the next one due is not recognizably in under way⁹³.

The management of halts of progressivity, or in other words instances where the next one due is not produced directly, is an important interactional issue for participants (cf. e.g. Gardner, 2007; Schegloff et al., 2002). The reason for this is that the halting of progressivity gives rise to a co-participant's search for reasons for the absence of a straightforward response (cf. chapter IV, section 5.2., as well as chapter VII, section 1). In what follows I show that this challenge is met by the students by means of the deployment of practices that indicate their epistemic and perceptual access to the prior turn, i.e. the students display if the just prior turn has been heard/understood or not. These displays are precisely timed to the completion of the FPPs. Note that in contrast to what has been observed in section 2 (preparation phase of signs and gestures, visual responses), these displays do *not* implement an answer to a question or the requested action.

Therefore, this section is dedicated to the *practices the students deploy for displaying their understanding of a previous first pair part in a precision-timed manner*. The focus is put on those instances where sequence progressivity is compromised because the next one due is momentarily lacking (as in excerpt 19). Concretely speaking, a first pair part is followed by either a delayed second pair part or by an absence of the second pair part. The analyses reveal that the practices for displaying understanding of a previous turn are put in the service of embodying a forward-orientation during breaks of progressivity, i.e. participants do not make relevant a reformulation of a prior turn. In section 3.1. I present those practices that are used as what I refer to as visual pre-beginnings, i.e. gaze withdrawals (and stagings of thinking) or bodily reorientations that are displaying understanding of the prior turn and that are foreshadowing an upcoming SPP. Section 3.2. is dedicated to an analysis of the same visual practices but when they are not followed by an SPP.

3.1 Delayed second pair parts after exposed displays of understanding

The study unveils three major practices by means of which students display their understanding of the prior turn and thereby make mutually accountable troubles in providing an answer after an SPP, i.e. breaks in sequence progressivity. The first practice, very rare, consists in a *vocal hesitation marker* that occurs between the end of the FPP and the beginning of the SPP. Such hesitation markers function as pre-starts (Sacks et al., 1974) and, by projecting an upcoming responsive turn, they display understanding of the prior turn. Whereas the hearing students in my data regularly use such *vocal pre-beginnings* (cf. also examples in Fasel Lauzon & Pochon-Berger, 2010; also hard-of-hearing adults in Skelt, 2006), these are very rarely produced by the hard-of-

⁹³ I consider those delays as verbal delays (i.e. linguistic material is produced with a delay).

hearing students. Because of their low frequency, I will not further discuss them. The second practice and the third practice in contrast are *visual pre-beginnings* (cf. also *gestural pre-beginnings*, Gülich & Mondada, 2008) and are frequently used by the hard-of-hearing participants. The second practice consists in the students' gaze withdrawal from their co-participants and staging of thinking precisely timed to the completions of FPPs (section 3.1.1.). The third practice can be described as bodily reorientations by participants to relevant material, again precisely timed to the completions of FPPs (section 3.1.2.).

This section identifies and describes the practices that hard-of-hearing students deploy as a means for exhibiting a *forward-orientation* during halts of progressivity that occur between the FPP of a teacher or a classmate and the provision of the SPP by the student. This implies that students make mutually recognizable that the reason for the lack of a straightforward SPP is not related to a problem in understanding the immediately prior turn, and that therefore a recycling (repetition or reformulation) of the FPP is not necessary. In these cases, participants make use of specific gaze directions and bodily conducts as a means of (a) displaying understanding of the current state of talk, (b) displaying engagement and participation, and (c) projecting an imminent turn-start, while at the same time delaying the SPP as there is no recognizable action (vocal or visual) that accomplishes the SPP of the adjacency pair.

3.1.1. Visual pre-beginnings I: Gaze withdrawals and staging of thinking

A recurrent practice for displaying perceptual and epistemic access to a previous FPP while indicating trouble in providing the SPP consists in participant's gaze withdrawal from his co-participant at a TRP, accompanied with a *staging* of thinking. By means of this practice, participants exhibit that they are engaged in a process of thinking in view of providing the SPP. In this sense, they make observable a forward-orientation during a halt of progressivity. Importantly, this process of thinking is displayed, or *staged*. *Staging* has been chosen as a translation for Schmitt's (2003) notion of *Inszenieren*, an interactional practice that consists in acting a cognitive or emotional state for the resolution of specific interactional tasks. Participants may stage surprise, indignation or thinking. On the basis of these procedures they can for example weaken a reproach or disagree with a co-participant (Schmitt, 2003), or they can make recognizable the activity of a word search (Goodwin & Goodwin, 1986; Goodwin, 1987⁹⁴).

With respect to the precise design of *staging of thinking*, Schmitt (2005a) shows how film students use a 'thinking pose' (*Denkerpose*) in lieu of a relevant next action and thereby design an absence of answer. The thinking pose is composed of a gaze directed slightly downward, the hand touching the chin and the head slightly put on the hand. It exhibits that the SPP made relevant through the FPP is 'cognitively in progress' (*kognitiv in Arbeit*; Schmitt, 2003:194). Goodwin (1987) has

⁹⁴ Goodwin (1987) distinguishes between self-directed and other-directed word searches. When gazing at another participant during word search, the search "*becomes formulated as a social activity*" (ibid.:118) while gazing away and thinking face are formulated as 'self-directed'.

described the ‘thinking face’ as consisting in a “*out of focus ‘middle-distance’ look*” (ibid.117). It is worth mentioning that *stagings* are different from the expression of emotional stance because they are selected and used at specific sequential moments as a means of solving specific interactional tasks. However, it is a delicate methodological issue to determine whether these *stagings* are conducts or practices, because the limits between both may be very fuzzy. Nevertheless, Schmitt proposes that it is exactly this fuzziness that may be exploited by conversationalists:

“Inszenierungen greifen auf das gleiche Repertoire von Ausdrucksmitteln zurück, und die Identität der Mittel für den rhetorischen und nichtrhetorischen Einsatz gehört zur Funktionalität des Inszenierens: Inszenierungen leben davon, dass es einen fließenden Übergang zwischen dem einfachen Ausdruck und dem funktionalen Einsatz der Demonstration und manifesten Symbolisierung innerer Zustände mit dem gleichen Repertoire an Mitteln gibt.” (Schmitt, 2003:205)⁹⁵

The exploitation of this ‘fuzziness’ will be put into sharper focus in section 3.1.2.

In addition to the reported thinking faces, other resources such as *body torque* (Schegloff, 1998) or gestures can be used to back up the staging of thinking. In excerpt 21 below, several resources are used as a means of displaying a self-directed process of thinking (Goodwin, 1987:118), i.e. a word search that does not invite other participants to launch in the search. The fragment stems from an activity between the teaching assistant Micheli and Jacob. Simultaneously to an ongoing exercise correction in the plenum, Micheli asks Jacob to state what solution he wrote down (01). The exercise consisted in choosing some adjectives from a text (1st step) and to write down the comparative (2nd step) and superlative forms (3rd step). Apparently, Jacob has not done this exercise yet and tries to find out the comparative and superlative forms during the current interaction. At lines 18-19 Jacob visibly displays that he has understood the question and that he thinks of an answer by means of a specific gaze conduct, before he finally provides the answer. For reasons of legibility, only the interaction between Micheli and Jacob is reproduced in the following excerpt.

Excerpt 21

Corpus SG, [JNV_IN_100624]

		what adjectives do you have
01	Mic	"°welche adjektive °*hast du (x)°
	MIC	"EINS_____°wh-question PNT(sheet_mic)
	Mic_gz	->sheet(jac)->*
	Jac_gz	->his pens *->mic->*

⁹⁵ “Stagings rest on the same range of resources, and the identity of the means for rhetorical and non-rhetorical use is part of the very functionality of stagings: stagings depend on the fuzzy boundaries between mere expression and the functional use of the demonstration and the manifest symbolization of internal conditions with the same range of resources.” (my translation).

02 MIC *Jac_gz* "(0.7)
 "*PNT(sheet_jac)
 ->sheet_mic->

03 Mic *Jac_gz* anyone of these
 "°irgendein (von dies) *(x)°
 "*palm-up_circling on jacob's sheet
 ->sheet_jac-> *->mic->*

04 *Jac_gz* *(1.0)
 ->pens->

05 Mic *Jac_gz* which adjective
 "°(xxx) "(welches adjektiv)°
 "PNT(sheet_jac) "*wh-question
 ->sheet_jac->

06 (.)

07 Jac *JAC* loud
 "°>laut.<°
 "PNT(sheet_jac)

08 *Jac_gz* okay
 ->mic->sheet->
 Mic "okay (.) "(xx)
 Mic_hd "nod
 MIC "PNT(sheet_jac)

09 *Jac_nv* *(3.0)
 *writing

10 *Jac_gz* *(0.7)
 ->mic->

11 Mic *MIC Mic_gz* and now once again
 "°und jetzt noch[mal]°
 "*palm to torso, depict a movement from the torso away
 ->jac->

12 Jac quiet
 [°leise°

13 Mic *Mic_hd* no
 "°mh_m.°
 "shake

14 Jac loud
 °laut.°

15 Mic *MIC Mic_gz* loud and more
 °laut, "*(0.3) "und noch *mehr?°
 "°... (PLUS) "PLUS
 ->hands-> *->jac*

16 MIC "(0.5)
 "palm-down in front of chest

- 17 Mic loud
Jac °la[ut-°
 [-a-
- 18 Jac_gz → *(0.7)
 *->his left side
- 19 JAC *(1.9)
Jac → "-L- -A-
 "-l-



Figure 38

- 20 Jac loud (with non-standard ending)
JAC "°lau (..) >TEN.<
Jac_gz "°-L- -h_____ -N-
 ->mic->
- 21 Mic_hd yes
Mic_gz *nod
 *->sheet(jac)->>
- 22 Jac_gz *(5.2)
Jac_nv "°->sheet->>
 "((jacob is writing))+

[Mic teaching assistant, Jac HI student]

After some negotiations regarding the mutual engagement between Micheli and Jacob (l.01-05), Jacob cites the adjective he decided to work on, *laut* ('loud', l.07; 1st step). After ratification (l.08), Micheli further tries to elicit the comparative form (*jetzt nochmal*, 'once again', l.11), accompanied with her left hand/arm depicting a further step. The use of 'once again' refers to the three-step procedure of providing neutral, comparative and superlative form of adjectives. Jacob responds to this in overlap with an unexpected SPP (cf. negative evaluation, l.13) that consists of the antonym of the adjective loud (l.12). Micheli further tries to elicit a response (l.15-17) through different vocal and visual recyclings. Finally, at lines 17-19, Jacob does not provide a further response but operates a staging of thinking. He does this by means of a bundle of serially and simultaneously deployed resources. First, he launches the production of an unvoiced -a- (l.17), and then, while maintaining this mouthed -a-, he withdraws his gaze to the left upper side, gazing away from Micheli (l.18). Finally, he produces a fingerspelled L and A as well as a mouthed -l-, while still gazing to his left (l.19; see figure 38). During the deployment of these resources, Micheli gazes at Jacob but she does not intervene with an assistance turn that would provide him with further hints or with a repetition of the question turn. This absence of further help by Micheli suggests that she does not interpret Jacob's absence of answer as being related to a problem in

epistemic or perceptual access to her prior question. This interpretation is further corroborated by Jacob's next action, which is the provision of an answer at line 20⁹⁶.

All in all, Jacob first displays that he understands the turn to be complete by withdrawing his gaze in the transition space, i.e. precisely timed to the end of *laut* (l.18). The systematic gaze withdrawal at these sequential positions has also been observed e.g. by Kendon (1967), Psathas (1990b) and Skelt (2006). Gaze withdrawal can occur simultaneously with the launching of a verbal response (in which case it has sometimes been interpreted as tied to a cognitive planning, Kendon, 1967), but, interestingly, it may also be present when a pause between the current and next speakers' turns occur (Psathas, 1990b). In this case, it displays that the TRP has been recognized and the prior turn understood (by contrast to a repair initiation). Hence, by breaking mutual gaze with Micheli, by refraining from initiating repair sequence and by staging thinking, Jacob claims understanding of the question. This interpretation is observable in the fact that Micheli does not treat Jacob's lack of answer as being related to a problem in epistemic or perceptual access to the previous turn. The diversity of resources used by Jacob for staging thinking is significant. It is not only through gaze, but also through mouthings and fingerspelling that Jacob indicates his attempt to provide an answer. By means of all these resources, Jacob designs the delay between the FPP and a potential SPP in such a way so as to exhibit a clear forward-orientation. Concretely speaking, sequence progressivity is halted because the next one due, the SPP that should be provided by Jacob, is lacking. By means of the staging of thinking however, Jacob makes mutually recognizable that the lack of response is not engendered by a problem in understanding the just previous turn. Therefore, Jacob does not display that a revision of the prior turn would be necessary.

A further example that demonstrates the student's practice of staging thinking as a means of dealing with a break in progressivity in the transition space is provided in excerpt 21. It comes from a grammar exercise in the plenum where students have to denote the grammatical cases in sentences that are projected on the wall by means of an overhead projector. The procedural format consists in three steps: the students have to read a statement (1st step; *der esel pries das pferd glücklich*, 'the donkey called the horse lucky'), and then transform it into a question (2nd step; *wen oder was pries der esel glücklich?*, 'who or what did the donkey call happy') so as to determine the grammatical cases (3rd step; *das pferd*, 'the horse'). Previously to the segment below, Nikolas struggled with the formulation of the question (2nd step) and finally another student sitting in the back of the classroom has accomplished the 2nd step. The excerpt starts when Nikolas has to repeat this 2nd step provided by another student. The staging of thinking occurs at line 08, consisting again in gazing away from the participants and a mouthing.

⁹⁶ Note that Jacob's answer consists of a low voiced *lauten* ('louder' with a non-standard ending) and is backed up with fingerspelled letters *L* and *N*. At the beginning of this answer, Jacob returns his gaze to the teaching assistant Micheli. It can be noted that the teaching assistant orients to Jacob's second pair part as a relevant and appropriate next. In a normative perspective, however, the appropriate answer would be *lauter* ('louder') and Jacob's answer is therefore erroneous.

Excerpt 21

Corpus SG, [JNV_IN_100506]

- 01 Nik *who or what called*
 Nik_gz wen oder was "(0.3) "*pries (0.9)
 Mic_gz ->blackboard->*
 Rot_hd *->blackboard->*
 Rot_gz "*nod
 ->nik->
- 02 Mic *the donkey*
 MIC "°°°der esel°°=
 Mic_gz "*palm-up
 ->nik->
- 03 Nik *the donkey*
 Nik_gz =*der e:s*el.
 Mic_gz *->rot->*
 ->blackboard->
- 04 (0.2)
- 05 Rot *exactly who or what called the donkey and*
 Nik_gz °genau° we:n oder was pries der esel.
 ->roth->



Figure 39

- 06 Rot *and now what kind of grammatical case do you have here*
 Mic_gz .h und jetzt hast du was für einen *fall hier?
 ->nik->
- 07 Nik_gz *(1.6)
 ->blackboard->



Figure 40

08 Nik_gz → *(1.2)
 Nik → *->left side->*

09 Nik accusative
 Nik_gz *akkusativ.=
 ->rot->

10 Rot very good
 Mic_gz *=sehr gut.
 ->rot->



Figure 41

[Roth main teacher, Nik HI student]

Nikolas' repetition is ratified by Roth's positive assessment including another repetition of the right 'question' (l.05). Through an expansion, the teacher continues and asks Nikolas what grammatical case it is (l.06)⁹⁷. Nikolas' answer to this display question (cf. evaluation l.10) comes with a delay (l.09) but this delay is made mutually recognizable as a self-directed process of thinking (i.e. does not invite a teaching assistant for launching in; cf. Goodwin, 1987). First, Nikolas breaks mutual gaze with the teacher precisely timed to the TRP at the end of *hier* (l.06, 'here'). Simultaneously to this, his whole body is swinging with the swivel chair, aligning his upper torso and head towards the blackboard in front of the class (l.07, compare figures 39 and 40). This repositioning marks the closure of the engagement with the student in Nikolas' back and establishes a renewed home position (Sacks & Schegloff, 2002[1975]; Schegloff, 1998), displaying engagement in a course of action that implies himself, Roth and the material on the overhead projector. Ensuing this orientation to relevant material, held for 1.6 seconds (l.07), Nikolas stages thinking by means of several resources. He changes his gaze direction by withdrawing it to his left side and looking out of the windows (l.08, figure 41). This is backed up by a mouth movement resembling either swallowing or an unvoiced *-am-*. As in other stagings of thinking, Nikolas' bodily configuration is noteworthy. He accomplishes a body torque, consisting in "divergent orientations of the body sectors above and below the neck and waist, respectively." (Schegloff, 1998:536; cf. also Kendon, 1990 on o-space). More precisely, while his head and gaze are oriented to his left side, the torso remains stably oriented toward the front of the class. Through this, Nikolas displays or claims "involvement in, and articulation or management of, more than

⁹⁷ During this question, the teacher is approaching the overhead projector but we do not have any visual access to a potential pointing that would accompany a local deictic the teacher uses. Though, given the fact that deictic particles are regularly used to direct co-participants attention to gesture (cf. Streeck, 1995), it may be assumed that Roth is in fact pointing to a specific locus on the overhead projector.

one course-of-action or activity at the same time” (ibid: 544), namely involvement in a self-directed activity of thinking and a simultaneous orientation to the exercise at hand with Roth⁹⁸.

Nikolas’ staging of thinking extends over 1.2 seconds and is resumed by his redirection of gaze and upper body towards Roth while providing the (relevant and expected) answer (l.09). Again, the absence of any remedial action by the co-participants (l.07-08) suggests that they understand the momentary absence of Nikolas’ answer as not being related to a problem in epistemic or perceptual access to a previous turn, otherwise a reformulation or repetition would possibly occur. Additionally, Nikolas does not invite co-participation as his staging of thinking is at no point backed up by a gaze towards the teacher (cf. Goodwin, 1987). This interpretation is then supported by Nikolas’ ensuing action, namely the provision of the answer, which demonstrates that Nikolas did hear and understand the question.

In the excerpts above, students gazed at their left side and accompanied this gaze aversion with further mouth and/or manual movements (fingerspelling). However, the staging of thinking is not necessarily accompanied by a specific facial or bodily conduct, but can be displayed by a mere gaze aversion. Most fundamentally it is by means of a mutual elaboration of gaze conduct and its sequential position that this gaze is framed as staging thinking⁹⁹. Previous research on word searches, where the focus has been on staging of thinking during turns in progress (and not in *transition space*), Sacks et al. (1974:705f.) have shown that features such as cut-offs or vowel lengthening additionally framed the activity as a word search. However, in the aforementioned excerpts, it is a combination of gaze withdrawal, the vocal silence and the sequential position (after FPPs) that contributes to the construction of the practice ‘staging of thinking’ (similar to Schmitt, 2005a). A question that emerges is whether instances of mere gaze withdrawals and instances as the examples quoted above (gaze withdrawal with unvoiced mouth configuration) should be considered as being part of the same collection (and practice), or by contrast two different collections. For the moment, these instances are part of one collection, but when the collection is extended it may well be that differences appear between the specific contexts where gaze withdrawal occur rather with lip partings or rather with hands to the chin.

3.1.2. Visual pre-beginnings II: Bodily reorientations to relevant artifacts

In the data under analysis, the most frequently deployed practice for displaying understanding of a previous turn consists in reorientations of body posture and/or gaze to books, sheets, or other material that may be relevant for the provision of the FPP. I refer to these practices as *bodily reorientations* in pre-beginning position. For example, when a student is requested to read a

⁹⁸ *Body torques* are characterized by their instability because torso and head are directed to different direction. This is reported to be a position that is not held over a long time, but rather making relevant a subsequent resolution of the torque for either aligning torso to the head orientation, or the other way round, aligning head and gaze to the torso.

⁹⁹ On the one hand my data is in line with Argyle & Cook who state that “[a]version of gaze can act as a more or less deliberate signal that a person is thinking.” (1976:122). On the other hand, the sequential position of these gaze aversions are an important part of the action.

paragraph (FPP), he must accomplish a preparatory orientation of his gaze (and probably upper body) to the book or sheet he has to read. This movement is a necessary precondition for the accomplishment of the task. At the same time, by means of such a conduct the participant also indicates that he understood the previous turn to some extent, namely at least the TRP and the request for action ‘to read’ (but he could for instance read an inappropriate text). Furthermore, such a reorientation at the completion of an FPP suggests that progressivity is promoted because the participant exhibits a forward-orientation, a preparation of the next action due, in contrast to the initiation of an insert sequence for example.

Similarly to what has been stated about the preparation phases of gestures and signs (section 3.1.1.), such bodily reorientations basically are *necessary conducts* for the accomplishment of practical actions. Nevertheless, participants can actively exploit reorientations towards relevant artifacts as a resource for interaction. This is the case when participants perform such reorientations at TRPs and in preparation of a relevant SPP despite the fact that for example consultation of a book is not required for the provision of the SPP.

A compelling case of a *necessary bodily reorientation* is provided in excerpt 22. The fragment stems from an activity where Pashali is reading a journal article that is projected on the wall by an overhead projector. At the moment of the fragment, the main teacher Fritsche has temporally stopped the reading in order to clarify the German term *Inkassobüro* (‘debt collection agency’). At the end of his explanation, the previous participation framework including Pashali as the main speaker (reader) and the rest of the class as an audience has to be re-established. While during the explanation sequence Pashali gazes in direction of the main teacher, the re-launching of the reading requires that Pashali re-orient his upper body and his gaze from the teacher towards the text that is projected on the wall (l.11-12).

Excerpt 22

Corpus SG, [PA_IN_100528_2eheure]

01	Fri	and such debt collection agencies make a lot of money und solche inkassofirmen die machen gro:sses geld
02		by putting people under pressure indem sie eben leute unter druck setzen, (0.9)
03		legally putting under pressure normally well simply lega:l unter druck setzen normalerweise, (0.8) also einfach
04		with reminders with fines and mit mahnungen, (0.5) mit strafgebühren °und
05		so on so weiter.°
06	Fri_nv	“(1.2) “approaching the overhead projector->”

- 07 Fri and they have now gone a little bit too far
 08 &und die haben's jetzt ein bisschen "zu weit
 getrieben&
 FRI "takes pen on
 overhead projector and puts it on the projected sheet->"
- 09 Fri as it seems
 Fri_nv &"so wie's aussieht?
 "moving back from the OP->"
- 10 (.)
- 11 Fri we continue reading (.) pashali
 FRI lesen wir weiter? *(.) "pashali."
 Pas_nv → *... PNT(pas)
 Fri_nv "starts leaning forward->"
 "stops moving back"

Figure 42



Figure 43



- 12 (0.7)
- 13 Pas with the car they scare the woman and retained her during the night
 mit dem auto (0.2) <verschrecken> (°x°) sie die frau:
 14 (0.3) hielten sie über nacht fest ((continuation of
 reading))

[Fri main teacher, Pas HI student]

At line 05, Fritsche reaches a potential end of his explanation, indicated by a pragmatic, sentential and prosodic completion. Following this, he links back to the reading by two means. First, he starts moving from the wall to the overhead projector where the text is (l.06), and expands his vocal turn by means of a comment (l.07-08) in which he refers back to the protagonists of the lecture with a demonstrative (*die haben's*). By means of these resources, Fritsche links back to the

reading and proposes to close the explanation activity. Additionally, Fritsche puts a pen on the projected sheet (l.08), thereby localizing (approximatively) where the reading in the text continues (cf. shadow of the pen on the projected sheet). Fritsche then again moves back from the overhead projector in direction of the wall (l.09) and during this slow stepping back he makes a request to continue the reading (l.11). This request ending in *weiter* with raising final intonation is a potentially complete turn, but at this point neither Pashali nor any other student of the class has been explicitly entitled to continue the reading. Latched to the first TRP of his request, Fritsche then moves his right hand out of rest position and thereby projects the production of a gesture. He prepares a pointing directed to Pashali, which is “*bringing into play*” (Schegloff, 1984; Streeck, 2009) a verbal explicit allocation of the turn (the continuation of the reading) to him (l.11; see also figure 42). Interestingly, a close look at Pashali’s bodily conducts reveals that he understands the “*bringing into play*” of a turn allocation by Fritsche’s pointing gesture. Even before Fritsche produces the explicit address term *Pashali*, the student already starts leaning forward and orients his gaze to the projected sheet on the wall (l.11; see picture 43). The reorientation in this specific sequential positioning is significant as it displays that Pashali anticipates his selection by the teacher as well as the action he is requested to accomplish. Even more importantly, through Pashali’s deployment of this specific reorientation, the following pause of 0.7 seconds is not interpreted as exhibiting a problem in responding but rather as a search for the relevant location where the reading has to be continued (cf. l.12, absence of teacher’s remedial activity) (cf. also Psathas, 1990b). All in all, Pashali displays understanding first through the bodily orientation to material that is effectively relevant for the accomplishment of the requested action, and second through the absence of repair initiation (Schegloff, 1982).

The delay between the teacher’s request at line 11 and Pashali’s SPP at line 13 constitutes a pause where no action is under way that completes the adjacency pair in its own right (in contrast to preparation of signs and gestures that are inherently part of the element that completes the sequence, section 2.1.). In a lot of cases, students are obliged to re-orient themselves (posture, gaze) or co-present material in order to provide a relevant response to a teacher’s FPP. They may have to read an answer, an assignment, help themselves with re-reading the question, etc. In all of these cases, as illustrated in excerpt 22, there is a vocal pause (no speech) as well as a verbal pause (no action that could accomplish itself the sequence), but this does by no means imply that there is a mere ‘blank’ (cf. also Psathas, 1990b; Schmitt, 2005a). Pashali’s orientation to the wall projection is a preparation activity, required for the very accomplishment of the requested action. Based on this assumption, the reorientation cannot be interpreted as a practice (i.e. form, resource, turn design, turn feature; cf. chapter III, section, 1.2.) or as a pre-beginning, similarly as the preparation phase of sign/gesture cannot be said to be a practice but a natural necessary condition for the accomplishment of a gesture, cf. section 2.2.1.). Moreover, such bodily reorientations in pre-beginning position cannot be considered as actual impingements on the sequential progressivity since they are necessary for the accomplishment of the SPP. Consequently, based on the fact that these reorientations are necessary they may be better described as conducts, which are

directly contributing to the sense-making process, rather than practices. However, in many cases the bodily reorientations seem to be locally exploited by the participants as a means of displaying their understanding of the prior turn and hence, an incipient turn beginning. Note that the question whether e.g. an exercise book *must* be consulted or not as a means of responding to an FPP is often out of the researcher or co-participant's scope. Hence, in some cases, the necessity for reorientations in pre-beginning position can be empirically neither confirmed nor refuted. This is the case in excerpt 23 that comes from a plenary activity where the students provide answers to display questions of the teacher. In a first step, students have to put an indicative statement (written on their sheet) into several different tenses while the main teacher writes those at the blackboard. In a second step, students have to name each tense written on the blackboard. In the example below, Jacob is other-selected by the teacher for providing the tense of a form written on the blackboard (l.01; written on the blackboard: *sie hatten kinder gehabt*, 'they have had children'). At the TRP of the teacher's question, Jacob orients to his sheet (l.04) and thereby indicates that he understands that he is other-selected for the following tense.

Excerpt 23

Corpus SG, [JNV_IN_100614]

01	Rot Jac_gz	and jacob *und (.) jacob? *blackboard->*
02	Jac_nv	*(0.5) *sitting up+
03	Rot	the last one die letzte?= *(1.8)
04	Jac_gz Kar_nv	→ =*>his paper->* *orienting her body towards jacob
05	Jac Jac_gz	past perfect → <plu(s)quam>perf*ekt.= *>rot
06	Rot	very good =<sehr gut.>
07		+(5.5) ((roth is writing on the black board))+
08	Rot	so so
09		(1.0)
10	Rot Kar_hd	right now we have here richtig. also wir haben jetzt *(0.3)& *nod

11	Kar	good -gu[t-
12	Rot	two times the same order [&zwei mal (0.3) die selbe reihenfolge, <i>[Rot main teacher, Kar teaching assistant, Jac HI student]</i>

After the other-selection by means of an address term, Jacob reseats himself in his chair, thereby displaying the hearing/recognition of his name and his attention (establishing mutual engagement) (l.02). This type of postural positioning can be seen as an initial *gestural pre-beginning* (Gülich & Mondada, 2008). Then, the teacher indicates which verbal form Jacob has to determine (l.03, ‘the last one’). Latched to the end of Roth’s turn, Jacob turns his gaze from Roth or from the blackboard to his sheet (l.04). This finely tuned gaze redirection to a relevant artifact demonstrates his understanding of both the TRP and the FPP. Jacob’s orientation to the sheet is however in contrast to the other students’ conduct, who remained oriented to the blackboard and did not consult their sheets or workbooks. This is in line with the fact that within the procedural context introducing the exercise, the main teacher stated that the class had not yet solved this exercise. A reason for Jacob’s reorientation might be that he has done this exercise in advance with the teaching assistant (within the *bimodal class*) or that he is reading the word *plusquamperfekt* as a support for articulating this rather complicated word. Evidence for this latter interpretation may lie in Jacob’s slow and broken pronunciation of the response turn. This remains however speculative, as we have access neither to the sheet, nor to the lesson where this sheet may have been discussed already.

In any case, the teacher does not orient to Jacob’s delay as problematic even if, in contrast to the previous excerpt 22 (l.12, 0.7 seconds), the pause between the FPP and SPP is rather long (l.04; 1.8 seconds). The absence of any remedial action by the teacher attests to her interpretation of the pause as not displaying an understanding problem of the previous action. Moreover, the teaching assistant’s conduct during this activity reinforces this interpretation. Karpf’s bodily reorganization shows her engagement in the activity, her availability for Jacob in case of problems, but she also refrains from providing a revision of the request (l.04). In sum this means that not only Roth but also Karpf let pass 1.8 seconds without turning this delay into an absence of response by providing Jacob with *remedial activities* (Jefferson, 1989:170), such as a reformulation of the request. After a pause of 1.8 seconds where teacher and assistant wait for Jacob’s response, the latter finally provides an answer at line 05 and redirects his gaze to the teacher. This answer demonstrates (and not only claims) understanding of the previous question and it exhibits at the same time knowledge of the German verbal tense (cf. positive evaluation of both the teacher in line 06 and the teaching assistant in line 11).

It has to be noted that excerpts 22 and 23 are fundamentally distinct regarding the scope of the action that is made relevant through the FPP. In excerpt 22 the FPP is a request for the accomplishment of a practical action (i.e. reading) that requires the student to understand the FPP (and of course to be able to read). Excerpt 23 by contrast is a request for determining a tense, and

therefore it makes not only relevant the understanding of the FPP but also knowing the answer. This entails that in excerpt 23 the delay between the FPP and the SPP can display a process of thinking, re-calling knowledge of a specific piece of information (here the tense of a verb), but the same does not hold for excerpt 22.

As mentioned earlier, there are other cases where students deploy bodily reorientations to material in pre-beginning position even if such a reorientation is not a requirement for the accomplishment of an SPP. Such clear cases occur for example when the FPP consists of a question that requires the student's free imagination. The specific interactional task that participants accomplish by means of such reorientations is displaying understanding of the previous turn and managing a break in progressivity by indicating a forward-orientation. In the excerpt below, Pashali has to imagine and write down a story about a kidnapping. Pashali's story tells how the parents of his protagonist, Daniel, have been kidnapped during the Sri Lankan civil war. The teaching assistant is sitting beside him and mediates the activity by asking for the further step in the story ('what happened next'). During this activity, Pashali and Micheli established a working procedure that consists in Pashali's proposition of some content of the story, followed by Micheli's ratification or refusal of the proposition, and finally Pashali's writing of the proposed or negotiated part of the story. Previous to the excerpt, Micheli asked who Daniel is giving money to and Pashali answered that Daniel gives the money (the ransom) to the war. This is where excerpt 24a begins. At line 8, Pashali looks at his sheet despite the fact that the answer is not written there but must be invented by him.

Excerpt 24a

Corpus SG, [PA_IN_100528_2eheure]

01	Mic	you cannot give money to the war the war is not a person du kannst dem krieg kein geld geben der krieg ist
02	Mic	"keine person.
	Mic_hd	"shake
	Mic_gz	->direction pas->* ((only head direction is clearly observable))
	Pas_gz	->mic->*
		*(3.2)
03	Pas_gz	*->sheet->*
		you must give it to a person
04	Mic	du musst es der- >einer< person geben.=
	Pas_gz	((uncertain))
		yes
05	Pas	=ja.
	Pas_gz	((uncertain))
06		(.)
		so which person does he give it to
07	Mic	also <u>welcher</u> person gibt °er das.°

08 Pas_gz → *(3.9)
 ->sheet->

09 Pas give money to a man
 Pas_gz *ein mann (geld geben.)
 ->mic->

10 (0.7)

11 Mic okay
 okay?

12 Pas_nv *(1.5)
 *reseating himself and starts writing

13 Mic the chief
 dem chef.

14 (0.4)

15 Mic of the kidnappers
 von den entführern.

[Mic teaching assistant, Pas HI student]

The excerpt begins with Micheli's refusal of a previous proposal made by Pashali (l.01-02). Finely tuned to the completion point of this refusal, Pashali reorients his gaze to his sheet (l.03) and finally Micheli provides a hint by saying that one should give the money to a person. After this, Micheli redoes her question, based on the previous negotiation of the fact that Daniel must give the money to a person (l.07). This question again addresses the further development of the story and its answer is therefore not written in Pashali's notebook yet. However, Pashali designs the delay between the question at line 07 and his answer at line 09 in a way that suggests that the answer is trackable in the exercise book. While it is evident for all participants (and the analyst) that the answer to Micheli's question is not accessible in the workbook, Pashali's orientation to it enables him to show that despite an absence of response, he is engaged in the activity. In a similar context, such orientations to material have been described as displaying limited availability for providing a response (Schmitt, 2005a). As this excerpt as well as the example discussed by Schmitt (ibid.) show, participants do not orient to such limited availability as displays of non-participation. They do neither repeat their questions nor do they sanction the lack of answer, e.g. through 'I asked you something'. By contrast, they adopt a 'waiting position' for a (limited) lapse of time. An important feature that contributes to the meaning-making of such orientations as displays of participation and engagement (by contrast to non-participation) is that it is embedded in a moment where Pashali is unambiguously the addressed participant.

Through Pashali's gaze withdrawal at relevant moments, namely at TRPs of Micheli's turns, he displays understanding on the level of turn construction and he also claims understanding of the preceding action (i.e. absence of repair initiation). Additionally, through the absence of any repair

initiation, both participants orient to the progressivity of interaction and do not explicitly negotiate a possible problem in understanding.

Bodily reorientations in pre-beginning position such as those described in this section can be characterized as a practice that is similar to the [a]-face described by Streeck & Hartge (1992). The [a]-face is a facial configuration that stages the articulation of the vowel 'a', without however being produced with voice. Conversationists of Ilokano (a language spoken on the Philippines) rely on this facial configuration as a resource for displaying their imminent turn launching in transition spaces. Just as with the bodily reorientations described below, the [a]-face is physically necessary and "natural" conduct when it is followed by a turn-start that consists in a first vowel 'a'. However, participants make use of this facial configuration also in cases where the vocal turn does not start with an 'a'. Based on this, the authors describe the [a]-face as a "*unit on the borderline between 'natural symptom' and formulaic display.*" (1992:147). The phenomenon described by Streeck & Hartge is nevertheless slightly different because in contrary to bodily reorientations to material in pre-beginning positions, participants can state retrospectively if the [a]-face could have been an actual physical preparation of the ensuing vocal start. This is not possible for the prefatory reorientations. However, even if the vocal part starts effectively with the vowel 'a', this does not methodologically grant that the previous [a]-face has not been exploited as a resource. Such an argumentation would have to be grounded in the precise sequential context, namely with respect to the interactional tasks that may be at hand, and cannot be limited to the observation of the isolated phenomenon.

Interestingly, it may well be that it is exactly this vagueness between what is a necessary conduct and what is a practice for addressing specific interactional tasks, that can be and is methodically exploited by participants as a way of displaying their understanding of the FPP, while the SPPs are deferred to a later moment (or absent).

The practices described in section 3.1., gaze withdrawals and stagings of thinking (section 3.1.1.) as well as bodily reorientation to relevant material (section 3.1.2.) do not accomplish the SPP. This contrasts with the cases discussed in section 2, i.e. the signs/gestures (including their preparation phases), the practical actions as well as the visual non-manual actions (e.g. head nod, head shake, facial expression), which have been shown to accomplish in themselves the SPP that has been made relevant by the FPP. This accomplishment is warranted by the *next turn proof procedure*, showing that co-participants orient to them as appropriately completing the adjacency pair.

Nevertheless, the practices described in section 3.1. are deployed for all practical purposes, and more specifically for the purpose of handling the interactional pressure ensuing FPPs. By means of these practices, students manage breaks in sequential progressivity when they have been other-selected for the accomplishment of an SPP but display troubles in doing so. Practically, students rely on visual practices for indicating their understanding of the just prior turn. By means of such

displays, the participants make mutually understandable that the break in progressivity is not due to a problem with the prior turn. In the excerpts quoted so far, these displays of understanding have further been followed by demonstrations of understanding to the extent that an SPP has been provided and accepted by the co-participants, thereby warranting that the delay was not related to a problem in accessing the prior turn.

Gaze withdrawals, staging thinking, and bodily reorientations at TRPs after FPPs may be exploited in pre-beginning position in Schegloff's sense (1996) as a way of announcing the "*onset of talk*" (cf. also Psathas, 1990b) – when and if this onset actually occurs however is uncertain at this point. In section 3.1. I have shown that the visual pre-beginnings are followed by an action that confirms the students' understanding of the question (his displays prove to be demonstrations). In section 3.2. I focus on some cases where the same displays of understanding functioning as pre-beginnings are finally not followed by an answer of the potential next speaker but by a re-doing of the FPP by the co-participant. This analysis further warrants the fact that the students' visual pre-beginnings are displaying understanding and implementing a forward-orientation, since the interactional consequences, i.e. the co-participants remedial activities, orient to them as such.

3.2 Absent second pair parts after displays of understanding

So far I have shown that different spatio-visual practices can be relied upon by the students for displaying their understanding in response to an FPP with precision-timing, while at the same time delaying the upcoming SPP. In this section, I focus on those cases where the students use the same visual practices, but where they finally do not provide an SPP and where finally the teacher (i.e. the FPP-speaker) proposes a remedial activity. The import of this analysis is that it provides support, on the basis of the next turn proof procedure in three steps, for the fact that the students' visual practices are also effectively oriented to by co-participants as displaying understanding of prior turns. Concretely, the addressed questions are: How do co-participants orient to the students' absences of SPPs and, in turn, to the students' practices for managing these breaks in progressivity? What further interactional consequences arise from those practices? The analyses in this section demonstrate that the teachers effectively interpret the students' visual practices as displays of epistemic and perceptual access to the FPP. In particular, the excerpts bear witness to the fact that co-participants align their remedial actions to the students' forward-oriented practices of managing progressivity since their further actions are rather new FPPs than recyclings of the initial FPPs.

In section 3.2.1. one case is discussed where the absence of answer is followed by the provision of further information that may potentially help the student in providing a relevant SPP and therefore carrying forward the achievement of the activity. In section 3.2.2. the teacher meets the student's lack of answer by providing him with a localization of relevant information, and in section 3.2.3. with an exemplification. In none of the cases does the teacher recycle his initial FPP.

3.2.1. Interactional consequences I: Providing different information

When students do not provide the SPP but they displayed understanding of the FPP by means of gaze withdrawals, thinking faces or bodily reorientations, teachers propose remedial actions that are designed for helping the student to provide the SPP. Remedial actions can, for example, consist in the provision of procedural information that is necessary for the accomplishment of the task. This is illustrated in the excerpt below (which is a partial repetition of excerpt 7 from chapter VI).

Excerpt 24b

Corpus SG, [JNV_IN_100506]

06	Rot Nor_gz	'amongst the enemies' you have to specify <unter die feinde> musst du bestimme*n. *->blackboard->*
07		(3.0)
08	Nor Nor	*(2.2) *lip parting
09		(3.4)
10	Nor_ex	*(1.6) *corners of mouth down / smiling
11		(1.1)
12	Mic Nor_gz	→ (nora) how do you have to ask ...WAVE *WAVE(nor) "FRAGEN palm-up "°wie musst du fragen.° *->mic->*
13	Nor NOR Nor_gz	(yes) (xxx) "(-ja-) (-xxx-) "palm-up *->blackboard->*
14		(0.4)
15	NOR	*(1.5) *scratches her ear->>
16	Nor Nor_gz	but where am I -aber wo bin *ich- *->mic->>

Against the background of the previous analyses of the students' displays of understanding by means of gaze withdrawals and thinking faces, Nora displays understanding of the teacher's request (l.06) at lines 07 to line 10. The way how Micheli orients to the absence of answer shows that she interprets the absence effectively as being related to a procedural problem and not a problem in accessing the request: after a long lack of answer, the teaching assistant breaks the pause and proposes a remedial action by means of a question (l.12). It is noteworthy that on the formal level this question does not recycle Roth's FPP (l.06) but it makes explicit the intermediate

step that students have to carry out for the accomplishment of the requested action (the provision of the grammatical case of *unter die feinde*). As the excerpt further reveals, Micheli's assistance is actually not fitted to the problem that Nora appears to encounter (l.13 and l.16). Nevertheless, both Nora and Micheli make observable that (at least) an understanding problem of the prior turn is excluded as a diagnosis.

3.2.2. *Interactional consequences II: Localization of relevant information*

A similar case is evident in excerpt 25, stemming from a similar activity but involving the student Nikolas. The remedial action in this example consists of the teacher's localization of an information that is relevant for the accomplishment of the exercise, and thus for the SPP. The activity occurs at the end of the lesson when students had time to solve the exercise individually. Roth starts the discussion of the solutions (the formulated questions) even though not all students are finished yet¹⁰⁰.

Excerpt 25

Corpus SG, [JNV_IN_100506]

- 01 Rot right nikolas
*<richtig?> nikol*as?
 Nik_gz *->rot->* *->BB->*
- 02 (.)
- 03 Rot are you ready
 Nik_gz bist du schon *so weit.
->sheet->
- 04 Nik no not yet
 NIK >nei no(ch) "ni(cht.)<=
"PNT(sheet)
- 05 Rot not yet
=noch [nicht?]
 Mic but you can do i
 MIC [*°aber du kannst es&
*PNT(blackboard)



Figure 44

¹⁰⁰ Jonas, a student of the class, has been other-selected by Roth and responded to the request to give the solution with an account that he has not finished yet. Roth refused this account and requested him to do the exercise online in the classroom.

06 Mic *here*
 &[*hier* machen.°
can you try it is the
 Rot [kannst du's versuchen, (0.6) s'geht um das
very last namely 'his destiny'
 07 allerletzte nämlich seine*m schicksal.
Nik_gz *>book
 08 *Nik_gz* *(0.7)
NIK *book -> *
 *PNT(book)
 09 *Mic_nv* → *(0.6)
NIK *[orienting to nikolas
 [,,, ,
 10 *NIK* *(0.9)
Mic_nv [*palm-up
 [pulls nikolas' white-out away

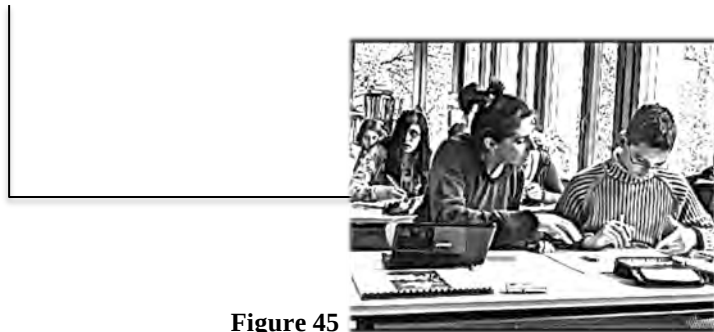


Figure 45

11 *MIC* → *how do you have to formulate the question*
Rot [PNT(book_nikolas)->
 [wie musst du fragen.
 12 *Nik_gz* *(4.0)
Mic_gz *book
 *PNT(book_nikolas)-> *
 13 *Mic* → *has thanked his destiny*
Mic_gz *+°dankte seinem schicksal.° ((reading))+
 *PNT(book_nikolas)-> *
 14 *Nik_gz* *(1.2)
 *((looks at book))+
 15 *Mic* → *what is the question*
MIC °was ist die "frage"
 "FRAGE
 16 *Nik_nv* *(15.5)
 17 *looking on sheet, on left, hand on front, opening
 mouth several times

[Rot main teacher, Mic teaching assistant, Nik HI student]

After having checked whether Nikolas has already finished the exercise (pre-request l.03), both Roth and Micheli align that Nikolas can solve the task directly, based on the statement projected on the wall (l.05; see also figure 44). Roth further specifies which exercise she requests Nikolas to do ('the very last one', l.07). Approaching the completion of this turn, Nikolas orients his gaze and upper body to the sheet/notebook on his desk and displays his effort to resolve the task by reading the sentence on his sheet (l.07-08). By orienting to the relevant material (lines 07-15), Nikolas displays his understanding of the fact that he is requested to accomplish an exercise. His absences of response come in lieu of relevant next actions and halt the progressivity of the ongoing interaction by deferring the second pair to a later moment. His orientation is nonetheless a sign that he understood what he has to do, therefore a revision of the FPP does not seem necessary. Hence the gap between the FPP and the SPP (l.07) is made interpretable as being related to, most presumably, the search for the relevant sentence in his booklet.

The two types of remedial actions which are provided by the teachers align to this display of understanding by proposing forward-oriented help rather than revisions of the prior turn. Micheli gains access to Nikolas' sheet (l.10) and points several times to a specific point. Simultaneously, Nikolas quickly forms a palm-up handshape that can be understood as a variation of a wh-question marker. The teaching assistant's action makes also recognizable that she localizes Nikolas' problem in responding at the level on the task resolution itself. In addition to a localization of the relevant statement, Micheli emphasizes the elements that Nikolas' question should comprise through her pointings to each part of the statement. The main teacher's non-first first is slightly different but it makes observable that she also excludes an understanding problem related to the prior turn. She modifies her first action designed as a request (l.06-07) into a wh-question (l.11). In contrast to her initial FPP (l.06-07), constituted as a request for action, her revised FPP consists in a wh-question that constitutes an explicit formulation of the precise action Nikolas has to accomplish (l.11, 'to formulate the question').

The significant point illustrated in this example is the fact that the remedial actions (l.10, 11, 13, 15) are designed as re-instantiations of the initial FPP whose completion is still pending. These re-instantiations comprise information that clarifies the procedure of the task at hand and therefore address rather a problem in solving the task more generally, than a problem in understanding the FPP in itself. In this sense, the remedial actions proposed by the co-participants align to the forward-orientation that Nikolas exhibits during the lack of answer (l.08; absence of repair initiation, orientation to the sheet). This forward-orientation exhibited by Nikolas during the break of progressivity is further operated by the rather low equivalence between the initial FPP and its recyclings provided by the teacher and teaching assistant.

Given these examples, the students' bodily-visual resources for displaying understanding and for indicating a forward-movement prove to be practices that are mutually shared, building a basis for the co-construction of the interactional order. The break of progressivity is dealt with to the extent that *one* type of remedial action, namely the recycling of the prior turn, can be excluded.

Nevertheless, both examples pinpoint the uncertainty that remains with regard to the precise problem the students encounter. Hence, in the first example the initial remedial action provided by the teaching assistant proves to be inadequate, and in the second example two participants provide two different solutions. This observation meets to some extent the findings of studies on DHH's ability to initiate repair, that has been reported to be insufficiently clear and too heavily based on open class repair initiators. However Skelt (2006, 2012) already has pointed out for adult participants (with acquired hearing loss) in medical encounters or private conversations, this is without taking into account other crucial issues of the DHH participants related to the management of face or identity.

3.2.3. *Interactional consequences III: Providing exemplifications*

Another type of remedial action that is provided by the teacher/teaching assistant when the student displays understanding but an answer is lacking consists in exemplifications. By means of such remedial actions, the teacher displays that he does not interpret the lack of answer as being related to problematic hearing/perceptual access. Such a remedial action is presented in excerpt 26, which comes from a long activity between Micheli and Pashali devoted to the writing of a story about a kidnapping. The protagonist's (Daniel) parents have been kidnapped, and Pashali has to write down the reasons for this kidnapping. In the segment below, Micheli asks Pashali to imagine what the kidnappers wrote in a letter addressed to Daniel. The accomplishment of the conditionally relevant next depends on understanding of the previous actions, as well as on some world knowledge. After a first lack of answer (l.03-04), Micheli provides an exemplification that aims at solving the problem and carrying forward the activity (l.05).

Excerpt 26

Corpus SG, [PA_IN_100528_2eheure]

01	Mic MIC Pas_gz	and now you have to write what is written *und jetzt musst du schreiben (.) <was "steht in& "wh-question *->sheet->*
02	Mic MIC	in the letter what do the kidnappers write &dem brief?> ".hh was schreiben die entführer. "PNT(sheet_pas)
03		(1.8)
04	Pas_nv	*(1.9) *puts head in his hand->*



Figure 46

- 05 Mic → *the kidnappers write in the letter*
MIC "die ent*führer <schreiben> in dem bri:ef (1.0)&
Pas_gz "tap(pas) *->mic->*
- 06 Mic → *what they want*
MIC &was sie "wollen. *(0.4)"
Pas_gz "palm-up_*,*,*" *->sheet->*
- 07 Mic → *for example do they want some money*
MIC "(0.2) zum beispiel *geld ">wollen sie< geld haben.
Pas_gz "... (GELD) GELD -h_____ "palm-up
->mic->
- 08 (0.4)
- 09 Mic → *the kidnappers*
Pas_gz die ent*führer. *->sheet->*
- 10 Pas_nv *(3.2)
*(writes down on his sheet)
- 12 Pas *(°dani°)
Pas_gz *->mic->*
- 13 Mic daniel?
- 14 Pas *wrote a letter (or)*
schreibt (0.7) eine brief (1.2) (odä/ oder)
- 15 (1.7)
- 16 Pas *(or)*
(odä/oder)
- 17 (1.7)
- 18 Mic *mh I don't know what you want to write say*
mm:h ich weiss nicht was du schreiben möchtest sag
- 19 *continue. daniel*
mal weiter. daniel.

[Mic teaching assistant, Pas HI student]

Micheli requests Pashali to propose what was written in the kidnappers' letter (l.01-02). Ensuing a first completion after *brief* at line 02, Micheli straightforwardly expands her turn with an audible inbreath and a wh-question (l.02). Micheli's rephrasing at line 02 does not occur after an absence or delay but is designed as doing pre-emptive work on understanding (cf. also *recipient design* by Sacks, et al. 1974:727; Gardner, 2004). The major modification consists in a change from a passive/static verb (*im brief stehen*) to an active/dynamic verb (*die entführer schreiben*).

During the assistant's turn, Pashali continuously gazes at his paper. At the end of Micheli's question, Pashali prolongs his gaze at his sheet (l.03) without providing any response. After 1.8 seconds he more clearly stages a process of thinking by supporting his head by his hand, and he remains so for 1.9 seconds (l.04; see figure 46). The staging of thinking as well as the absence of repair initiation can be interpreted as claiming understanding of the current state of talk (Schegloff, 1982). Micheli's following remedial action proves this understanding by means of two features. First, she does not propose any remedial action for 3.7 seconds of silence (l.03-04) and provides Pashali with rather long 'wait time' for the accomplishment of the SPP (Walsh, 2006). Second, when Micheli addresses the lack of answer, she provides a partial answer by suggesting what is written in the letter from the kidnappers, namely the kidnappers' demands (l.05-06). At this point, the adjacency pair is technically completed. Quite straightforwardly however, Micheli further exemplifies what type of demand the kidnappers could address to Daniel ('for example money', l.07) and this exemplification is designed as a polar question and requests for Pashali's confirmation (cf. syntactic inversion, final raising intonation). This implies that a further slot is opened, making relevant that Pashali provides a response either by confirming Micheli's proposition or by supplying another object that the kidnappers could ask for. After a further lack of response by Pashali (l.08), Micheli expands her question with a right dislocation, which has previously been described as a practice for re-instantiating a transition relevant place (Horlacher, 2007) when an uptake is missing.

In a similar vein, Krafft & Dausendschön-Gay (1993) mention that providing response models may be understood as an 'avoidance technique' that is designed for circumventing long and complicated negotiation sequences (in the Krafft & Dausendschön-Gay's terms 'bis-versions' of a first action). The example that the authors provide consists of a list of possible responses (is it x or y or z). Interestingly, the authors argue that such response models are not reaching out for simple confirmations or disconfirmations but they are deployed in the service of clarifying the initial question. In this case however, Micheli's exemplifications do not seem to successfully re-establish progressivity as Pashali's answer remains lacking (l.08). However, it is noteworthy that on the interactional surface there is no display of non-understanding neither. At line 10, Pashali finally moves out of his previous position and starts writing something down. His following turns suggest that he starts writing that Daniel wrote a letter, which is inversely following what Micheli previously suggested (that Daniel receives a letter). The further continuation of the activity unveils that no mutual understanding has been achieved between Micheli and Pashali.

The example shows that first speakers can afford different types of actions to deal with lacks of answers of their recipients. In these remedial actions, first speakers also reveal how they interpret their recipients' problem and the source of the lack of answer. In the quoted excerpt, the teaching assistant's remedial actions following Pashali's lacks of response (l.05-07, l.09) provide *further information* and do not simply recycle the first versions of the question/request. It is noteworthy that Micheli thereby shifts between several action types: from a request to a wh-question (l.01-02),

to an answer (l.05) and finally to a polar question (l.07-09). On a linguistic level those changes are reflected in the use of modal verbs, interrogative particles and syntactic inversion respectively. All the described resources make recognizable that Micheli orients to the absences of answers as being due to a problem in understanding or a problem of shared world knowledge (e.g. knowledge that kidnappers regularly demand ransom money), but not a problem in hearing.

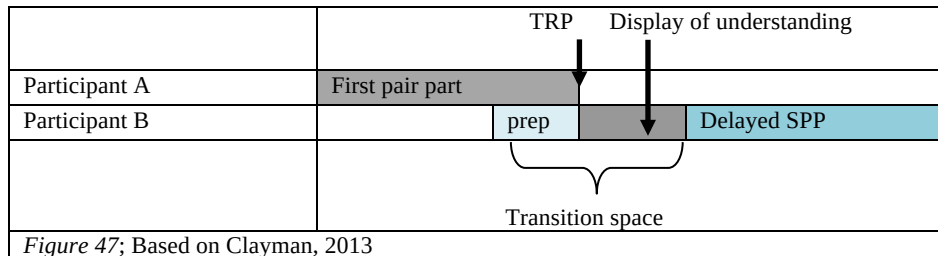
While progressivity is clearly impinged by a high amount of inter- but also intra-turn pauses (l.03, 04, 05, 08), all participants clearly display a forward-orientation and therefore promote progressivity. Participants accomplish this in different manners. Pashali does this by not initiating repair, by gazing at his book, therefore showing his involvement in the activity and displaying that no backward-movement is necessary for the sequence completion. Micheli aligns to this orientation and to the principle of progressivity in the sense that she does not merely repeat her first request/question (l.01-02) but rather offers new information and new sequentially implicative actions, carrying thereby forward the interaction despite impingements on progressivity. Both participants therefore collaborate in promoting progressivity.

To sum up, section 3.2. has provided further evidence for the fact that by means of displays of understanding the prior turn (gaze withdrawal, staging thinking, prefatory reorientation), recipients of questions or requests manage the interactional pressure after FPPs in a mutually accountable manner. By means of these displays, students exhibit a clear forward-orientation. This forward-movement is characterized, according to the activity at hand, by exemplifications, by the localization of relevant pieces of information and by procedural information. In short, the remedial action is not a mere reformulation or redoing of the original FPP, but provides different and further information.

Furthermore, the findings of this section suggest that the students' practices for designing delays are used for all practical purposes. By means of these practices students do not only indicate whether they have perceptual and epistemic access to the FPP, but at the same time it is on the basis of these displays that co-participants can narrow down the remedial action which may be helpful for the students in overcoming the trouble in providing an SPP. This is an important point because when progressivity is broken, an appropriate remedial action can more quickly reinstall the progressivity of interaction. By displaying their access to the previous turn the students indicate at least a misfit of those resolutional actions that would operate a backward movement (i.e. highly equivalent reformulation of the previous FPP). However, there are instances as well where several proposed remedial actions do not enable the re-establishment of progressivity (as in the last example). It can of course not be excluded that sometimes students display understanding despite an actual trouble in understanding – either because they do not realize their actual non-understanding or because they do not want that this becomes observable.

3.3 Summary

Section 3 concentrated on the practices hard-of-hearing students deploy for dealing with breaks in sequential progressivity, i.e. practices deployed when they have been other-selected for an SPP but display trouble in providing this SPP in a precision-timed manner. The sequential environment is illustrated in the table below:



After a question or a request by participant A, the student (participant B) does not provide the SPP and thus a break in progressivity occurs. More precisely, instead of the SPP the student exhibits a visual conduct that defers his answer/requested action to a later moment. Most importantly, these conducts are accomplished in a precision-timed manner, i.e. they are subtly tied to the completion of the FPP. It is on the basis of this sequential and temporal unfolding that the spatio-visual conducts can be interpreted as sense-making resources (Hougaard & Hougaard, 2009). As there is a systematic organization between these visual resources, their sequential position and the actions they implement, these conducts are treated as *practices* (cf. Heritage, 2010; Stivers, 2002).

The students' practices for dealing with breaks in sequential progressivity at the completion of an FPP are the following:

- (1) In response to a question or a request provided by a first speaker, the student indicates understanding of the prior turn by means of gaze withdrawal from the FPP-speaker within the transition space, while commonly also staging thinking (e.g. hand to chin, lip partings). By displaying their understanding of the previous talk the students index that their problem in providing an answer or a requested action is not pertaining to an issue of not hearing or not understanding the question/request.
- (2) In response to a question or a request for action provided by a first speaker, the student indicates understanding of a prior turn by means of bodily reorientations to artifacts that are potentially relevant for the activity at hand. The students' reorientation to relevant material is often a necessary activity in pre-beginning position that delays the proper SPP (e.g. orienting to a book before reading). It has been argued that theoretically such reorientations cannot be considered as a practice insofar as they are *necessary* for the accomplishment of the action/SPP itself. However, the analyses have further demonstrated that students routinely accomplish such reorientations, also in instances where no such orientation seems necessary for responding to a question or a request. The significant point about this observation is that methodologically the analyst (and the

co-participant) cannot always distinguish between necessary reorientations and reorientations as a practice. The question whether the reorientation is necessary for the provision of the SPP or not is important to the extent that it has not the same consequence on whether progressivity is promoted or not. When a reorientation is necessary, it is not breaking progressivity as it is an inherent part of the accomplishment of the SPP. When the reorientation is not necessary, it is halting progressivity because in this case it postpones the next one due to a later moment, but without being a necessary preparatory step. I argue that it is precisely owing to the co-participant's difficulty in deciding if reorientation is indeed necessary or not, all those reorientations are exploited and oriented to as not halting the progressivity.

What do the students practically achieve through these practices? First, the students embody that the halt of progressivity is not to be solved by means of a repair, i.e. a recycling (repetition, reformulation) of a prior turn that would necessitate the initiation of a new sequence. Second, by exhibiting their understanding of the teacher's FPP despite an absence of an answer/requested action, the students make visible their participation within the interaction and their attempt in complying with the FPPs. Etically speaking, they do this without any verbal turns but they rely solely on spatio-visual resources. Nevertheless, they make thereby mutually accountable the reasons for the noticeably absent SPP. It may be suggested also that by displaying their understanding of the prior turns without providing the relevant SPP they portray themselves as regular students, as not being able to answer questions within classroom interaction is more common reason for lacks of answers than not understanding or not hearing the question.

Evidence for the systematicity of the practices is provided by the routine use of the spatio-visual conducts (design and sequential position) by the students, and, most importantly, their sequential implications. The analyses of cases where students only provide a visual display of understanding but do not finally accomplish the SPP is important for supporting the argument that these visual displays are effectively practices. Hence, section 3.2. was concerned with cases that are schematized as shows the following table where FPP-bis corresponds to the remedial action that the FPP-speaker proposes in response to a noticeably absent SPP:

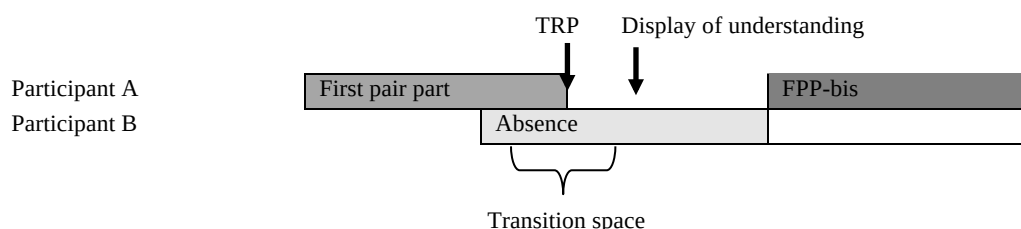


Figure 48; Based on Clayman, 2013

When students displayed their understanding of the prior turn by means of a gaze withdrawal, thinking face or a bodily reorientation, teachers provide the students with extra wait time. This

wait time is a first proof that teachers understand the students practices as effectively indicating understanding of the prior turns. After a lapse of time, the teachers address the students' lack of answer by means of specific actions, namely forward-oriented remedial actions. Practically, the teachers provide new information, they index where relevant information for the accomplishment of an SPP is, or they provide exemplifications. These actions have as a common denominator that they are forward-oriented; they do not recycle previous turns. Indeed, their remedial actions are better described as new actions and further steps than 'repetitions' or recyclings of the original FPP. For this reason I chose the term of *bis-version* of an FPP (Auer, 1984), which seems more appropriate as it suggests rather a follow-on. Hence, hard-of-hearing participants exhibited forward-orientation during impingements on progressivity is taken up and aligned to by the teachers and teaching assistants.

Very schematically, the embedment of the revealed practices can be represented as follows:

Participant	Action	Description
A	FPP	The first speaker accomplishes a question or a request for action
B	Display of understanding	The second speaker displays understanding by (1) Gaze withdrawal (+ staging thinking) or (2) Bodily reorientation
B	SPP	The second speaker provides an answer / the requested action

Table 15

When the students' answer to the teacher's first pair part is finally absent, the course of action is as follows:

Participant	Action	Description
A	FPP	The first speaker accomplishes a question or a request for action
B	Display of understanding	The second speaker displays understanding by (1) Gaze withdrawal (+ staging thinking) or (2) Bodily reorientation
A	FPP-bis	The first speaker provides some remedial action: new information, localization of relevant information, or exemplification
B	SPP	The second speaker provides an answer / the requested action

Table 16

4 Discussion

Chapter VII offered an examination of how the hard-of-hearing students under study manage the pressure for responsive participation when co-participants (teachers or classmates) other-select them for the accomplishment of an answer to a question or for the accomplishment of a requested action. The relevance of these moments can be described as follows: When an FPP-speaker other-

selects the student, there is a normative expectation that the student provides this SPP and that he provides it precisely timed to the completion of the FPP. Both expectations are related to the preference for progressivity in interaction. On the basis of Schegloff et al. (2002), I started with the assumption that when the student does not provide the FPP in a precision-timed manner, the occurring gap is import-laden, i.e. co-participants will seek out for the meaning of the gap (cf. chapter IV, section 4). With respect to their status as *hard-of-hearing students*, the most prevalent reasons for lacks of response are *not having heard*, *not having understood* and *not knowing the answer*. This contrasts with other possible ‘problems’ in responding, such as disagreement in mundane conversation (Pomerantz, 1984c), resisting and evading journalists’ questions in broadcast news interviews (Clayman, 2001) or resisting answering questions in courtroom (Beach & Metzger, 1997; Metzger & Beach, 1996) and in child counselling sessions (Hutchby, 2002). Against the background of this diversity of possible reasons for gaps after an FPP, the indication of the precise trouble source is an important interactional issue that the students have to manage, because it is on the basis of such an indication that the FPP-speaker provides remedial actions which can dissolve the halt in progressivity.

A basic finding of this chapter is that hard-of-hearing participants are able of accomplishing SPPs in a precision-timed manner, thereby promoting the principle of progressivity in interaction (section 2). I have also shown that students do not only finely time vocal responses (section 2.1.) but also visual responses (section 2.2.). Practically, students launch preparation phases of gestures, of signs as well as practical actions in tight coordination with the completion of the teacher’s or the classmates’ FPP.

There is also a range of instances where students are other-selected for an SPP but where their straightforward response is missing. This means that students defer the beginning of the answer/requested action to a later position that is beyond the transition space. Traditionally such delays have been referred to as inter-turn silences or gaps, which are *import-laden*. In the analyses of this chapter I have shown that participants actively design these delays, i.e. they are not mere ‘absences’. When one considers all bodily resources that participants can use for making sense in interaction, it becomes evident that students deploy a range of visual practices for indexing within these gaps whether or not they did hear/understand the FPP that has been addressed to them. It is on the basis of this indication that an FPP-speaker searches for the reasons of the students’ (momentary) lack of precision-timed response. Consequently, FPP-speakers do not only ‘guess, infer or determine what the trouble is’ (Pomerantz, 1984b: 155; cf. chapter IV, section 5.2.1.) on the basis of the gap, but they can rely on the co-participants’ visual displays. This confers a more active role to the recipients of the questions or requests who do not answer with precision timing.

Concretely, when speakers address a question or a request to students and the students do not provide a relevant next action in a precision-timed manner, they deploy the following practices for displaying their hearing and understanding of the FPP:

- Students indicate that they heard/understood the co-participant's FPP by means of a gaze withdrawal from the co-participant and a staging of thinking. Importantly, the gaze withdrawal is finely tied to the completion of the FPP. The stagings of thinking are often backed up with e.g. lip configurations, small signs or hands moving to the forehead or the chin (section 3.1.1).
- Students indicate that they heard/understood the co-participant's FPP by means of a bodily reorientation (with gaze withdrawal from the co-participant) towards artifacts that may be relevant for the accomplishment of the answer or the requested action that has been made relevant (section 3.1.2).

On the basis of the analyses in this chapter of the HH students' practices for managing progressivity in responsive participation, I emphasize the following points:

- (1) The students prove to be interactionally competent with respect to the management of sequence completion and timing. They regularly respond to FPPs in a relevant and precision-timed manner. Moreover, when they have troubles in providing an FPP, they indicate whether they have understood the prior FPP or not.
- (2) The analysis has shown that a holistic take on social interaction with the HH students is of crucial importance. It is on the basis of such an understanding of social interaction that the students' way of participating can be described as organized and competent.
- (3) When students are other-selected for active participation within classroom, understanding the question/request and providing an answer are not the only relevant issues. Hard-of-hearing students have been shown in chapter VI to navigate between different forms of participation that may either highlight that they are accompanied by a teaching assistant or that they can participate in interaction in a similar manner than the regular students (according to the participation framework and activity at hand). Thus, the students are also concerned with different types of participation that may emphasize their difference from the other students or by contrast minimize this difference. In this regard I suggest that displaying their understanding of the prior action while indicating a trouble in responding may be especially significant as it does not foreground the fact that the student could have difficulties with hearing or with the language. In fact, not providing an SPP because of a need for thinking time for example recalls the regular students' way of participating in the classroom activities. By contrast, not providing an SPP because of a lack of understanding the question/request for action potentially foregrounds that the student is a hard-of-hearing student or not sufficiently competent in German.
- (4) This chapter has shown how HH students under study participate in question-answer sequences by dealing with sequence progressivity. As the choice to focus on the HH students was preliminary to the study, the analysis singled out these participants and did not extend the analysis to the hearing students. Note however that practices described in this chapter must not be specific to the population of prelingual hard-of-hearing

students. The aim of this chapter was first to provide an overview of the HH students' competence in promoting sequence progressivity which has not been in the focus of attention in prior studies on prelingually deaf children. Second, the chapter aimed at demonstrating the importance of a holistic account of the HH students' way of participating in a spoken classroom interaction – the sole focus on vocal resources and spoken language would not do justice to highly ordered and systematic way of participation.

Chapter VIII – Dealing with progressivity II: Displaying lack of understanding in response to first pair parts

The present chapter examines how hard-of-hearing students deal with progressivity when they display trouble in hearing or understanding a question by initiating a repair sequence (and thereby break progressivity). It is not always clear whether the student's trouble is related to a lack of hearing or a lack of understanding in terms of interpretation (e.g. due to a lack of German lexical or grammatical knowledge). This ambiguity is also reflected in how the co-participants repair their trouble sources: their self-repairs simultaneously address different types of potential problems. In this chapter, when not specified differently, the reference to lacks or problems of understanding include also problems in hearing or seeing. The focus is put on those cases that occur in response to first pair parts produced by a hearing co-participant (question, request). In this specific sequential environment, the deployment of practices for displaying a problem in understanding enables the hard-of-hearing participants to address the conditional relevance set by the FPP while at the same time deferring the expected relevant next action to a later position, namely after having repaired the trouble in understanding. The repair practices examined in this chapter are open class repair initiators or unspecific repair initiations, such as e.g. *was* ('what') or *wie bitte* ('pardon?'). When the student uses such a repair initiator, he (other-) initiates self-repair that will be carried out by the trouble source speaker (i.e. the teacher or a hearing classmate).

An example of how students display a lack of understanding in response to a first pair part is provided in excerpt 27. After the question by Karpf at line 01, Nikolas uses an unspecific repair initiator at line 03, locating the prior turn as the trouble source. This turn is then self-repaired by the teaching assistant (l.04), who orients to Nikolas problem as a hearing problem. In the excerpt, the repair initiator is based on a truncated German interrogative particle (was, 'what'), but it is unvoiced (cf. hyphens).

Excerpt 27

Corpus SG, [JNV_IN_100617, #192]

		<i>what are you doing</i>	
01	Kar	was machst	*"du?
	KAR		*"PNT(nik)
	Nik_gz		*->kar->*
02	(0.5)		

03	Nik	→	^{what} -wa-
04	Kar Nik_gz		^{what are you doing} was *machst du? *->u->kar->*
05	NIK		PNT(laptop)

The repair initiator is the beginning of a new sequence (l.03) that is completed with the repair (l.04), before the answer to the first question (l.01) can be provided (l.05). In this case, the repair initiator is treated by the trouble source speaker as indicating a lack of hearing (cf. repetition of her question). This interpretation is confirmed by the fact that the repair sequence proves to be successful (Nik provides the answer). As I will show in the upcoming analyses, the unspecific repair initiators are designed by different types of resources. All repair initiators described in this chapter break sequence progressivity as they initiate an insert sequence. The analyses reveal however that students routinely rely on repair-initiating practices that are minimally disruptive for the unfolding activity, which qualifies an orientation to both the principle of progressivity and of intersubjectivity. This constitutes the main argument of this chapter.

Practically, this chapter aims at identifying and describing how the hard-of-hearing students initiate repair and how they simultaneously deal with the fact that repair impinges on the progressivity of interaction. The chapter examines the following questions: (a) How do students display a lack of understanding in response to FPPs? (b) What interactional consequences arise from those displays? (c) What do those cases reveal concerning the status of the student in the regular classroom? The chapter is organized as follows. I first briefly recall some aspects of unspecific repair initiators (section 1). In the analysis (section 2), I first show how students initiate repair by means of question words (*was*, *wie*) and how co-participants treat these repair initiators (section 2.1.). In section 3 I show how students use specific gaze conducts as a means of displaying a lack of understanding in response to an FPP. Section 4 provides a short discussion of the results and proposes a reflection on these repair initiators in terms of the students' management of progressivity and their participation in integration classroom interaction.

1 Unspecific repair initiations in response to first pair parts

In chapter VII section 3 I described and showed the situated use of two visual practices that students rely upon for displaying their understanding of a previous question or request. The import of these practices is that they delay the second pair part that has been made relevant, and at the same time they indicate that the delay or lack of answer is not related to an understanding problem. The focus of this section is put on the practices that hard-of-hearing students deploy as a means of displaying *problematic access* to the prior turn, i.e. that they did not understand or hear the

question or the request. These displays can be vocal or visual, and they are systematically followed by what has been referred to as self-repair. Bluntly speaking, the course of action unfolds as follows: the teacher asks a question, the student displays his non-understanding/non-hearing, the teacher repairs his question.

Previous research has shown that if participants encounter problems in hearing or understanding, they have several techniques at their disposal for initiating repair sequences (cf. chapter III, section 2.3.) in lieu of accomplishing the action made relevant. Such other-initiated self-repair sequences are side sequences and can be qualified as disruptive to the ongoing interaction inasmuch as they defer the next one due to a subsequent position. Schegloff (2007:100) also refers to them as “*post-first insert expansions*” that are backward-looking because the self-repair recycles a turn that has already been accomplished. Other-initiations of repair “*are techniques for locating the trouble source*” (Schegloff et al., 1977:377), providing the trouble source speaker with an index of the kind of ‘obstacle’ the hearer is confronted with.

“(...) other-initiations of repair locate problems of hearing and/or understanding as ‘obstacles’ to the production of what would otherwise occupy the sequential position in which they are placed – an appropriate ‘next turn’ sequentially implicated by prior turn.” (Schegloff et al., 1977: 379f.)

Furthermore, Selting (1987a, c, 1988) shows that different displays of a problem in understanding and their subsequent remedial actions are connected through conditional relevance. According to Selting (1987a), this implies that different techniques for displaying a problem in understanding make relevant different types of repair. For instance, the repair initiators *bitte* (‘pardon’) and *was* (‘what’) are followed by repetitions, repetitions with modified prosody or partial repetitions. By contrast, when a next speaker explicitly formulates *ich habe nicht verstanden* (‘I did not understand’), the first speaker addresses this display of non-understanding by reformulating the trouble source turn. Moreover, Selting proposes that if the ‘right’ repair type is not used, the problem of understanding will be re-categorized.

The clarity of locating the trouble source however varies between the different techniques. In fact, the different repair initiation types can be ranked in accordance to their strength of clearly identifying the precise trouble source (ibid; Drew, 1997; Egbert, 1996; cf. chapter III, section 2.3. for more details). An overview of repair initiations accomplished by HH students in response to FPPs of co-participants is provided in the following table.

Repair initiations after SPPs	Occurrences	%
Candidate understanding	7	15.2
Wh-question	4	8.7
Open class repair initiation	35	76.1
	46	100

Table 17

What I will especially be concerned with are those instances where the student displays a problem with a prior question but without precisely indicating what element is problematic. Traditionally the practices for such repair initiations are discussed under the heading of *open class repair initiators* (OCRIs, Drew, 1997). OCRIs are turn-constructional devices like ‘huh’, ‘what’ or ‘pardon’ (in German *hü/hm, was, bitte*; cf. Egbert, 1996). Note that the use of those techniques ‘displays’ a problem in understanding but are regularly used in mundane conversation also as a method to manage dispreferred responses or topical disconnections (Drew, 1997; cf. also Gardner, 2004 for L2 participants).

In what follows, I first describe the vocal practices that the hard-of-hearing students deploy as a means for displaying non-understanding of a prior question (section 2). I then turn to spatio-visual practices. I consider these practices as a *minimized* form of OCRIs (section 3). The results will then be discussed with respect to progressivity as well as participant’s interactional competence (section 4).

2 Initiating repair with vocal and visual movements

The present section describes vocal *open class repair initiators* (OCRIs) used by the hard-of-hearing students as a means of displaying a problem in perceptual (hearing, seeing) and/or epistemic (understanding) access to a co-participant’s question or request. In what follows I refer to *repair initiation speaker* for the students and *trouble source speaker* for the teacher or other classmates that produce a question/request that will be repaired. The data under analysis reveals that the use of the interrogative particle *was* or a truncated form of it (*wa*) is the most pervasive among the vocal repair initiating practices. Rarely used are *wie*, *wie bitte* and *hü*. The students’ vocal practices for initiating repair are regularly interpreted by co-participants as indexing a problem with the immediately prior turn (in contrast e.g. to the metalinguistic formulation that ‘I did not understand’, cf. Selting, 1987b; chapter IX). Previous research has shown that the use of *was* or *what* is routinely oriented to as indicating a problem in hearing (Svennevig, 2008; see Egbert et al., 2009 for *was* as specific repair initiators). This becomes observable in the fact that trouble source speakers regularly provide repetitions or partial repetitions of their initial turns as a means of re-establishing understanding. Against the background of the students’ hearing loss it might be suggested that the diagnosis of hearing problems is even more prevalent.

The findings of this analysis put forward the argument that the trouble source speaker designs his repair so that it enhances the *perceptual salience* of the FPP. A first example is provided in excerpt 28 where Micheli requests Jacob to write something down in his agenda. Micheli’s self-repair at line 05 involves minor formal simplifications and a visual enhancement.

Excerpt 28*Corpus SG, [JNV_IN_100603]*

- 01 Mic write it down that tomorrow you bring the w- the
MIC schreib es *"auf dass du morgen das sp- (0.4) das&
Mic_gz "taps on jacobs agenda
Jac_nv ->table->*
Jac_gz "starts handling his pencil case
->mic-> *->table->*
- 02 Mic workbook bring along
&sprachheft mitbringst.
- 03 Jac_nv "(1.3)
"handles his pencil case
- 04 Jac what
Jac_gz >*°wa(s)°<
->mic->
- 05 Mic bring along workbook
→ *"<sprachheft mitbringen.>
Mic_nv "leaning slightly towards jacob
Mic_gz *->jac->*
- 06 Jac_nv ((takes agenda, sits down; micheli disengages))

[Mic teaching assitant, Jac HI student]

Simultaneously to her request, Micheli specifies where Jacob has to write down to bring his workbook by tapping on his agenda (l.01). At the same time, Jacob orients his gaze to the desk and reaches his hand out for his pencil case. This practical action displays Jacob's understanding of the fact that he has to write something down. During a gap at line 03, Jacob is still oriented to his desk and is handling his pencil case. Then he quickly redirects his gaze to the teaching assistant and produces a low voiced and rapidly articulated *was* (l.04, 'what'), displaying some problem in understanding with the just previous turn. The repair provided by Micheli (l.05) indicates that she interprets the OCRI as a display of insufficient access to her previous turn. She reformulates the trouble source turn by modifying its linguistic and prosodic structure. In comparison to her initial request, the repair turn contains a syntactic reduction and a morphological modification (2nd person > infinitive). Micheli takes up the object of the requested action (to bring the workbook) by modifying its morpho-syntactic form, whereas she does not reiterate the predicative of the requested action in itself ('to write down'). This choice may respond to Jacob's clearly exhibited embodied orientation to the desk and his pencil case, displaying already his understanding of the requested action 'to write'. Moreover, while carrying out the repair, Micheli gazes at Jacob, she decelerates her speech and she slightly bounds her torso towards Jacob. It may be suggested that by means of this bundle of resources Micheli attempts to enhance the perceptual access to her request. This first example suggests that the interpretation of *was* as indexing a hearing problem

may be broadened onto a conceptualization of the practices as displaying a *perceptual problem*, including thereby the visual part of speech.

Not only the teaching assistant but also hearing students rely on enhancement of perceptual resources as a means of accomplishing repair in interactions with the hard-of-hearing students. The next example illustrates this. The segment comes from a small group activity by Nikolas, Cyril, Aylin and Caro. The group shall discuss the answers they have previously provided individually to questions relative to a text. Again, the self-repair, accomplished by Cyril, consists in a partial repetition of the FPP. In this case the vocal repair is backed up by a head movement that favours Nikolas perceptual access to the repair (l.05).

Excerpt 29

Corpus SG, [JNV_IN_100607]

01	Cyr	(sta-)
	Cyr_nv	"(°fä-°)
	Nik_gz	"*orienting upper body towards nik *sheet_nik->*
02	(0.3)	
03	CYR	do you you start
	Cyr	"... "PNT(nik) " , , ,
	Nik_gz	"(0.3) "°fän- " * > fängst du an? < *->cyr->*
04	Nik	what
	Nik_ex	"(-wa-; -wie-) "raised eyebrows
05	Cyr	→ what
	Cyr_hd	→ "an[fangen. "tilting back *(1.1)
06	AYL	to start [*tap(nik)
07	Ayl	what did you write for 'one'
	AYL	"was hast du beim "eins *geschrieben.
	Nik_gz	"PNT(sheet_ayl) "PNT(sheet_ayl) *->sheet_nik->*
08	(0.3)	
09	CYR	PNT(sheet_nik)

[Participants: Nik HI, Cyr H, Ayl H]

At line 03, Cyril requests Nikolas to start, through a polar question with syntactic inversion. Previously to this request, at line 01, Cyril starts turning his upper body towards Nikolas and simultaneously starts a turn. However, mutual engagement is not established, as Nikolas is not gazing at Cyril. The latter in turn starts moving his right hand out of rest position, projecting

thereby visually an imminent turn beginning (Streeck, 2009, also Mondada, 2007a for a similar case) and points at Nikolas (l.03). In parallel to the pointing, Cyril restarts (l.03) but self-interrupts a second time. It is only when mutual gaze is established that Cyril recycles his turn beginning and pronounces the full request *fängst du an* ('do you start', l.03). The several self-repairs Cyril accomplishes (through cut-offs) are contingent on absence of mutual gaze between Nikolas and himself and may function as summonses for Nikolas' attention (cf. Goodwin, 1982 on restarts and mutual gaze).

In response to this request Nikolas initiates repair by means of a very low or even unvoiced *wa* while simultaneously raising his eyebrows (l.04). Clearly, Cyril treats Nikolas' *wa* as referring to a problem with his request as he proposes to remedy it with a highly equivalent reformulation (l.05). The reformulated turn is based on a reduction of the morpho-syntactic complexity of the original turn by changing the conjugated verb into its infinitive and dropping the subject (similarly to the previous example). On the prosodic level, the second version is not produced with higher volume than the first one (l.05). However, its perceptual coding is enhanced through a visual accentuation of the first syllable of *anfangen* (see figures 49-51 below). This enhancement relies on a physical change in the articulation of the word – the mouth opening seems bigger on the second *an* and Cyril's head slightly tilts backwards during the *an* (figures 49 and 50), and then bends forward again during *fangen* (figure 51). The traced lines in the figures below indicate the inclination of Cyril's chin and illustrate therefore bending back and forward of his head. Stills of mouth openings are unfortunately not illustrative enough – maybe it is also the motion of the head during *an* that gives the impression of bigger mouth opening on the video clip.



Figure 49
Onset of *an*

Figure 50
End of *an*

Figure 51
End of *fangen*

The two examples above illustrate that the repair consists in a *morpho-syntactic reduction* of the first version as well as *articulatory enhancements*. This articulatory enhancement does not necessarily rely on vocal prosodic features, but can also pertain to '*spatio-visual prosody*' adding stress to oral features (be they vocalized or not). The repairs carried out by the trouble source speakers indicate that they understand the students' OCRIs as pointing to a problem of perceptual understanding on the one hand, but maybe related also to grammatical complexity on the other hand. This double-aiming of the repair may be responsive to the fact that OCRIs do not precisely

indicate the trouble source. However, in the excerpts above (28 and 29), co-participants remedial actions do clearly not address referential, lexical or pragmatic understanding.

Importantly, the examples add an interesting dimension to previous findings on OCRIs. They suggest that the repair turn can be specifically designed for providing better access to a prior turn by means of an enhancement of visual articulation. Concretely, such enhancements of visual resources consist of exaggerating visual articulation, leaning forward or tilting back the head as a way to render more visually accessible ‘lipreading’. This is noteworthy because repair is described as organization for treating problems in hearing and understanding (and acceptability, Svennevig, 2008). Yet, the problems in hearing may pertain more precisely to problems in perceptual access. Such a view takes into account that speech perception does not only imply hearing but also seeing speech. Moreover, the visual access to speech is particularly relevant for persons with hearing loss because they are reported to rely to a large extent on visual resources for understanding ongoing interaction. An interesting question beyond the scope of this thesis would be whether trouble source speakers address similar self-repairs to hearing participants. Based on the assumption that social interaction is a fundamentally multimodal accomplishment and can by no means be reduced to the vocal resource, such observations would indeed not be surprising. Moreover, these repairing practices used by the hearing co-participants underline the fundamental collaborative achievement of repair.

The example below provides further illustration of a perceptual enhancement in other-initiated self-repair. Furthermore, it shows that another resource than forward leaning (excerpt 28) and head tilting (excerpt 29) intervenes in this ‘spatio-visual prosody’, namely fingerspelling (l.05). The sequence is unfolding between the teaching assistant Karpf and Jacob in parallel to an interaction in plenary.

Excerpt 30

Corpus SG, [JNV_IN_100614]

01	Rot	here again my question what means ‘to pickle’ da noch einmal meine fra:ge was heisst einwecken who still knows that
02	KAR Kar Jac_gz	wer [weiss das noch. [tap(jac)""-E-_____ wh-q ,,, ""(°°einwecken was ist das°°) ->his arm->* *->kar->* to pickle what's that
03	(0.5)	



Figure 52



Figure 53

04 Jac_ex ["squinted eyes
 Jac ["°°wa(s)°°
 Jac_nv "moving quickly head forward
 Rot you know
 [ihr kennt&

05 Kar to pickle
 -einwe- "-einwecken-
 KAR → "-E-I-N[-W-E-*C-K-E-N-&
 Rot_or to wake as a verb
 Jac_gz [&wecken (.) als verb.
 ->sheet->



Figure 54

06 KAR what is the meaning
 JAC &wh-question [*INHALT
 Jac_gz [*... HH_schütteln
 ->kar->hands->kar->
 to shake/to wake up someone



Figure 55

07 Rot to wake up but to pickle
 aufwecken [aber einwecken?

08	Kar Kar_hd	no to pickle "-einwecken- "shake
09	KAR NIK	that's not the meaning VERNEIN [INHALT to wake up [(WECKER)

[Rot main teacher, Kar teaching assistant, Jac HI]

The main teacher Roth addresses a display question testing lexical knowledge to the whole class (l.01). At this moment, Jacob and Nikolas are not gazing in direction of the main teacher. In overlap with Roth's expansion (l.02), Karpf other-selects Jacob by touching him (*tap*) and addresses the same question to him (l.02). Her turn is built as a hybrid form between DSGS and spoken German and it only contains the verb. It consists in a fingerspelled letter *E* and a whispered production of the verb *einwecken* (obsolete term for 'to pickle'), followed by a vocal and a signed interrogative construction (wh-question). Jacob responds to this with a forward bending of his head, squinted eyes and a whispered 'was' (l.04; see figure 52 and 53). The design of this OCRI indicates a problem in perceptual access on different levels. The leaning forward reduces the physical distance between Jacob and Karpf, which suggests an attempt to reduce the perturbation or the loss of the acoustic signal, signalling therefore a hearing problem. Skelt (2006) and Pajo (2012) described the participants' leaning forward as a non-verbal feature accompanying verbal other-initiation of self-repair in interaction with hard-of-hearing (cf. also Seo & Koshik, 2010 for hearing interaction in ESL conversational tutoring). Additionally, the squinted eyes however may be interpreted rather as indicating a problem in visual access. The design of the repair initiator points to the importance hard-of-hearing participants give to the visual clarity of the speech. This suggestion however remains rather speculative at this level as no other instances have been found in the corpus.

Karpf orients to Jacob's repair initiation through a highly equivalent reformulation (l.05). The major modification between the trouble source (l.02) and the repair turn (l.05-06) lays in an augmented use of the visual resources whereas the spoken resources are reduced. Karpf's repair starts with an unvoiced repetition of the German verb *einwecken* which is cut-off. She then self-repairs by producing an unvoiced version of that verb which she accompanies with a fingerspelled version of it. As regards spoken German we therefore observe a change from a whispered to an unvoiced production, whereas as regards sign language we witness a change from a partial to a complete fingerspelled verb. During Karpf's fingerspelling, Jacob turns his head towards the sheet and thereby displays his understanding of the question as being related to the text. Ensuing this visual disengagement between Karpf and Jacob, the teaching assistant now addresses the question also to Nikolas by gazing at him (l.06). In overlap with Karpf's turn-ending, Jacob provides an answer by means of a sign that is depicting the action of shaking a big object with two hands (l.06, see figure 54). Despite the inappropriateness of Jacob's answer (cf. Micheli's negative evaluation

at 1.08), it displays understanding in two ways. First, as stated before, Jacob turns to his sheet and shows thereby his interpretation of Karpf's question as being related to the text they are discussing. Second, his answer depicting the action of shaking a big object most likely refers to the action of waking up someone (*jemanden wecken*). On the basis of this high lexical resemblance between question and answer (*einwecken* – *wecken*), it may be suggested that Jacob understood the question but that he does not know the answer.

This excerpt is significant in terms of how participants select resources to overcome a problem in responding to a question. As in the previous excerpts, the action type (display question) does not get modified through Karpf's repair (1.05; by contrast to what has been shown in chapter VII after displays of understanding). Hence, the repair turn rests upon the initial turn and only the resources for designing the second version are changed. The teaching assistant's and Jacob's use of visual resources is responsive to the fact that their negotiation is unfolding in parallel to a plenary activity (see also chapter VI). In this specific activity, the use of visual resources and reduction of vocal resources is of even greater importance because they allow for establishing mutual understanding and at the same time they do not disrupt the ongoing plenary activity.

The enhancement of resources and some morphological simplifications have until now been discussed as the major type of modification in the non-first firsts after OCRIs. In addition to these modifications, the self-repair can also contain a clarification of reference (cf. also Pomerantz, 1984b; Krafft & Dausendschön-Gay, 1993; Schegloff, 1987b). By means of such a manifold repair the chance of a successful re-establishment of understanding may be enhanced. The excerpt below stems from a lesson where all students have to correct their workbooks (*Aufsatzheft*, 'workbook for essays') (1st step). When they have finished, each student must show his workbook to the main teacher (2nd step), and then turn to a subsequent task (3rd step). Nikolas gets up from his desk and starts walking towards the overhead projector. The excerpt begins when Nikolas stops moving and solicits Karpf. Two repair operations by Karpf are necessary (1.06 and 1.10) before the sequence can be closed.

Excerpt 31

Corpus SG, [JNV_IN_100617]

01	Nik NIK Nik_gz	miss karpf	
		frau kar(pf)	*(xx)
			*PNT(OP)
		->kar->*	*->OP->kar->*
02	Kar	did you finish as well	
		bist du auch fertig?	

03 Nik_nv +(approximately) ((translation uncertain))+
 NIK *(0.8)
 Nik_gz *goes back to his desk
 *flat hand oscillating movement
 ->sheet->



Figure 56

04 Kar did you show it
 KAR ">hast du *es "gezeigt?<
 Nik_gz "PNT(workbook_nik) "PNT(direction roth)
 ->kar->

05 Nik pardon
 Nik_ex "°wie?°
 "slight eyebrows raising

06 Kar → did you show the notebook to miss roth
 Nik_gz hast du das heft frau roth gezeig*t?
 ->workbook->

07 (0.7)

08 Jac oh I have to write
 +(1.5) AH:: muss schreiben.+

09 Nik_gz *(0.4)
 ->kar->

10 Kar → did you show your essay notebook to miss roth
 11 hast du frau ro::th dein aufsatzheft
gezeig*t?
 Nik_gz *->booklet->*

12 Nik no not yet
 Nik_hd "(nei noch *nich)
 Nik_gz "shake
 *->kar

13 Kar well then you have to go to miss roth
 (dann musst du zu frau roth)

[Kar teaching assistant, Nik HH, Jac HH]

Nikolas solicits Karpf through an address term (1.01). Simultaneously to the second unintelligible part, he deploys a pointing gesture to the overhead projector where material for the subsequent

task is arranged (l.01). Karpf then elicits information about Nikolas' actual state of advancement (l.02), which is a precondition for deciding if he can move on to the next task or not. Nikolas then steps back to his desk without vocally responding to Karpf's question (l.03). Instead, he deploys a hand configuration and a movement that resembles the conventionalized DSGS sign *UNGEFAEHR* ('approximately, roughly, nearly'; see figure 55)¹⁰¹.

It cannot clearly be stated if Karpf sees and orients to this manual production. Her next turn is a polar question that again addresses Nikolas' actual state of advancement, this time by explicitly asking whether he has accomplished the second step of the overall assignment (show to Mrs Roth the corrected workbook) (l.04). Karpf refers to the workbook through the personal pronoun (*es*) and a simultaneous pointing to Nikolas' workbook. The indirect object (*Roth*) is not vocally made explicit but is inferable from Karpf's following pointing into the direction of the main teacher, working on a desk in the back of the classroom (l.04). Nikolas responds to this straightforwardly with an OCRI consisting in what is audible as *wie* at line 05 (similar to 'pardon'; often used with the complement *bitte* > *wie bitte*; cf. Egbert, 1996 for the use of *bitte*). Note that during Karpf's turn-beginning (l.04), Nikolas is gazing at his desk and mutual gaze is therefore not established. This observation recalls Egbert's (1996) findings regarding the use of *bitte* as an OCRI that occurs when during the trouble source turns, mutual gaze between trouble source speaker and repair initiating speaker has been broken. In my data however no systematicity could be found between gaze conducts and *bitte* or *wie bitte* as a repair initiator.

Nikolas' OCRI is responded to by Karpf's reformulation (l.06) of her previous action (l.04), operating a twofold modification. On the one hand, prosodic resources are enhanced: Karpf accentuates parts of the words *heft* ('workbook'), *roth*, and *gezeigt* ('shown'). On the other hand, Karpf specifies the direct and indirect object that she referred to through the use of pointing gestures towards the workbook and in direction of the teacher Roth (l.06). After an absence of answer to which Karpf orients again as a display of non-understanding, she offers a third version of her question by specifying its direct object (l.10; *dein aufsatzheft*, 'your essay booklet'). A significant aspect of Nikolas' absence of response is his gaze behavior. When Karpf's revised turn at line 06 reaches completion, Nikolas withdraws his gaze from her and directs his head and gaze to the desk/workbook. This orientation is held for 2.2 seconds (l.07 + during Jacob's turn l.08) and meanwhile Karpf is gazing back at Nikolas. It may be argued that Karpf is waiting for a response for a rather long time as Nikolas has displayed understanding of the previous turn by gazing at his workbook on a TRP. Nikolas' raising of his head and gazing back to Karpf may be interpreted as foreshadowing an upcoming turn-beginning, however Nikolas again does not respond for 0.4 seconds (l.09), which is followed by Karpf's further revision of her question (l.10-11). Again, prosodic enhancements are implemented (prolongation of *roth*, raising volume in part of *gezeigt* 'shown') and the reference is further specified by means of the composite noun *aufsatzheft*

¹⁰¹ The hand is held vertically in front of his abdomen, the fingers are spread out and the flat hand is directed to the left. In this hand configuration, the hand moves from one side to the other.

referring to the workbook for essays. Ensuing this third version of the question Nikolas provides a relevant and appropriate answer to it (l.12), followed by an explicit formulation of what he has to do.

This excerpt has provided further evidence for the fact that the teaching assistant's repairs are highly equivalent with the original FPP and echo the initial action. In addition to the enhancement of perceptual salience, the teaching assistant's self-repairs also comprise modifications in the reference coding: the teaching assistant specifies the references with more linguistic material while maintaining the action of information request. In sum, the teaching assistant addresses several potential troubles at the same time, which may be responsive to the unspecified repair initiator. This is further highlighting that achievement of mutual understanding does not only rest on the HH student's way to initiate repair, but also on how the co-participant designs his repair.

To summarize, the students routinely disclaim hearing or understanding of a teacher's or classmate's question or request by means of vocal open class repair initiators. Students regularly deploy simultaneous visual resources, such as raised eyebrows, body leans as well as squinted eyes (cf. also Mortensen, 2012; Seo & Koshik, 2010). Despite the potential combination with visual resources I chose to refer to these instances as *vocal repair initiators* in an attempt to distinguish them from those practices that are based only on visual resources (cf. section 3 below). A particularity of the HH students' initiations is their use of *unvoiced* repair initiations that are based on German interrogative particles (*was*, *wie*). I considered these initiations vocal practices because of their base on spoken language, but also due to the difficulty (and potential bias) of distinguishing whether a practice is whispered or unvoiced (on the basis of the researcher's recordings).

The repairs carried out by the trouble source speakers are generally *reformulations with minor modifications*, which means that the trouble source and the repair turn are highly equivalent and accomplish the same action. Thus, the OCRIs such as *was* ('what') or *hā* ('huh') are most commonly treated by co-participants as referring to a local problem of *perceptual understanding*. Perceptual understanding is not limited to 'hearing' but includes the reception and treatment of vocal and visual resources concurrently. As a matter of fact, the analysis of some examples has shown that the modifications in the repair turn rely on a bundle of different spoken and visual resources.

- (1) As a means of enhancing perceptual salience, spoken prosodic features like accentuation or speed are modified.
- (2) 'Visual prosody' as for example bigger mouth movements, forward leanings or head tilts can relevantly be used as a means of enhancing perceptual salience.
- (3) Visual resources such as fingerspelling (but also gestures or signs) can be used in self-repairs.

- (4) Additionally to the enhancement of perceptual salience, repairs also comprise modifications on the more structural level. On the one hand, morpho-syntactic simplification (excerpts 23 and 24) as well as specification of reference (excerpt 25) are implemented in the non-first firsts in addition to the perceptual modifications.

By means of the combination of perceptual enhancement and simplification or specification, the participant who operates the self-repair endeavors to promote progressivity and address the understanding problem at the same time: by carrying out multiple modifications within one repair, the chances for a successful resolution of the interactional problem may be augmented, and this implies a successful returning back to the progression of interaction (cf. also Gardner, 2004 for revised turns after problematic responses that address understanding problem and preference organization). However, when a repair carries out different modifications of the trouble source turn, it is methodologically impossible to track back which one of the modifications has finally contributed to the successful resolution of the problem. In some cases also, the repair or multiple repair is ultimately unsuccessful.

The organization presented in this section can be summarized as follows:

Participant		Action		Description
A		FPP		The first speaker accomplishes a display question or an information request
	B		FPP (repair initiator)	The second speaker disclaims hearing/understanding by mean of a vocal repair initiator (was, wa, wie), possibly combined with visual resources (squinted eyes, raised eyebrows, leaning forward)
	A		SPP (repair)	Enhanced perceptual resources, morpho-syntactic simplification, referential specification
B		SPP		Response

Table 18

3 Initiating repair by means of gaze

This section concentrates on a further practice that the hard-of-hearing students rely upon for displaying non-understanding of a prior question or request. In contrast to the vocal repair initiations (section 2), these practices can be called *visual practices* because they are based on specific gaze conducts only. These displays of non-understanding consist of an absence of the relevant next action accompanied with either the *preservation of mutual gaze* or the *rapid establishment of mutual gaze* with the trouble source speaker. These gaze conducts contrast with the students' gaze redirections towards relevant material or the stagings of thinking (chapter VII, section 3).

The understanding of these gaze conducts during absences of relevant next actions as *practices* is based on empirical evidence: it appears that the same feature (gaze conduct) within the same sequential environment accomplishes the same action (Heritage, 2010; Stivers, 2002). This is warranted by the fact that co-participants respond to the practices in a systematic manner. On the basis of this, I will further refer to these practices as repair initiations. Visual repair initiators have been discussed by Seo & Koshik (2010), Mortensen (2012) in hearing interaction, and also researchers in the field of hard-of-hearing communication mentioned visual elements that are followed by self-repair of the trouble source speaker (Caissie & Rockwell, 1993; Jeanes et al., 2000; Tye-Murray & Witt, 1996; and Skelt, 2006; Pajo, 2012 within a CA approach). Leaning forward, quizzical looks or a hand to the ear have been described as non-vocal actions that indicate trouble in hearing and understanding (even if their status as repair initiation is not approved by all researchers, cf. e.g. Pajo & Klippi, 2013). Importantly, all the practices described consist in *movements* of a body part. Interestingly, in the data under study here only one occurrence of such a repair initiation was found (but they did accompany their vocal initiations with such visual movements). By contrast, the HH students make use of visual repair initiators that consist in an *absence of movement*. On the basis of the assumption that the sense-making process is based on the participants' *movements* of body parts (their vocal tract, their hands or eyebrows; Hougaard & Hougaard, 2009), it is important to bear in mind however that treating an absence of movement as a practice may be debatable to the extent that 'mutual gaze' is rather an absence of action than an action. Very recently, Pajo (2013) commented for example that delays of HH participants can be interpreted differently by their co-participants, sometimes inducing self-initiation of repair and sometimes not:

"Sometimes, when the HI participant is not immediately taking a turn, the delay seems to help the FP [familiar partner] to predict trouble (...). However, a mere delay (especially one without gaze, or other any non-vocal actions) does not usually cause FPs to self-initiate and produce a repair (for example, to repeat.)." (Pajo, 2013:72)

The data under study reveals that the vocal OCRIs and the visual practices for initiating repair have exactly the same interactional implications. Note however that the number of visual repair initiators is slightly higher than that of vocal ones (35 open class repair initiators, 19 are visual and 16 are vocal¹⁰²). The explanation for this may be twofold. First, visual initiations qualify the preference for progressivity: by requesting a repair by means of a gaze conduct, progressivity is only minimally breached because there is not a clearly identifiable insert sequence in terms of repair initiation and repair. Second, and this intimately linked to the first point, making repair initiations in a minimally disruptive manner enables the students to portray themselves as competent conversationalists in the sense that they can avoid to be publicly recognized as the person who does not hear/understand. The sequential environments where these initiations occur support this interpretation: these repair initiations occur often in multiple repairs and when the students are engaged as speakers in plenary interaction or in group work (with hearing classmates).

¹⁰² As mentioned, unvoiced question particles are counted as vocal repair initiations in this study.

3.1 Maintaining mutual gaze with the trouble source speaker

A first practice that students deploy for displaying a problem of access to the just previous turn consists in the absence of gaze withdrawal from their co-participant who accomplished the FPP. The remedial actions proposed by the co-participant are of the same type as those after OCRIs. The first excerpt illustrates this between Jacob and a hearing classmate (Cyril). All students have received different worksheets and are asked to come together for group work. Through the attribution of different sheets, the class is divided into three groups, a, b, c. During the arrangement of the different groups, Cyril approaches Jacob's to ask him which sheet he has, which group he has been attributed to. Jacob displays trouble with the prior question from line 02 on, first with a vocal OCRI (l.03) and then only with mutual gaze (l.05).

Excerpt 32

Corpus SG, [JNV_IN_100607]

- 00 Cyr *(1.5)
 Cyr_gz *PNT(sheet_jacob) -h->*
 Jac_gz *desk->*
 mon->
- 01 Cyr (hey) are you do you have c
 Cyr_gz (hey) BIST DU *(.) HAST DU C?
 Jac_gz *->jac->*
 ->cyr->
- 02 → (0.8)
- 03 Jac (huh;what)
 → (°hä?°;°wa?°)
- 04 Cyr do you have c
 CYR "hast du c.
 "PNT(sheet_jacob) -h
- 05 → (1.0)
- 06 Cyr +C." ((enhanced visual articulation))+
 CYR "release of hold
- 07 Jac_gz (0.2)
- 08 Jac no
 Jac_hd "(°mhm.°)
 Jac_gz "shake
 >sheet-->
- 09 Cyr what do you have
 Jac_gz *>was hast du?<=
 >cyr-->
- 10 Jac_gz =*>blackboard-->*
- 11 Jac euhm a
 *äh: a:.

Jac_gz *>cyr-->>

[Jac HI student, Cyr H student]

Cyril starts establishing mutual engagement between him and Jacob through a pointing towards his sheet (Mondada, 2007a; Mortensen, 2009; Streeck, 2009). Then, Cyril asks if Jacob is part of the group C (l.01). His first start of the question is designed as a question referring to Jacob as a member of group C ('are you C'), but is then interrupted and reformulated by referring to the task/paper ('do you have C'). The polar question is designed with a syntactic inversion and produced with high volume, responding to the noisy surrounding caused by the students' parallel group building. Cyril's question at line 01 is followed by a gap of 0.8 seconds during which Jacob is steadily gazing back at Cyril without providing any response. Jacob then opens a repair sequence through a vocal OCRI (l.03). Cyril's repair consists in a reformulation of his previous action by a repetition of his initial question (more precisely the second part of his turn) and by dropping the previous self-repair; as in his first version, Cyril parallels this by specifying the reference through a pointing to the exercise sheet (l.04; cf. also figure 57). With respect to prosodic resources there is no apparent augmentation of vocal intonational features or volume. Rather, the repair is produced with a normal volume whereas the first version was produced with markedly high volume.

Cyril's repair (l.04) still does not get any response from Jacob who maintains his gaze at Cyril during one second (l.05). This gaze conduct clearly contrasts with the precisely timed gaze withdrawals by means of which the hard-of-hearing students display their understanding of their co-participants' questions or requests (described in chapter VII, section 3). After one second of mutual gaze and a lack of response, Cyril again self-repairs by reducing the question to the sole naming of the group, namely C (l.06; figure 58). Cyril's reformulation is a reduction of the previous turn. With respect to prosodic features we have seen that his first turn was quite loud (l.01) whereas his second version was a little bit less loud (l.04). The third version is particularly interesting as Cyril shortens his turn to the most essential information, the group's name *C*, and at the same time, Cyril strongly enhances the visual articulation of *C* by lifting his chin a little bit (cf. figures 57-58; also excerpt 29).



Figure 57

Figure 58

	FRI_LH	"PNT(DREI)
09	Pas_gz	*(1.1) *>fri
10	Pas_gz	*(0.8) *>mic (?)
11	Fri	hundr- [hunder - u-sixteen was the group
	Pas	[(xxxx) u u sechzehn isch gruppe ((continuation))

[Fri main teacher, Pas HIS, Jon HS, Cla class, Mel HS]

The teacher proposes similar repair types to these displays of trouble: he recycles the trouble source turn mainly by clarifying the references, addressing therefore not primarily hearing but an understanding problem. After a third repair attempt at line 08, Pashali further displays non-understanding/hearing by gazing back at Fritsche for 1.1 seconds. This is followed by an action that recalls Schegloff's (2007) observation that "*if the trouble has not been dealt with in three tries, the parties may give up and find another way of continuing the interaction*" (ibid.:106; but see Egbert et al., 2004): after three repair attempts, the teacher finally provides Pashali with a candidate answer in order to possibly re-install progressivity of the halted sequence. Through the candidate answer Fritsche finally shifts from repairing his prior turns (backward-oriented actions) to an action which carries further the progression of interaction (forward-oriented action). This is responsive to the substantial break in progressivity, i.e. the fact that an answer to his question in line 01 is still pending. This change of procedure in how to remedy an understanding or hearing problem demonstrates that there is no static and strict interrelation between a type of display of access to the previous turn and its remedial actions (i.e. it is not sure that one can speak in terms of conditional relevance, cf. Selting). By contrast, remedial actions that aim at re-establishing intersubjectivity (and progressivity) are locally adapted to the contingencies of the unfolding interaction. The excerpt provides evidence for the fact that even when progressivity is substantially broken, the initially launched course of action is not sacrificed in the service of progressivity. Concretely, for re-establishing progressivity the teacher could have abandoned the question and closed the course of action, but by providing a candidate answer the participants finally manage to achieve an intersubjective understanding of the question and to promote progressivity of the launched course of action.

Psychological studies interested in gaze in interaction have described mutual gaze and especially mutual gaze during silences as being embarrassing or even threatening (e.g. Argyle & Cook, 1976). According to these studies, mutual gaze during silences is regularly disrupted by either one of the participants breaking gaze or breaking silence. This is reported to occur after some tenths of seconds as a result of participants' avoidance strategy of embarrassment/threat. In such a view,

gaze withdrawals are therefore seen as a conduct regulating the interpersonal relationship. Notwithstanding the reality of such instances, the next example substantiates the suggestion that these conducts are not determined by physiological dimensions like embarrassment or threat due to mutual gaze, but that they are actually exploited as sense-making practices for action.

In excerpt 34 is an example that shows that a silence between an FPP-speaker and the recipient is resolved by a third person, which has not been involved in mutual gaze. The excerpt is taken from an activity in plenary and implicates the main teacher Roth, Jacob and the teaching assistant Micheli. Roth addresses a display question to Jacob (l.01-03). Jacob does not respond but maintains mutual gaze with Roth for a bit more than 0.6 seconds (l.05). The participant who finally resumes silence is Micheli (l.06), who was not implied in mutual gaze with these participants.

Excerpt 34

Corpus SG, JINV_IN_100624]

		the five colors jacob
01	Rot	*die fünf f"arben, jac*ob.
	ROT	"EINS -h
	Rot_gz	*->jac->*
	Jac_gz	*>mic-->* *>rot-->
		*(0.4)
02	Jac	*reseating and bending forward
		how one has to highlight nouns
03	Rot	wie werden "nomen übermalt?
	ROT	"EINS
04	Jac	((blink))
05		→ (0.6)
		which color
06	Mic	→ welche *f[arbe]
	Jac_gz	*>mic-->*
		with which color
07	Rot	[mit welch]er <fa*rbe.>=
	Jac_gz	*>rot-->*
08	Mic	=nomen
		nouns
		*(0.5)
09	Jac_gz	*rot-->*
		*(0.5)
10	Jac_gz	*>left side-->*
		euhm orange
11	Jac	°°ähm°° (.) or*ange.
	Jac_gz	*>rot-->>

12	Rot	no these are the pronouns orange <nein>? das sind die pronomen. orange.
13	Rot_gz	*(0.2) *->jac->*
14	Rot_gz	*(0.3) *->nik->*
15	Rot_gz	*(0.3) *->jac->*
16	Rot Rot_gz ROT	do you know *we[isst du (x)] *->nik->* *PNT(nik)
17	Jac	(blue;brown) [+(blau;braun.)+]

[Rot main teacher, Mic teaching assistant, Jac HI student]

Roth launches a request to name the colors of the different word types (nouns, adjectives, pronouns, verbs), addressed to Jacob (see gaze. l.01). Simultaneously to this, Roth deploys a manual *EINS* ('one') and thereby projects a list (l.01). However, at this point, mutual gaze between her and Jacob is not established as Jacob gazes at Micheli. The teacher then vocally other-selects Jacob by means of an address term (l.01) and it is exactly in the middle of her address term that Jacob reorients his gaze to Roth. Then, during 0.4 seconds Jacob gazes at the main teacher and straightens slightly his upper body (l.02; gestural pre-beginning, Gülich & Mondada, 2008). When mutual engagement is established, the teacher continues (l.03). The teacher modifies her initial request for naming the colors by means of an imperative form (i.e. with strong entitlement, Curl & Drew, 2008) into a display question pertaining to the color associated with nouns ('how does one highlight nouns'). Whereas the action type changed, the semantic content remains unchanged (*farben* > *übermalen*; 'colors' > 'to color'). The outcome that the question targets however has also slightly changed to the extent that the initial request asked for naming all colors (for nouns, adjectives, verbs, etc.), whereas the revised form asks for the color of nouns only¹⁰³. Thereby Roth narrows down what Jacob has to do.

At the completion of Roth's display question (l.03), Jacob quickly blinks (l.04) but he does not answer the question (l.05). During a lack of answer of 0.6 seconds, he maintains his gaze at the teacher without staging any thinking process or displaying an imminent turn beginning. While Roth and Jacob mutually gaze at each other, progressivity is halted as the relevant next action to Roth's question is still pending. The mutual gaze is resumed after a bit more than 0.6 seconds (l.05-l.06) by Micheli, a third party, who reformulates the teacher's question (l.06; 'which color'). The teacher aligns with Micheli's repair proposition (l.07) and Micheli further expands with the

¹⁰³ This may suggest that the first action (l.01) was not a request to Jacob but a topicalization in which the further display question (l.04) is embedded. This enhances the interpretation that l.04 is not responsive to Jacob's silence.

specification of the word type Roth is searching for (l.08, 'nouns'). In this case it is clear that the break of silence cannot be related to a regulatory function between the participants (of embarrassment, threat), as it is a third party who resumes the silence. By contrast, the fact that a third participant proposes a repair suggests that the mutual gaze is interpreted as a practice for indicating a problem in understanding/hearing.

The three-party organization of this repair is noteworthy. The previous instances discussed in section 3.1. are categorized as *other-initiated self-repairs* involving a trouble source speaker and a repair initiation speaker, where the repair is carried out by the trouble source speaker. The present excerpt provides an illustration of what could be referred to as a special case of an *other-initiated other-repair*: Jacob initiates a repair of Roth's trouble source turn, while the repair is carried out by Micheli (cf. Egbert, 2004, 2009). Practically, the teaching assistant reformulates (l.06) the teachers' question (l.03) by reproducing the same semantic content: from 'how to color nouns' she operates a shift to 'what colors (have) nouns'. In addition to this, the word 'color', firstly used at line 01, is repeated with enhanced accentuation in the teacher's increment at line 07. Ensuing this repair Jacob shifts his gaze between the two teachers (l.07, l.09), then gazes at Roth during half a second (l.09), and finally stages thinking by withdrawing his gaze to the left side during half a second (l.10). This staging is followed by a hesitation marker (l.11, *ähm*) and finally the answer 'orange'. With regard to the repair by Micheli, three things are noteworthy here:

- As Micheli has not been engaged in mutual gaze, her intervention cannot be related to a pressure to end a silent mutual gaze.
- Jacob is not gazing at Micheli and therefore does not solicit her (cf. Goodwin, 1987 on co-participation in word search).
- Micheli's repair is highly equivalent with the teacher's initial FPP but the diversity of resources deployed (changing verb to noun, repetition and accentuation of 'color') allows simultaneously addressing potential problems in hearing (accentuation) and understanding (verb>noun), which in turn augments the chances for establishing understanding and progressivity.

Note that this specific repair format involving three participants is an indication of the procedural consequentiality of the integration classroom setting - the organization of repair is shaped by the fact that the setting is composed of students and two teaching persons (see chapter VI for a more extensive discussion on the setting). It contrasts with similar instances in ordinary conversation: Egbert (2009) shows that when a third participant carries out repair, the repair initiating speaker and the trouble source speaker orient to the participant's repair as being inappropriate to some extent (e.g. by specifying the repair). This qualifies the preference for the addressed participant to answer (Stivers & Robinson, 2006). In the data under study here however, this type of repair is not sanctioned or oriented to as inappropriate. The fact that participants do not treat it as troublesome may be a specificity of this type of classroom.

The example is a deviant case that shall strengthen the argument that the steady mutual gaze in response to FPP is deployed as practice for initiating repair. I have argued so far that such mutual gaze is a practice for displaying non-understanding/hearing and that is followed by the teacher's recycling of the prior FPP. In excerpt 35 however, we see the following happening: Jacob steadily gazes at Micheli at the TRP of her question (l.09). However, finally he launches an answer (l.11). This answer puts into question whether the mutual gaze is therefore really displaying non-understanding/hearing. However, there is an overlap between Jacob's answer and Micheli's repair (l.11), which in turn corroborates the practice of mutual gaze as a repair initiator. Jacob's task in this excerpt is to highlight words that may be difficult for him to write down/to spell. At the same time, this activity engenders some negotiations on German words (testing lexical knowledge, morphological knowledge). The negotiation concerns the word *bänken* ('benches'), which Pashali pronounces with a voiceless explosive (*pänken*, l.04) rather than a voiced explosive.

Excerpt 35

Corpus SG, [JNV_IN_100603]

01	Mic MIC Jac_gz	what's that "*>was ist das?< "*PNT(book) *->sheet->*
02	(0.4)	
03	Jac_gz	*(0.3) *->mic->*
04	Jac	'pänken' pänken.
05	Mic Mic_nv	what's that "was ist das? "shrug shoulders
06	Jac_gz	*(0.3) *blink
07	JAC Jac Jac_gz	you know 'pänken' "*... "FB_rectangle(3) , , , _" "*weissst *du: "pänken. (1.5)"= *->hands->* *->mic->*



Figure 59

Figure 60

08 Mic what does one do with that
 Mic_ex ="was macht man damit?"
 "shrug shoulders

09 → (1.1)

10 Jac → *(0.7)
 *-m-



Figure 61

Figure 62

11 Mic → what can one do with that
 Mic_ex → [<was kann man> machen *damit?
 Jac → *shrug shoulders
 [(°muss;mit°)
 (must;with)

12 (0.3)

13 Jac (must;with) chair
 (muss;mit) stuhl.

[Mic teaching assistant, Jac HI student]

The fragment starts with Micheli's display question addressing the meaning of *bänke* (benches), two that Jacob responds with two different answers (l.04 and l.07). Micheli however does not observably orient to this as a sufficient or acceptable answer but formulates a further question (l.08), asking about the usage of the same object. Jacob does not respond to Micheli's question but remains silent while steadily gazing at her for a bit more than a second (l.09). After 1.1 seconds of mutual gaze, Jacob starts shaping his lips in a way that resembles the letter *-m-*, and he holds this lip configuration during another 0.7 seconds while still gazing at Micheli (see figure 62; cf. Streeck & Hartge, 1992 on [a]-face).

Following this *-m-*, Micheli and Jacob both launch a turn in overlap (l.11) and thereby make public a divergent orientation to the preceding lack of answer. Micheli's turn displays her orientation to Jacob's absence of answer as a trouble in hearing: she only minimally revises the trouble source turn, by slowing down the rate of her speech and articulating more clearly (l.11). In addition to the prosodic changes, she provides minor changes on the grammatical level, adding an ability verb (l.11, *können*). In overlap with this repair, Jacob launches a response that begins with the letter *m*

(l.11; *muss* 'must' or *mit* 'with'). Then, Jacob cuts off his turn, and takes it up after the assistant having finished her reformulation (l.13). The apparent coherence between the mouthed *m* and the upcoming *mit stuhl* (with a chair) or *muss stuhl* ('must chair') suggests, retrospectively, that Jacob did project a turn-beginning through the m-mouth configuration already at line 10 and that he therefore in fact understood Micheli's question. For understanding the import of this excerpt, the following points should be recalled:

- The mutual gaze during the absence of answer indicates non-understanding or non-hearing.
- Routinely, the trouble source speaker addresses such displays by a self-repair. This occurs regularly between 0.5 sec and 1.0 sec of mutual gaze.
- In chapter VII, section 3.1.1. the student's gaze withdrawal and staging of thinking (e.g. with lip configurations) at the completion of previous speaker's questions/requests has been shown to display understanding of the FPP.

In the excerpt quoted above, Micheli does not self-repair after 1.1 seconds of mutual gaze with Jacob. After 1.1 seconds, Jacob attenuates the display of non-understanding/hearing by indicating with a mouth configuration a potential turn launching. By contrast to what has been described as a practice for displaying understanding in section, Jacob does however maintain mutual gaze with the teaching assistant. All in all, it appears that Micheli takes into account the maintenance of gaze (as a display of non-understanding/hearing) whereas Jacob signalled an imminent turn-beginning and thinking process through the use of an initial mouth configuration that projects a further turn launching. The facts that Jacob did not break mutual gaze and that this mouth configuration is barely visible may have contributed to the divergent interpretation.

The example above presents the sole case found where a silence with an absence of gaze break at a TRP and during a silence is followed by an overlap. In all other instances, either the student finally withdraws his gaze and turns into a thinking pose, or the co-participant accomplishes a self-repair. The systematicity of this organization as well as the explanation of the previous example as a deviant case provides compelling evidence for the fact that an absence of response in addition with the maintenance of gaze between the FPP and an SPP-speaker can be considered as a practice and not as a mere conduct.

In summary, additionally to the students' vocal practice of initiating repair of their co-participants' prior turns, this section has shown that there is a visual practice consisting in an absence of answer accompanied with the maintenance of mutual gaze between the participants. The discussion of several excerpts has provided evidence for the organization of this gaze conduct and its functioning as a practice: the practice is deployed by the students in the same sequential environments and it accomplishes the same action, which is warranted by the fact how co-participants orient to the practice in a systematic manner. Similarly as vocal repair initiators, the visual practices for displaying trouble with the prior question are only rarely addressed as indicating 'only' a hearing problem. The repair often involves several resources (referential repair,

prosodic modifications, morpho-syntactic simplification) and thereby addresses different levels of potential trouble.

3.2 Establishing mutual gaze after non-gaze

In the previous section, the maintenance of mutual gaze between the FPP-speaker and its recipient at the completion of a question or a request has been described as a practice for displaying non-understanding. The practice has implied that during the FPP-speaker's turn, mutual gaze is established and hence gaze is maintained past the TRP. In other instances, the student is not gazing at the FPP-speaker during the question or the request. In this case, the practice is locally adapted: students display their non-understanding by means of quick head and gaze movement towards the the FPP-speaker at the moment of a TRP. Similarly as for the other the instances in section 3.1., the sequential consequence of this practice is characterized by a high equivalence between the trouble source and the repair turn.

A first example shows how a student quickly establishes mutual gaze with the teacher for indicating a problem with the teacher's prior question (l. 07). Excerpt 36 stems from a writing activity. The teaching assistant addresses a question to Pashali (l.03) and Pashali indicates trouble in accessing this question by means of a rapid establishment of mutual gaze with her (l.07).

Excerpt 36

Corpus SG, [PA_IN_100527]

01	Pas_nv Pas_gz	*(1.3) *leaning back after a period of writing *to the front of the class->in front->*
02	Mic MIC Pas_gz	(°ah°) "(0.7) "(0.2) "(1.0) "... "PNT(sheet_pas) "*-h__& *->sheet->*
03	Mic Pas_gz	<i>here does the direct speech start</i> &mh hier fängt die wörtliche *rede an, (0.7)& *->mic->*
04	Mic MIC Pas_gz	<i>where does it end</i> &"wo ist sie zu ende? *"retracting pointing *->sheet->*
05	(.)	
06	Mic MIC	<i>now here</i> "jetzt hier? "PNT(sheet_pas)
07	Pas_gz → Mic_gz	*(0.4) *->mic->* *->sheet->*

- 08 Mic_gz *(0.6)
*->pas->
- 09 Pas_gz *(0.2)
->sheet->
- 10 Mic does the direct speech end here
Mic_gz ist die wö:rtliche rede *hier zu ende?
->sheet->
- 11 (.)
- 12 Mic then you have to put quotation marks
MIC dann musst du,
Pas_gz /GAENSEFUESSCHEN/
->mic->*
- 13 Pas_nv *((starts writing))
Pas_gz *->sheet->*

[Mic teaching assistant, Pas HI student]

In lines 01-02, Micheli deploys a vocal and a gestural pre-beginning as a means of establishing a mutual focus of attention between her and Pashali (l.01-02) before she launches her question (l.03-04): she asks where in the written text the direct speech starts (l.03-04). At the completion of this question, Pashali is gazing at his sheet, which is a relevant orientation with respect to Micheli's pointing to the sheet. Micheli quite straightforwardly provides a candidate answer (l.06) by means a vocal deictic accompanied by a renewed pointing, reinforcing the relevance of Pashali's gaze to the sheet. The answer to this question is lacking: Pashali steadily gazes at his sheet for a moment (l.06), and then he quickly directs his head/gaze towards Micheli (l.07), before he finally turns back to the sheet (l.09). Micheli orients to this as a display of problematic access to her question, reformulating her FPP at line 10. The way she recycles her question is noteworthy. The repair first comprises not only a part of the turn expansion that presented a candidate answer (*hier* 'here', l.06), but also the essential elements of the initial question turn (l.03, l.04). Furthermore, there is an enhancement of perceptual resources (cf. lengthening, accentuation first syllable of *wörtliche* ('direct' (speech), l.10).

When this self-repair reaches prosodic, syntactic and pragmatic completion, Micheli expands her turn by stating that he should write the double quotes. Note that she adds this despite the fact that Pashali did not respond to the question whether this is really the position where direct speech is finished. Thus, Micheli does have no indication whether Pashali understood the question or not, as Micheli closes herself the adjacency pair that she has opened (and repaired, l.04-06; l.10). This is an example which shows how Micheli favours progressivity over an explicit demonstration of Pashali's understanding. It may be assumed however that by monitoring Pashali's further writing, she can have access to whether he understood what he has to do.

The two expansions at line 05 and at line 12 may best be interpreted as preemptive or prospective work on understanding. Several points support this interpretation. First, Micheli expands her turns

quite straightforwardly (after unmarked pauses of 0.1 seconds between the TCUs). Second, and more importantly, at the possible completion points at the end of lines 04 and 11, Micheli is not gazing at Pashali but at the sheet. In a recent contribution, Stivers & Rossano (2010) propose a rethinking of questions as naturally making relevant a next action. They propose instead that the pressure for the accomplishment of an SPP is not only the result of its responsive position after a sequentially implicative turn, but relies in fact additionally on the action type and the specific turn design of the initial turn. The authors describe gaze at the potential next speaker as being a response-mobilizing feature of turn design, making potential next speakers responsible for the accomplishment of an SPP. In this light, Micheli's conducts suggest that she attaches more importance to the fact that Pashali should write the quote marks than to Pashali providing actual responses to her questions. The rapid production of a candidate answer (l.06) shows also that Micheli prioritizes progressivity and the accomplishment of the practical action of writing the quotation marks over a possible display of whether Pashali understood Micheli's questions.

The example below provides further evidence for the fact that students indicate that they did not access (understand, hear, see) a prior turn by means of a quick gaze establishment with the prior speaker. Jacob, Nikolas and Nora prepare a speech that they will present in front of the classroom. The text of the speech is already written down, now the students have to organize what parts of the speech they present and who presents what. Micheli comes to their desk and asks them several questions. For one specific part she said that they should say this, but the students refused. She further points to a new point and suggests that this one they should say; Jacob displays trouble in hearing or seeing the question by quickly establishing mutual gaze with Micheli finely tuned to the TRP of her turn (l.04).

Excerpt 37

Corpus SG, [JNV_IN_100621]

01	Mic	<i>okay</i> "ok*ay: .
	Mic_nv	"shrugs shoulders
	Jac_gz	*->sheet->*
02	(0.7)	
03	Mic	<i>but this one</i> "aber das schon.
	MIC	"PNT(sheet_jac) -h

04 Jac_gz → ^{*(0.3)}
^{*->mic->*} ((quick))



Figure 63

05 Mic ^{this one yes}
 MIC das "schon. (0.4)
 "(SUPER;EINS) PNT(sheet_jac)

06 Jac ^{yes this one we have to}
 Jac_gz *ja da muss?
 ->sheet->

07 Jac_gz ^{*(0.2)}
 ->mic->

08 Mic ^{yes exactly}
 ja: genau.

[Mic teaching assistant, Jac HI student]

Micheli's FPP is a confirmation request that consists in a hybrid turn composed of a vocal and a visual deictic, thereby making relevant the gazing towards the sheet (l.03). At the TRP of Micheli's turn, Jacob quickly reorients his gaze from the sheet towards Micheli (l.04) without providing any response. Following this, Micheli revises her FPP (l.05) through a reduction on the syntactic level (dropping of *aber*) and an enhancement of visual resources through the adding of a hand configuration composed of a fist and a extended thumb – this configuration resembles the sign for 'one' (*EINS*) as well as *SUPER* (see figure 63). Note that the initial FPP (l.03) and the reformulation (l.05) remain highly equivalent. This suggests that Micheli interprets Jacob's lack of answer and the gaze reorientation as a display of problematic access to the just previous turn. The ensuing answer that Jacob provides (l.06) shows several things: it effectively reinstalls progressivity, it demonstrates understanding (by its modification of Micheli's question, not a mere 'yes'), and it displays that Micheli's interpretation of Jacob's lack of answer as well as her remedial action were appropriate.

The examples discussed in this section suggest that the students' practice for displaying non-understanding is not merely a combination of an absence of answer and a maintenance of gaze. By contrast, the examples demonstrate the context sensitiveness of that practice:

- When mutual gaze is established between FPP-speaker and the recipient during the accomplishment of the question/request: the recipient's maintenance of gaze is the relevant feature implementing the action of repair initiation.
- When mutual gaze is not established between FPP-speaker and the recipient during the accomplishment of the question/request: the recipients's (quick) establishment of gaze with the FPP-speaker is the relevant feature implementing the action of repair initiation.

After both types of visual conducts within the specific sequential environment of FPP-completion, the trouble source speaker recycles his initial FPP. This means he interprets the absence of answer with the gaze conduct in response to an FPP as a practice for indicating a problem in understanding.

The analyses in this section have shown that students display non-understanding of their co-participants' questions or requests by means of a *visual practice* that consists in an absence of answer and one of two gaze conducts:

- (1) A maintenance of gaze at the FPP-speaker (when during the FPP speaker and recipient already gazed at each other)
- (2) The rapid establishment of mutual gaze with the FPP-speaker (when during the FPP speaker and recipient did not gaze at each other)

By means of this practice, students accomplish the action of other-initiating repair of the teacher's or their classmate's question or request. Then the trouble source speakers engage in self-repair, *reformulating* their initial FPPs with minor modifications. By means of these self-repairs, the trouble source speakers indicate that they interpret the students' displays of non-understanding as indexing a problem with the just prior question/request. Frequently, the repair addresses several potential problems at the same time.

The organization of the courses of action in this section can be described as follows:

Participant		Action		Description
A		FPP		The first speaker accomplishes a display question or an information request
	B		FPP (repair initiator)	The second speaker disclaims understanding by mean of a visual repair initiator (1) No gaze withdrawal (2) Rapid establishment of gaze
	A		SPP (repair)	Enhanced perceptual resources, morpho-syntactic simplification, referential specification
B		SPP		Response
Table 19				

This table highlights that the visual practice described in this section present a sequential position and interactional implications that are identical with the vocal practice described in section 4.1.

With respect to progressivity, one important point should be mentioned. Just like the vocal repair initiators (section 2), the visual repair initiators break sequential progressivity by opening an insert sequence. These insert sequences are rather short, as the trouble source speaker recycles his initial question/request in a highly equivalent manner. Moreover, ensuing this repair the student commonly provides an answer to an initial FPP. Consequently, sequential progressivity is regularly reinstalled rather quickly. However, this does not mean that after the repair the student answers ‘correctly’ – thus, the progression of the overall activity can further by suspended.

4 Discussion

This section concentrated on the practices that hard-of-hearing students deploy for displaying their non-understanding of a prior question or a request by means of unspecific repair initiators. I have shown that the students make use of vocal and of visual practices. With regard to this distinction however, two points must be highlighted:

- (1) The differentiation between vocal and visual resources is a methodological decision that aims at finely describing the observed practices. It is not clear that such a differentiation is relevant for the participants themselves.
- (2) With respect to a distribution of different unspecific repair initiating practices, an important preliminary observation is that the practice of steady of mutual gaze occurs regularly when a prior repair initiation was based on a German particle.
- (3) The distinction between vocal and visual resources is problematic to the extent that also spoken language is ‘visual’. Thus, as long as a repair initiator such as a German ‘was’ is vocalized, it may be categorized as ‘vocal’. The question arises how to categorize it when it is unvoiced and is only ‘visual’? Again, such methodological problems may be relevant for the analyst but not for the participants themselves. Note that in this thesis I treated also unvoiced repair initiators based on German interrogative particles as ‘vocal’ resources.

The students’ practices for displaying non-understanding of a prior FPP can be unspecific or specific. In this chapter I focused on open class repair initiators, which can be summed up as follows:

- (1) When a speaker’s question or request reaches completion, the student displays non-understanding of this FPP by means of vocal open repair initiators such as *was*, *wie*, *wie bitte*. Raising eyebrows, leaning forward and/or squinted eyes can accompany these. When students accomplish repair initiations, they break sequential progressivity by opening an insert sequence that will be completed by the trouble source speaker. When

this insert sequence is closed, students regularly close the initial adjacency pair by providing an answer.

- (2) When a speaker's question or request reaches completion, the student displays non-understanding by means of specific gaze conducts. When speaker and recipient are gazing at each other during the accomplishment of the speaker's FPP, then the maintenance of mutual gaze at the completion of the FPP is displaying non-understanding.
- (3) When speaker and recipient are *not* gazing at each other during the accomplishment of the speaker's FPP, then the rapid establishment of mutual gaze at the completion of the FPP is displaying non-understanding. Thus, the practice for displaying non-understanding consists in the recipients' gazing at the FPP-speaker while not responding to the FPP.

By making such a categorization I attempt to show that the traditional difference between repair initiators (as e.g. *what* or *huh*) and mere 'lacks of response' may be reconsidered when one takes seriously the assumption that social interaction is fundamentally multimodal and that participants to interaction rely on bodily resources beyond the linguistic resources (i.e. speech, signs) for the sense-making process in interaction. The vocal displays of non-understanding are repair initiators deployed in the following sequential environment, where the repair is more precisely an other-initiated self-repair.

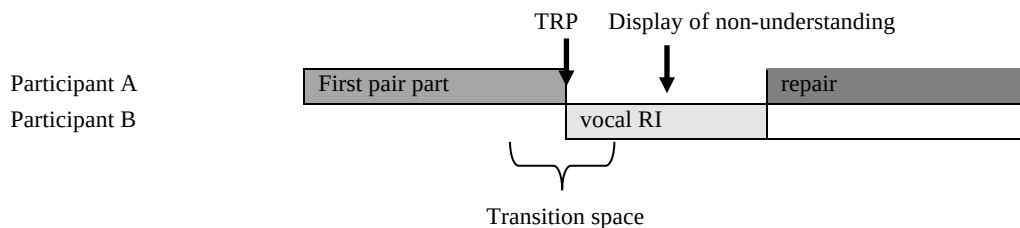


Figure 64; Based on Clayman, 2013

By contrast, what I have treated as visual displays of non-understanding would traditionally be schematized as a silence or an absence of answer as in the following schema. The repair in this case would be a self-initiated self-repair.

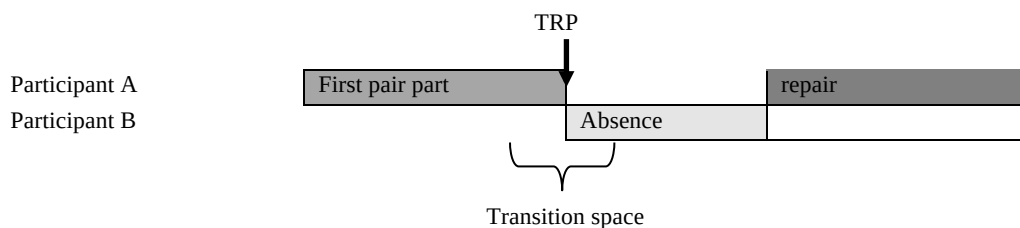


Figure 65; Based on Clayman, 2013

I have described how students actively ‘design’ these gaps by means of their specific gaze conducts, thus it may be suggested that these absences are in fact filled with visual repair initiators as exposed in the schema below. In these cases the self-repair is not self-initiated, but the other-initiation by the student is minimized as it is deployed only by a subtle gaze conducts.

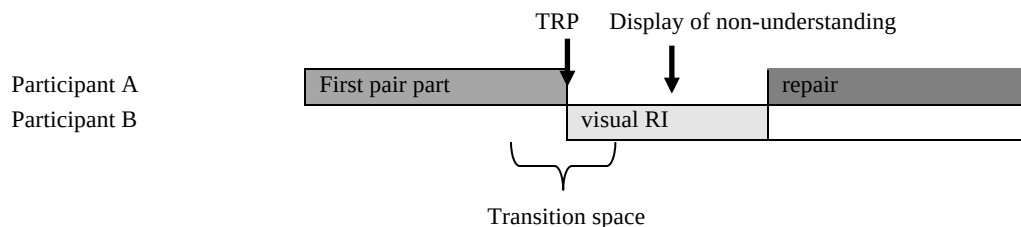


Figure 66; Based on Clayman, 2013

The examination of the corpus revealed also that students make heavily use of vocal and visual repair initiators that are unspecific, i.e. they index a problem with the prior turn but without singling out a precise element of the trouble source turn. Previous research has already pointed to the fact that open class repair initiators are heavily used by deaf and hard-of-hearing participants, and this type of repair has regularly been associated with ‘incompetent’ repair strategies. In addition to these vocal OCRI, the hard-of-hearing students in this study accomplish also visual repair initiators and these are used slightly more often than the vocal repair initiators. Against the background of the previous analyses I argue that these visual repair initiators have a specific import for the management of progressivity and bears testimony to the students’ interactional competence:

- Repair initiating speakers break sequential progressivity as they open a new adjacency pair and displace the relevant next action of the initial FPP to a later position.
- A difference between visual and vocal repair initiators is that visual repair initiators can be seen as staging non-understanding by means of a *minimization* process. According to Schmitt (2003), *stagings* (Inszenierungen) can be accomplished either by *maximization* or by *minimization*. *Maximization* entails that the participant combines a multitude of different multimodal resources (e.g. posture, gesture, prosody) that make the staging dense and redundant. *Minimization* by contrast means that the staging relies on a minimum of resources, as e.g. the staging of thinking where gaze conduct and possibly head position (on the hand) are used (Schmitt, 2003). Note however that minimization does not necessarily refer to so-called non-verbal resources – the use of a vocal resource only is also *minimization* by contrast to the use of a combination between voice, eyebrows and bodylean¹⁰⁴.

¹⁰⁴ “Grundsätzlich kann sich Inszenieren in zwei Formen zeigen: Zum Einen kann es als Maximierung realisiert werden, bei der unterschiedliche Aspekte multimedialer interaktiver Arbeit (Intonation, Sprechweise, Mimik, Gestik, Körperverhalten) verdichtet werden und redundant zum Einsatz kommen, um das gesprächs-rhetorische Verfahren zu kontextualisieren. Zum Anderen kann Inszenieren auch als Minimierung deutlich werden. Hierbei handelt es sich also

- I argue that the concentration on visual resources in fact qualifies the preference for progressivity for the following reason: when students use visual instead of vocal repair initiators, the trouble source speaker's repair may be heard as a self-initiated self-repair (i.e. less impinging on progressivity than other-initiated repair). Hence, when students initiate repair by solely visual resources, interaction is apparently less disrupted. In the light of hard-of-hearing participants' status of co-enrolled students with specific needs, this may relevantly be exploited as a way of dealing with face-threatening situations where progressivity and intersubjectivity are at risk. Practically, making requests for repair in a minimally disruptive manner enables the students to portray themselves as competent conversationalists in the sense that they can avoid being publicly recognized as the person who does not hear/understand. In this sense, students can very subtly manage progressivity in interaction at the same time as portraying themselves as competent conversationalists and regular students. This observation recalls Skelt's (2012) pointing out that the way that hard-of-hearing participants design repair initiations is not only aiming at an efficient re-establishment of understanding, but it is also responsive "*to the threat to face or identity which repair may present by exposing hearing loss.*" (ibid.:65).

This section has shown the use of unspecific repair initiations by means of which students display a lack of understanding. A different way of indicating non-understanding in response to a first pair part by a co-participant consists in explicitly claiming non-understanding by means of negative constructions relying on the mental verb *verstehen* ('to understand'), as *ich habe nicht verstanden*. Such claims may function as repair initiations (Selting, 1987a). What is noteworthy in the present corpus is that

- (1) When teachers use *ich habe nicht verstanden*, this formulation is repair-initiating and the trouble source speaker (the HH student) recycles his turn.
- (2) When students rely on such explicit formulations in response to the teacher's questions/requests the teacher disaligns from them as being repair-initiating. For this reason these formulations of non-understanding are treated separately from the students open class repair initiations. There are 2 occurrences where explicit claims of non-understanding are repair initiating, but these do not occur in response to FPPs.

In what follows I show how the use of explicit formulations of a lack of understanding but also a lack of knowing are used by the students and oriented to by the co-participants. I first recall the methodological part of these analyses.

gerade um ein ge- genläufiges Verfahren, bei dem die Bedeutungskonstitution durch die Konzentration auf eine dominante Ausdrucksebene (beispielsweise Gestik) erfolgt." (Schmitt, 2003:194).

Chapter IX - Dealing with progressivity III - Formulations of non-understanding and non- knowing

The present chapter focuses on how hard-of-hearing students deal with progressivity in interactions by means of claims of a lack of understanding or of knowing in response to co-participants' first pair parts. It is concerned with explicit formulations of restricted epistemic access (not knowing, not understanding) and perceptual access (not hearing) by means of the German mental verbs *verstehen* ('to understand') and *wissen* ('to know'). The focus is put on those cases that occur in response to questions or requests for action produced by a hearing co-participant. In this specific sequential environment, formulating a lack of understanding or knowing enables the hard-of-hearing participants to address the conditional relevance set by the FPP while at the same time either deferring or replacing the expected relevant next action. The following excerpt illustrates the use of these claims: in response to a question, the student first answers with a claim of non-understanding (l.06) and then a claim of insufficient knowledge (l.13).

Excerpt 38

Corpus SG, [JNV_IN_100623_1ere]

- 01 Rot *who can recite all three forms for the last verb*
02 wer kann jetzt fürs letzte verb noch einmal alle
 drei formen sagen?
- 03 (0.4)
- 04 Rot jacob?
- 05 (1.0)
- 06 Jac → *I didn't understand*
 [ich habe nicht verstanden.
- 07 Rot *basic tense one*
 [grundform eins.
- 08 (1.1)
- 09 Rot *for this verb*
 von diesem verb da.
- 10 (1.6)

- 11 Fi1 (xx) sleeps
 (xx) schloft.
- 12 (3.6)
- 13 Jac → °ich weiss nich(t)°
 I don't know

In this excerpt, the student Jacob uses the formulations *ich habe nicht verstanden* ('I didn't understand') and *ich weiss nicht* ('I don't know') as *claims* of a lack of epistemic or perceptual access. Note however that while Jacob formulates and claims that he does not understand/know, this does not necessarily imply that he really does not know; by contrast, participants can claim not knowing for accomplishing another purpose in interaction, and whether they really do not know or understand is a matter of interactional negotiation (Beach & Metzger, 1997). In this study I use *claims* of insufficient knowledge (CIKs; Beach & Metzger, 1997; Sert, 2011) and *claims* of non-understanding (CNUs) as referring to the *action of formulating* a lack of understanding or knowing. In the quoted excerpt, Jacob's claims of non-understanding and insufficient knowing provide an explanation, an account, for his lack of answer.

This chapter examines the following questions: (a) In what specific sequential and actional environments do students address first pair parts by formulating a lack of understanding or knowing? (b) How do students design these formulations? (c) What interactional consequences arise from those formulations? (d) What do those cases reveal concerning the status of the student in the regular classroom? The analysis is built on small collections and single case analyses of HH students' formulations of lack of knowing and lack of understanding in response to FPPs of a hearing co-participant. The analysis reveals that by means of formulations of not knowing and not understanding, the students accomplish different interactional purposes that go beyond displaying a lack of understanding or knowing.

The chapter is organized as follows. I first briefly report on some recent research on the interactional use and management of such disclaims of epistemic access (section 1). Then I show how students formulate lack of understanding with *ich habe nicht verstanden* ('I did not understand') in response to a prior FPP (section 2). Section 3 is concerned with explicit formulations of a lack knowing with *ich weiss nicht* ('I don't know') in response to an FPP.

1 Formulating lack of epistemic and perceptual access

In response to questions, formulations of non-knowing (epistemic access) and formulations of non-understanding (epistemic or perceptual access; Koole, 2010) are part of *non-answer responses* (together with repair initiations and counters; Heritage, 1984a; Clayman, 2001, 2002; Stivers, 2010; Stivers & Robinson, 2006). I have already discussed the case of non-answer responses and

their relevance concerning the principle of progressivity in interaction (chapter IV, section 5.2.3.). The aim of this section is limited to a brief report of how such claims of non-knowledge and non-understanding have recently been treated within CA studies. As stated above, it is important to highlight that claims of non-understanding and of non-knowing can be used in a non-epistemic or non-cognitive manner, which means that they do not necessarily refer to a state of knowledge or understanding. In a similar vein, Beach and Metzger (1997) underlined that “*whether a recipient producing ‘I don’t know’ actually knows or not is a matter to be interactionally worked out*” (ibid.:568). This recalls also Sacks’ (1995a) discussion of how callers of a helpline avoid providing their names by displaying a hearing problem with the prior turn.

Formulations of non-understanding with the verb *verstehen* (‘to understand’) can have different meanings according to its turn design and its context of appearance. In a study on miscommunication, Selting (1987b) mentions that formulations of non-understanding in present tense relate to a grasping problem (*nicht verstehen*, ‘not to understand’), while the form in past tense refers to a perceptual problem (*nicht verstanden*; ‘not understood’). More recently, Deppermann (2011) described the negative constructions with the German verb *verstehen* (‘to understand’) as representing four different meanings, namely ‘to perceive auditorily’, ‘to grasp the semantics’, ‘to see/accept the reasons’ and ‘to accept a position’ (ibid.:108f.; cf. also Deppermann & Schmitt, 2009). In a study on 300 constructions with *verstehen* in different types of conversation, the author reports that 84 occurrences (28%) are negative constructions. Out of these 84 occurrences, 22 occurrences relate to the meaning of grasping and only 1 occurrence has been interpreted as meaning ‘to perceive auditorily’. The results of the study also demonstrate that the meaning of the negative construction is related to the activity type of the interactions: in psychotherapy interaction *verstehen* as *grasping* is more prevalent, whereas *verstehen* as *producing a reproach* is pervasive in mediations or debates (ibid.:109).

In classroom interaction, displaying and demonstrating understanding and knowledge is a ubiquitous task that the participants have to deal with. The teacher regularly makes relevant such displays from the students by means of different types of questions. While some questions make relevant the demonstration of understanding and knowing, other questions are sufficiently responded to with a claim of understanding or knowing (Koole, 2010). With this respect, Koole (ibid.) has shown that sole *claims* of understanding are sufficiently responding to the teacher’s checks of understanding, while *demonstrations* are expected in response to checks of knowledge (cf. chapter IV, section 4.3. on this difference). Moreover, displays of understanding and demonstrations of knowing are made relevant at different sequential moments, the former closing rather monological explanations provided by the teacher, and the latter closing dialogic explanations (ibid.). On the other hand, when students encounter a lack of understanding or of knowing, they have the option to formulate this with a negative construction with the mental verbs ‘to understand’ and ‘to know’. Formulations of non-understanding have been reported to be used by students for initiating a sequence with the teacher and introducing a help sequence (Lindwall &

Lymer, 2011; Koole, 2010) and for refuting a problem-solution that a teacher addressed to a student without having taken into account what the problem of the student actually is (Koole, 2012b). In response to questions, *formulations* of non-understanding in classroom interaction have not been studied in detail. It may be expected that in this specific sequential environment, they accomplish the action of repair initiation, i.e. one type of non-answer responses.

Formulations of non-knowledge by contrast have recently received much attention within the field of CA and its renewed interest in how participants locally negotiate epistemic rights and responsibilities (Stivers, Mondada & Steensig, 2011; Drew, 2012). Studies on different languages (e.g. English, Estonian), different institutional and non-institutional settings (e.g. courtroom, car repair service) show the fundamental importance of negotiation of rights and responsibilities to know as an underlying issue that “*drives sequences*” (Drew, 2012). In response to questions more specifically, formulations of non-knowledge have been shown to be used as accounts for an absence of answer in different contexts of interaction (e.g. Clayman, 2001; 2002; Gonzales Martinez, 2008; Hutchby, 2002; Mondada, 2011b; Sert, 2011). As already discussed in chapter IV, section 5.2.3., when a participant responds to an FPP with a claim of insufficient knowledge, sequence progressivity is promoted whereas activity progressivity is not (cf. Stivers & Robinson, 2006). For the case of questions addressed by a social investigator addressed to a suspect, this sequential organization has been described as follows:

“Suite à une question du locuteur A, sollicitant du locuteur B des informations sur sa situation, l'énoncé 'je ne sais pas' compte comme une réponse. Le locuteur B a respecté les préférences de progressivité et de contiguïté (Schegloff, 1979; Sacks, 1987) et la paire adjacente est complète.” (Gonzales Martinez, 2008:28)¹⁰⁵

In mundane conversation, when a participant responds to a question with a non-answer response, it is routine that another participant, who was not selected initially, provides an answer (Stivers & Robinson, 2006). This practice qualifies the preference for *activity progressivity* in interaction because participants exhibit a preference for providing an answer and thereby carrying forward the activity, even if this involves compromising the preference for answers by selected participants. Hence, Stivers & Robinson (ibid.) refer to this practice as a second order organization represented by the fact that preference for progressivity in interaction overrides the preference for answers by selected speakers. It has to be emphasized however that these observations are based on data qualified as mundane conversation and where more than two participants are present.

Very recently, studies on classroom interaction have shown how students deploy claims of insufficient knowledge in response to the teachers' questions (Sert, 2011; Sert & Walsh, 2013). In classroom interaction or other institutional interaction, additional organizational constraints possibly apply – e.g. when a student cannot provide the answer to a question, what are the possible

¹⁰⁵ My translation: “Following a question by participant A, requesting information on behalf of his situation from participant B, the utterance ‘I don’t know’ counts as an answer. Participant B has respected the preferences of progressivity and contiguity (Schegloff, 1979; Sacks, 1987) and the adjacency pair is complete:”

interactional consequences of this? A first constraint pertains to the common turn-taking system in classroom that consists in teacher-directed turn allocation. This implies that after a non-answer response by a student, another student may bid for a turn at talk rather than just take the turn and provide the answer (but this depends on the local participation framework at stake). This has been shown by Sert (2011) and Sert & Walsh (2013) to occur in the majority of cases. A second constraint pertains to the fact that in classroom interaction, restricted epistemic access may be read as an index of being a (bad) student. As the overall aim of the setting in itself is ‘learning, understanding and knowing’, a claimed problem in epistemic access may relevantly be turned into a learning matter. In this sense, the overall learning goal may sometimes and temporarily override the preference for sequence progressivity. This occurs when the local goal of providing an answer is locally adapted into a goal of learning – in this case, the activity has a different trajectory.

Sert (2011) and Sert & Walsh (2013) have also shown that in response to CIKs provided by the students, teachers regularly provide a repetition of this (‘you don’t know’) before they select another student. Their interpretation of this is that it provides evidence for the whole class that a next turn is to be taken. As I will argue in the analyses, such repetitions can be interpreted as candidate understandings which function as repair initiating devices, that provide the student with the opportunity to provide an answer instead of a non-answer. In ordinary conversation, these non-answer responses are accountable and not accounting for restricted epistemic access has face-threatening potential. Keevallik (2011) states on this behalf that freestanding epistemic disclaimers are face-threatening in the sense that they localize the problem of responding in the quality of the prior question (i.e. *“that the question was illegitimate, improper or inappropriate.”*, *ibid.*:1990). Commonly, participants in ordinary interaction account for an absence of answer by invoking inability rather than unwillingness (‘no-fault accounts’, cf. Clayman, 2002:235; cited by Keevallik, 2011). The investigation of CIKs by Sert (2011) did not show that in classroom interaction these non-answer responses are accounted for. It may be assumed that the status of the student as a learner is an implicit account for potential lack of knowing. Nevertheless, it cannot be excluded that, on occasions, the teacher sanctions a lack of knowledge (implying that the student is supposed to know).

In the remainder of this chapter I show how students make use of formulations of a lack of understanding or a lack of knowledge. The table below provides an overview of the ensemble of non-answer responses found in the corpus. While repair initiations have already been discussed in chapter VIII, the focus of this chapter is on the very small amount of explicit formulations of insufficient knowledge or non-understanding, providing evidence for how students exploit these for accomplishing interactional task(s) at hand.

Non-answer responses after SPPs	Occurrences	%
Formulations of insufficient knowledge	23	31.9
Formulations of non-understanding	3 (+ 2 that are not non-answers but answers)	4.2
Repair initiations	46	63.9
TOTAL	72	100

Table 20

2 Formulating lack of understanding: the use of '*ich hab nicht verstanden*' in response to first pair parts

This section is concerned with the discussion of cases where the hard-of-hearing students declare having restricted epistemic or perceptual access by means of the verbs *verstehen* ('to understand') and *hören* ('to hear'). In the remainder of this study, the term 'claims of non-understanding' (CNU) shall refer to both of these. In the data under study in this thesis, CNUs produced by the students occur in first pair parts as well as in response to first pair parts. In this study, the focus is on those CNUs that occur in response to first pair parts provided by a hearing participant. All of the students' CNUs are in first person singular and in perfect tense (*ich habe nicht verstanden*).

The number of HH students' CNUs is low (5 occurrences) and they appear in different temporal and sequential patterns. Hence, the analysis consists in a series of single case analyses rather than a demonstration of a systematic use (a practice). All occurrences in my data share one specific and striking feature: co-participants (which in this case is always one of the teaching staff) do not treat the students' responsive CNUs as repair initiations. In the light of the students' specific hearing status, this is a rather intriguing observation. The excerpts demonstrate that the fact of not treating the CNUs as repair initiators embodies the teacher's local other-categorization of the hard-of-hearing students as 'normal' or 'regular' students.

2.1 Claiming non-understanding in extended sequences of problematic repair

There are 2 instances of CNUs that function similarly (CNU_94; CNU_262). As I mentioned above, the differences in the courses of action however do not allow for treating them in exactly the same manner. Beyond the differences, the CNUs share two interesting features: the CNUs are embedded in courses of action where

- repair does not successfully re-establish understanding
- the teacher/teaching assistant explicitly refers to the student's 'hearing'

In both cases the student deploys a CNU as a means for accounting for his previous initiation of an insert sequence and therefore a break in progressivity. The first example occurs in a course of action that has already been discussed in chapter VI section 2.4.2. (excerpt 11) for its import on the management of dual participation frameworks. The main teacher Roth explains a procedure of a task and Jacob indicates a problem in understanding the main teacher's explanation by addressing it to the teaching assistant. Note that for this initiation he uses a formulation of non-understanding on the basis of sign language (l.36). This CNU is not part of the collection as it does not respond to an FPP but is an initiative action. The CNU relevant for the argument here is Jacob's claim of non-understanding at lines 45-46, which occurs in response to Micheli's question whether he does not hear.

Excerpt 39

Corpus SG [JNV_IN_100603] (CNU 94)

31	Rot	and I think you will quickly reach twenty words *und ich denke da kommt ihr ra*sch auf *zw[anzig *wörter. Rot_gz *->class->*	*->mic->*	*->sheet->*	[*nod_____
	Jac_gz				*->in front of
	Mic_hd				
	Mic_gz	herself->*			
32	Rot	you will soon reach twenty words right? *seid ihr *schnell bei zwanzig wörtern hä? Rot_gz *->class->*			
	Mic_hd				
	Jac_gz		*->mic->*		
33	Jac_hd	shake			(0.6)
34	(.)				
35	Jac_RH	(I) don't/didn't NICHT (WAVE) "[*((hand on right side of head)) " *WAVE(mic) Jac_LH *->jac->*			Has someone underlined three words and (said) Rot >hat jemand drei wörter unterstrichen und (>>ges(x)<<)&
	Mic_gz				

36 Jac_RH I don't understand/I didn't undertand
 Jac NICHT "VERSTEHEN
 "-ve(r)sta-



Figure 67

37 Jac_RH ((hand on right side of head))
 there is a sheet (on the overhead projector)
 Mic ("°es ist ein (x)blatt "(vorne°°)"
 MIC "PNT(OP),,,,"



Figure 68

38 Jac "(0.9)
 "shake
 JAC "(lifts hand with index stretched)

39 (0.8)

40 Mic_gz *(0.5)
 ->rot->

41 Mic_gz *(1.5)
 ->jac->
 Jac_gz *->rot->*

42 Jac_gz *(0.4)
 ->mic->

43 Jac_gz *(0.6)
 ->mic->

44 Mic don't you hear
 MIC "°hörst du *nicht?°
 "PNT(ohr) NEIN

Rot (>xx<)

these three words are
 difficult for me

Rot (d-) die
 drei *wörter
 machen mir
 schwierig-
 keiten.

Gz *->mic->*
 (0.7)

this means that
 when I

Rot *das heisst
 dann wenn
 ich&

Gz *->class->*

dictate the whole text

Rot den ganzen
 text
 diktieren

the this student (m.) or
 this student (fem.) has

Rot hat das: (.)
 dieser
 schüler oder
 diese
 schülerin&

only three errors

Rot &nur drei
 fehler .

45	Jac Mic_gz Mic_hd	sure I do -do::*:(ch)- *->rot-> *nod	all other words are written correctly Rot *alle anderen wörter sind richtig geschrieben. Gz *->mic- >class->*
46	Jac Jac_RH Jac_gz Mic_hd Mic_gz	I didn't understand → -hab(e) (habe) *"nich(t) "verstand(en)-" "NICHT "VERSTEHEN"+ [*(.) -h *',','+ *->rot->* [*nod_____ *->students->*	I have some "(1.2) ROT "UNGEFAHR Rot "hab ich so& ROT "UNGEFAHR
47	Mic	okay -okay-	Rot "meine:& ROT "UNGEFAHR,,,
48	Mic_gz	*(1.5) *->rot->*	slight doubts Rot leichten *zweifel. Gz *->mic->*
49	Mic_hd	yes *(1.7) *nod	hm? one reches quickly twenty Rot hm? Rot *kommt man bald auf zwanzig. Gz *->class->>
50	Jac_hd	no shake	so think thoroughly Rot also überlegt euch
51	MIC Mic_gz Jac_gz	wait *WARTEN *-h *->rot->> *->rot->>	If he or she dictates that to me, do I write it correctly? if not, highlight. Rot wenn DER oder DIE mir das diktiert, schreib ich das fehlerfrei (0.7) nicht sicher (.) übermalen.

The student Jacob initiates interaction with the teaching assistant by means of a display of non-understanding (l.31-34), the teaching-assistant responds by the provision of a piece of information (l.36), but Jacob does not ratify/accept the teaching assistant's response (l.38). Jacob's head shake indicates, that the repair has not been successful (i.e. the repair is still pending). This is then followed by the assistant's question relating to Jacob's 'hearing ability' (l.44; *hörst du nicht*, 'don't you hear?'). This question may function as a search for an account for why Jacob

encounters a problem in understanding, and/or why Micheli's answer did not successfully establish understanding. Hence, Micheli asks for an account that may explain the break in progressivity. Jacob answers with a claim of non-understanding that specifies the reason for his non-understanding and thereby actually provides the account: he did hear, but he did not grasp (l.45-46). The CNU is embedded in a course of action of unsuccessful repair and deployed by the student as an account for a break in progressivity. At the same time, Jacob disaligns from Micheli's action that suggests that he has hearing problems.

Students however do not always refute hearing problems as a valid account for problems in responding. In other instances, it is precisely a claim of restricted perceptual access that is used as a resource for displaying conform and appropriate conduct. In Excerpt 40, the CNU is embedded in a course of action where the teaching assistant talks into being Jacob's inappropriate procedure in solving a task. Micheli assists Jacob with the correction in an activity that is unfolding in plenary. For reasons of legibility, only the interaction between Micheli and Jacob is represented in the transcript below. Jacob has to provide the comparative and superlative forms of the adjective *laut* ('loud'); this means he has to write down the forms '*laut*' ('loud'), *lauter* ('louder') and '*am lautesten*' ('the loudest'). When the progressivity of the sequence is halted for a moment, Jacob asks Micheli to spell out the adjective with finger alphabet, but Micheli requests Jacob to listen. This is when Jacob responds that he does not understand (l.48).

Excerpt 40

Corpus SG, [JNV_IN_100624] (CNU_262)

- 17 Mic ^{loud and more}
°laut (.) und noch mehr?°
- 18 (..)
- 19 Mic ^{loud}
°laut, °
- 20 (2.7)
- 21 Jac ^{louder}
"lau (..) >TEN.<
JAC "-L- -h_____ -N-
- 23 Mic_hd nod
- 24 +(5.2) ((jacob is writing))+
- 25 Mic ^{and}
°und°
- 26 MIC ^{the louden (non-standard form)}
[((hand raised high))
- 27 Jac [*"am (...) lau (...) TEN*
JAC "*-M-_____ -T-_____ -N-*
- 29 (.)

30 Mic_hd shake

31 Mic ^{the lou-}
°°am lau°°

32 +(8.1) ((jacob is writing))°

33 Mic [(te)s:
34 JAC [-T-

35 +(1.7) ((jacob is writing))+

36 Mic [lautes&
37 JAC [-E-_-T-

38 Mic &[ten
39 Jac_hd [*shake
40 JAC *palm-up -T- palm-up -L- [-A-
41 Mic ["du sollst&
42 MIC "(WARTE) &
wait you should

^{hear}
43 MIC &"PNT(ear)
44 Mic &"hör[en
45 JAC ["PNT(ears)
46 Jac_hd "shake_____

^{I didn't hear}
47 +(.) ((mic bowing to the side))+

^{I did not understand}
48 Jac → "°ich habe nicht verstanden°
JAC "PNT(ears)

49 (0.6)

^{then you have to read}
50 Mic dann (...) [musst du le-
^{write it down}
51 JAC [(AUFSCHREIBEN)

^{no look at the mouth (lipread)}
52 Mic (°nein?°) (xxx)
53 MIC SCHAUEN PNT(mouth)

54 (1.1)

^{the loudest}
55 Mic <<am lautes:ten.>>

56 +(1.3) ((jac is writing))+

^{est}
57 Mic ten.

58 (1.7)

59 Mic (right; good)
(*RICHTIG; *GUT)

[Mic teaching assistant, Jac HH student]

From line 17 to 24, Jacob provides a first adjectival form and writes it down. The form is non-standard in German (*lauten* instead of *lauter*), but Micheli accepts it as an answer. The superlative ‘the loudest’ which Micheli requests at l.26 however poses a problem (cf. Micheli’s disconfirmation l.30). Between lines 31 and 32, Micheli and Jacob then launch into a collaborative construction of the solution: Micheli provides Jacob with the correct form, whereas Jacob writes it down. This endeavor is however not without difficulty, as will become apparent in the follow-up of the sequence.

The item that Jacob has to write down consists in four syllables - *am lau-tes-ten*. At line 31, Micheli starts with the first two syllables *am lau-* and then Jacob starts writing (l.32). At line 33, Micheli provides the third syllable *tes*, whereas Jacob parallels this with the letter *T* (l.34), before he starts writing again. At lines 36-37 then, Micheli and Jacob are visibly focalized on two different elements: Micheli repeats syllables two and three (i.e. *lau* and *tes*), whereas Jacob requests her to spell just the third syllable by producing an *E* and a *T*. At this specific moment, Jacob launches a repair initiation by means of a head shake, looking at his sheet, producing a quick palm-up hand and a mouthed *ma-* (*mal*) (l.39; supposedly stemming from *noch mal*, ‘once again’). Micheli however refuses this repair initiator by means of a visual *WARTEN* (‘to wait’), and thereby she reprimands Jacob’s request for a repetition and requests him instead to ‘hear’ (*du sollst hören*, ‘you should hear’, l.41-42). Jacob however refuses the relevance of Micheli’s refusal by accounting twice that he did not hear. He thereby reaffirms and insists on his position. With respect to the turn designs, the first claim of non-hearing consists in visual resources (pointing to his ear, vocalization; l.45 and l.46). A second claim, responding to Micheli’s embodied display of a problem in understanding (l.47), is backed up with a clear vocal turn consisting in ‘I did not understand’ which is again accompanied with a pointing to his ear (l.48). By means of these claims of restricted perceptual access, Jacob accomplishes at least two things.

- (1) He accounts for the initiation of an insert sequence (l.39-40) that has been refused by Micheli.
- (2) By means of these accounts, Jacob can also relevantly resist the local other-categorization of himself as ‘not listening’, which can be considered as being a typically deviant conduct in classroom that puts into question Jacob’s status as a cooperative student¹⁰⁶.

Note at this point, that in consideration of the fact that this interaction unfolds in parallel to an ongoing plenary activity, Jacob’s task to ‘hear’ is obviously a difficult one; first because of the surrounding noise by the plenary interaction, and second by the low-voiced speech of Micheli.

¹⁰⁶*Du sollst hören* implies that Jacob did not listen or did not hear, but that he is expected to hear/listen.

Jacob and Micheli finally propose two alternative ways in overcoming the problem of ‘hearing’ and to re-install progressivity. Micheli asks Jacob to lipread (cf. *le-* as a presumed start of the verb *lesen*, ‘to read’, sign *SCHAUEN*, ‘to look’, directed to her mouth; 1.50, 1.53). In contrast to this, Jacob proposes that Micheli directly writes down the form in question (1.51). As appears in the transcript, finally Jacob is looking at the teaching assistant and presumably writes down the adjectival form.

The analysis of this section reveals that students can deploy CNUs as a means of accounting for a break in progressivity on the one hand, and as a means of resisting an other-categorization that puts into question the student’s ‘conforming’ or ‘expected conduct’ on the other hand. Moreover, by backing up the vocal CNU with visual resources, the hard-of-hearing students disambiguate the meaning of *verstehen* (‘to understand’) by referring clearly to either an understanding problem in terms of grasping (excerpt 39) or a problem in terms of perceiving (excerpt 40).

2.2 Claims of non-understanding in response to checks for hearing

Two claims of non-understanding as SPP are accomplished in response to a teacher’s or teaching assistant’s check for hearing (CNU_24; CNU_147). In excerpt 41, the teaching assistant asks Nikolas whether he understood a statement made by a hearing peer during a small group discussion. Nikolas responds with a claim of non-understanding that is accomplished by means of a head shake (1.18), while the vocal part is downgraded and uncertain (1.20).

Excerpt 41

Corpus SG, [JNV_IN_100607]

01	Mon MON	did hear what he said? hast du gehört was "er gesagt hat? "PNT(cyr)
02	Nik_gz	*(1.38) *->desk->*
03	Nik_hd Nik	no "shake "°ne(i)°
04	Mon	he had a good idea hatte eine (.) er hatte eine gu:te idee.
05	(0.7)	
06	Mon	do you see me? siehst du mich.
07	Mon_nv	*(4.3) *moves so that she stands in front of him

- 08 Mon (schau) bei der "nummer vier, (.) seid ihr oder?
MON "PNT(sheet)
- 09 NIK *(3.7)
*searches something in his workbook
- 10 Mon >nikolas.<
- 11 Nik_gz *(0.9)
->mon->
- 12 Mon you(pl.) have to think about something new another situation where one has to show
13 consideration for somebody
14 ihr müsst etwas neues °überlegen, ° (0.6) eine andere
situation, (.) >wo man auch< (.) rücksicht nehmen
muss.
- 15 (.)
- 16 Mon where maybe one has to help somebody
wo man jemandem vielleicht <helfen muss.>
- 17 (1.2)
- 18 Mon and did you hear what he said
Nik_gz und hast du gehört was er gesagt hat.
mon->*
- 19 Nik_gz *(1.3)
->desk->
- 20 Nik_hd → no I did not understand
Nik "shake
"(-x-) [-vest-
Mon it was quite soft
[es war etwas leise.

Within a discussion of possible answers to an open question, one of the students (Cyril) provided a response in low-voiced manner and by gazing at Carolyn sitting vis-à-vis. After this, Montebello intervenes by asking whether he has heard what Cyril said (l.01) and Nikolas responds with no (l.03). After some re-adjustments by Montebello so that Nikolas can lipread what she says (l.06-07), she re-explains the context in which the turn that Nikolas did not hear occurred (l.18). Then Micheli re-asks the same question (l.18). While Nikolas has already answered this question in line 03, he now recycles this answer but with integrating an explicit reference to ‘understanding’ (l.20).

One could ask why Nikolas responds to the second check for hearing with a CNU (cf. also excerpt 43), while in fact a simple *no* is the preferred response to a polar question (Raymond, 2003; ‘did you understand’ - ‘no’). As there are only two occurrences in the data, I can only propose some preliminary reflections. First, in this specific context where Nikolas is engaged in a small group activity with hearing classmates (the sole in 11 recorded lessons), the use of an explicit reference to ‘understanding’ rather than ‘hearing’ may be exploited as a resource for downgrading the

association of the trouble in answering to Nikolas' hearing loss. A second option may be that related to the fact that when the student must negatively answer to a hearing check, his conduct in the classroom appears to be deviant because he did not open repair. In fact the student reveals, *a posteriori*, that he has adopted a strategy of letting it pass and that he favoured progressivity over initiating repair – it is only when the teaching assistant explicitly asks for understanding that the student assumes having a problem. The use of a CNU may be responsive to this and function as an account for this 'interactionally deviant' conduct consisting in an omission of initiating repair despite a lack of understanding. A point that may support this idea may come from a moment in the same group activity, where the student explicitly claims understanding (instead of just saying 'yes'). In excerpt 42, the teaching assistant doubts that Nikolas understands and she explicitly requests Nikolas to initiate repair when he does not understand. In response to an understanding check again, Nikolas answers that he actually does understand (l.11).

Excerpt 42

Corpus SG, [JNV_IN_100607]

- 01 Mon → nikolas?
- 02 Nik_gz *(0.3)
->mon->
- 03 Mon when you don't understand it I want that you ask again or that you read that
wenn du es nicht verstehst dann möchte ich
dass du nochmals fragst oder das lie:st ?
- 04 Nik_gz *(12.4)
->sheet on the desk->
- 05 Mon °>nikolas?<°
- 06 Nik_gz *(0.3)
->mon->
- 07 Mon du you understand the question
MON "verstehst du die *fra:ge.
Nik_gz "grasping his book *->sheet->*
- 08 MON *(0.4)
*grasping his book
- 09 Mon on the sheet
auf dem blatt.
(1.3)
- 10 Mon question number four
Nik_gz die *frage nummer vier.
->mon->
- 11 Nik I understand the question
→ °ich verstehe die fr[age.°
do you understand the question

- 12 Mon [verstehst du [die frage.
 13 Nik_hd yes
 [nod

Unfortunately the small amount of occurrences does not allow for a clear demonstration of how the precise action that these CNUs accomplish beyond the provision of an answer to a check for understanding. It clearly contrasts however with type-conforming answer (yes or no; Raymond, 2003) and is therefore doing some additional job (note that in this vein is in fact breaking progressivity as it goes beyond a default answer). The abovementioned ideas are meant as preliminary reflections for analyses on a larger corpus. Another moment where the CNU is responsive to a check for hearing is discussed in the following section, because this occurrence is also embedded in a repetition task.

2.3 Claiming non-understanding within repetition tasks

There are 2 CNUs that occur in courses of action where the hard-of-hearing student's task is to (re-) produce grammatical forms or sentences that have been enounced in one or several previous turns by another student (CNU_24; CNU_235). A significant feature of these cases is that in order to provide the expected SPP, the hard-of-hearing student has, a priori, the possibility to just repeat a previously stated turn or series of turns. A case in point is excerpt 43. Micheli asks Nikolas whether he understood the answer that has been provided by the student Sylvia, while Roth asks Nikolas whether he can repeat Sylvia's answer (l.01)¹⁰⁷. After a lack of response (l.02), Micheli repeats her question (l.03) and Nikolas responds that he did not understand (l.04).

Excerpt 43

Corpus SG, [JNV_IN_100506] (CNU_24)

- 01 Mic did you understand it
 [*°hast du's verstanden?°]
 Rot can you repeat that
 [kannst du das wiederhol]en?
 Nik_gz *->mic->*
- 02 Nik_gz *(1.2)
 ->in front of himself, down->
- 03 Mic did you understand it pashali
 MIC "°hast du's verstanden pashali?°
 Nik_gz "PNT(ear) PNT(nik)
 ->mic->
- 04 Nik → (I) did not understand
 Nik_gz [*°hab nich(t) ve(r)stand[e(n.)°
 ->in front of himself, down->

¹⁰⁷ Micheli addresses Nikolas but uses the name Pashali, who is attending the other classroom.

In this case, Nikolas' CNU responds to a check of understanding (with clear reference to hearing by means of Micheli's pointing to the her ear; l.03) (cf. analyses of excerpt 42). Note that the CNU in this excerpt occurs within a course of action where a repetition by the hard-of-hearing student is made relevant. Thus, the understanding of the classmates' answer is essential for being able to further progress within the activity at hand. In this case, the students' sitting arrangement makes it difficult for the student to have perceptual access to the classmate's turns (as Sylvia is sitting in the very back of the room and Nikolas in the very front). The second case is occurring in a similar sequential environment, namely when Jacob is other-selected by the main teacher for providing a repetition of the previously stated verb tenses. Jacob accounts for his lack of repetition by means of a CNU (l.06).

Excerpt 44

Corpus SG, [JNV_IN_100623_1ere]

		<i>who can recite all three forms for the last verb</i>
01	Rot	wer kann jetzt (.) fü:rs letzte verb noch einmal <u>alle</u>
02		drei formen sagen, (0.4) jacob?
		<i>I didn't understand</i>
03	Jac	→ [°ich hab(e) nicht verstanden.°
		<i>basic tense one</i>
04	Rot	[grundform eins.
05	(1.1)	
		<i>for this verb</i>
06	Rot	von <u>diesem</u> verb da.

In this excerpt the CNU occurs in response to a request for repetition, during which the student has in fact displayed divided attention. In this specific case, claiming non-understanding may potentially be heard as repair initiating, but the teacher does not orient to it in this way. The CNU is interpreted in this case rather as an account for a lack of answer. The example is discussed in detail in section 3.4. (excerpt 53) because of its combination with a claim of insufficient knowledge.

2.4 Summary

In the present section we have been concerned with students' formulations of non-understanding in response to co-participants' first pair parts. These formulations are based on the mental verb *verstehen* ('to understand') – the negation of the form can be accomplished vocally with the German negator *nicht* ('not') or only with a head shake (excerpts 40, 41). Such a combination resembles the negation formation in sign language where the verb is expressed with a manual sign and a head shake. Moreover, the formulation may be vocalized and audible or only visible on the lips of the participant.

Within the whole corpus, only five cases of HH students' formulations of non-understanding in response to an FPP have been found. All of them occurred in classroom A. The instances can be split into the following three different sub-groups:

- (1) CNU occurs in a problematic repair sequence (excerpts 39 and 40)
- (2) CNU is a response to a co-participant's check of hearing (excerpt 41, 43))
- (3) CNU occurs in a course of action where the student has to repeat a prior turn (excerpts 43 and 44)

A striking observation is that none of the responsive CNUs is a repair initiator. The CNUs in response to checks for hearing may be considered as repair-initiating, but not as a prototypical repair initiator – the repair initiator may be considered as being accomplished by means of a *minimal adjacency pair*, namely the check for hearing and its response (cf. schema below) initiated by the teacher/teaching assistant.

A: turn 1
 B: check for hearing
 C: response to check for } repair-initiating hearing
 A: repetition of turn 1

In the present section we have been concerned with courses of action where students deploy CNUs for all practical purposes. In concrete terms, the deployment of CNUs operates on different levels of interactional order.

- (1) On the sequential level, CNUs address the conditional relevance of an FPP. Students thereby make observable that they understand that a speaker change has been made relevant.
- (2) On the actional level, the students have been shown to use CNUs for addressing the following interactional tasks:
 - o Provide an explicit account for a repair initiation (when this repair is a complicated endeavour), either by refuting that the origin is a lack of hearing (excerpt 39), or to the contrary, by underlining that the trouble is due to a hearing problem (excerpt 40); in both cases the vocal formulation of non-understanding is accompanied with a different manual sign¹⁰⁸;
 - o Respond to a check for hearing by recalibrating the origin of their trouble in responding, by refuting to adhere to an explicit avowal of a lack of hearing (excerpts 41 and 43)
 - o Resist a launched course of action through a request after having displayed divided attention.

It has been shown that teachers can either accept or refuse the CNU. When they disalign from the students' CNU, they put into question the students' classroom-conform conduct. This is in line

¹⁰⁸ Strictly speaking they would therefore be part of two different collections. In this case, the choice of gathering the examples is based on the German CNU and its embedding in a similar course of action.

with what we will observe regarding the precision-timed CIKs in response to requests for actions (section 3.3. below).

3 Formulating lack of knowing: the use of '*ich weiss nicht*' in responses to first pair parts

In this section I discuss cases where the hard-of-hearing students claim having restricted epistemic access by means of the verbs *wissen* ('to know'). In line with Beach & Metzger (1997) and Sert (2011), I refer to formulations based on the use of a negated form of *wissen* as claims of insufficient knowledge (CIKs). CIKs occur in different sequential positions (initiative or responsive turns) and they are cast in terms of different temporal and formal features (straightforward, delayed, freestanding, combined with complements). In this study, the focus is put on the students' deployment of claims of insufficient knowledge in response to FPPs. The multimodal analysis of these instances shows that participants deploy these formulations as a resource for handling substantial breaks in progressivity on the sequence level and in some cases also on the turn level. As visible in section 1 of this chapter, the whole corpus of 21 hours classroom interaction allowed gathering 23 occurrences where students use claims of insufficient knowledge in response to FPPs. Instances of CIKs in FPPs as well as CIKs as a hedging device (cf. Weatherall, 2011) have been excluded. The 23 occurrences present the following common sequential and actional denominators:

- all instances occur in response to display questions, information requests or requests for action;
- all instances implement the action of *accounting for the absence of a conditionally relevant* action (i.e. an answer, a provision of information, requested action). On a subordinate level, these accounts can be deployed as an instrument for other actions, i.e. to resist a specific other-categorization by a co-participant;
- all instances occur *after a verbal or non-verbal claim of understanding of the FPP*
- most instances occur in courses of action where a *substantial break in progressivity* occurred, i.e. an answer that is ratified by the FPP-speaker is lacking over a long time span.

Note that of all 23 occurrences, only 3 occur during the participation of the HH student in plenary interaction, 3 instances occur during an activity in small group, and the rest of the 17 instances occur in dyadic interaction with the teaching assistant. As discussed in chapter V, the practices of hearing students cannot be systematically analyzed due to the initial methodological decisions (camera angle, microphones). During plenary interaction however, the corpus reveals 6 CIKs deployed by hearing students.

3.1 Claims of insufficient knowledge after lacks of answers to information requests

The present section is concerned with cases where students claim insufficient knowledge after having claimed understanding of the previous turn by means of a change-of-state token (Heritage, 1984b) or a turn-initial hesitation marker. There are 12 instances of CIKs occurring in such a sequential environment.

The analysis of these sequences suggests that hard-of-hearing students use CIKs in sequential environments where *substantial breaks* in progressivity occur. CIKs are deployed as a practice for handling these breaks in progressivity by technically closing down an opened adjacency pair. The CIK does not reinstitute the progress of the overall course of action because the question has been addressed but not really provided with an answer. Nevertheless, the students' CIKs regularly function as a first move in the collaborative re-establishment of progressivity of interaction. These points are illustrated in excerpt 45. The segment stems from a reading exercise in plenary. The aim of the exercise is that students enhance their reading aloud skills (voice, rhythm, etc.). Previously to the excerpt, the hard-of-hearing student Pashali read aloud a text that he had picked out of a daily newspaper. After his reading, the main teacher Fritsche comments on the difficult nature of Pashali's text. He affirms that Pashali did not make the most convenient choice because the text contained too many difficult words. Subsequently to this, he questions Pashali about the reasons for the choice of this specific text (l.01), appealing for an explicit account/explanation. This is where excerpt 45 starts. The excerpt shows how after an initial information request (l.01), progressivity is substantially broken and sequence and within-turn progressivity re-established when Pashali provides a CIK (l.07).

Excerpt 45a

Corpus SG, [PA_IN_100611_2eheure]

01	Fri Jon_nv Pas_gz	did you chose this text because of the picture *hast du wegen dem <u>bild</u> diesen text gewählt. *takes pashali's journal-> *fri->newspaper->fri->*
02	Pas_gz	*(.) *->newspaper->*
03	Unb Pas_gz	show it >zeig mol *gschwind.< *->in front->*
04	Pas_gz	*(0.4) *->direction fri->*
05	Fri FRI Jon_nv	or why did you chose exactly this text oder wa- warum hast du <u>genau</u> "diesen text *genommen. "PNT(pas) *shows newspaper to neighbour->>

06 Pas_gz → *(1.2)
->newspaper->

07 Pas → eh*m* I don't know (yet)
Pas_hd → °äh (0.7) +*ich weiss nicht (doch nich-)=((smile))+
Pas_gz → *shake
->fri->

[Fri main teacher, Jon H student, Pas HI student Unb unidentified hearing student]

In lieu of an answer to the polar question at line 01, a first noticeable absence of an answer response occurs at lines 1.02-04. Pashali's several changes in gaze orientation during the teacher's first pair part (1.01) may foreshadow his problem with the teacher's question. At the first possible completion of the question (1.01), Pashali gazes at his newspaper (1.02). His gaze orientation then shifts in front of himself (presumably responding to a students' request, 1.03) and is finally oriented towards Fritsche (1.04). Fritsche orients to the noticeable absence of an answer by expanding his initial turn. This expansion is cast in terms of a change from a polar question to a wh-question (1.05). Pashali responds to this reformulated question with a delayed CIK (1.07). With respect to the temporal unfolding it is noteworthy that the CIK follows a moment where Pashali has indicated that he understood the FPP by means of a finely tuned gaze reorientation towards the newspaper at the moment of Fritsche's turn completion on the one hand (1.06), as well as a turn-initial hesitation marker *äh* ('ehm', 1.07).

Importantly, at the moment when the CIK is deployed, a whole range of impingements on progressivity have already occurred: Sequence progressivity has been broken through the absences of an answer (l.02-l.04) and an inter-turn pause (l.06). The hesitation marker and the ensuing silence of 0.7 seconds (l.07) constitute further breaks in progressivity on the turn level. In what follows, I refer to such multiple impingements on progressivity as *substantial breaks* of progressivity. The turn launched with the hesitation marker is finally brought to closure through a CIK, which at the same time accomplishes a technical completion of the adjacency pair. The CIK is shaped as a hybrid turn, composed of a vocal component as well as a visual component (cf. head shake and smile). The vocal component is very low-voiced and only its first part is intelligible (*ich weiss nicht*, ‘I don’t know’). There is a second part that might be heard as *doch nicht* (‘in fact (I do) not (know)’ or as *noch nicht* (‘not yet’). In any case, through his CIK at line 07, Pashali resolves a practical and *local problem* of progressivity, namely he brings the turn he has launched to completion. Furthermore, the accomplishment of a non-answer response resolves also a *more global problem* of progressivity in the sense that it addresses the conditional relevance that has been established through an FPP several turns before (l.01). Given the fact that this course of action occurs in the plenum, i.e. where all other students are engaged in the participation framework as recipients, the management of face and membership may be a particularly relevant issue. Pashali’s smiling face that accompanies the CIK may index such face management. Pashali’s turn launching displays his engagement in the activity of providing a response, showing thereby also that he is actively participating in the classroom interaction. Additionally, drawing on

a claim of insufficient knowledge as a means of handling a problem in progressivity suggests also Pashali's competent use of interactional resources as a means of handling the structural organization of turn and sequence (cf. Hutchby, 2002 on the use of CIKs by children and its interpretation as a component of interaction competence).

At line 07, the impingement on progressivity that emerged at line 02 partially recedes because the adjacency pair is technically fulfilled, in other words, the slot opened by a first pair part has been filled with an action that addresses the conditional relevance. By means of the CIK, Pashali supplies a turn for which he has been selected, he completes the adjacency pair, and as a result the next turn is re-allocated to the teacher. The interactional consequences arising from the CIK are noteworthy: the teacher does not read Pashali's CIK as a testimony of insufficient knowledge but treats it as a indicating a problem in understanding: instead of abandoning the course of action, the teacher actually provides revised questions (l.08, l.12) before closing down the activity.

Excerpt 45b

- 08 Fri → ^{what did interest you in this text} =was hat dich daran interessiert.
- 09 Pas_gz ^{*(1.4)}
Unb ^{*->newspaper->*}
^{*°dj antoine.°}
- 10 Pas ^{ehm}
^{°äh:° (2.8)}
- 12 Fri → ^{do you know dj antoine} kenn*s- kennst du dj antoine.=
Pas_gz ^{*->fri->*}
- 13 Pas ^{yes}
^{=ja.}
- 14 (0.3)
- 15 Fri ^{well then probably you read that oh I know that guy dj antoine}
16 >also< (.) dann hast du das wahrscheinlich gelesen AH
den kenn ich (.) dj antoine, (0.4)&
- 17 Pas ^{yes}
^{°ja.°}
- 18 Fri ^{and then you chosed that way}
&und dann hast du so gewählt?
- 19 (0.3)
- 20 Pas_gz ^{*(1.5)}
^{*->newspaper->*}

[Fri main teacher, Pas HI student]

Subsequently to the student's ignorance account, Fritsche provides Pashali with another reformulation of the question (l.08). This reformulation narrows down the possible answers by specifically asking for the element that awoke Pashali's *interest* in this text. By means of this, the main teacher suggests already one specific reason (interest) for the choice and excludes other reasons such as for example the simplicity of the text (or an arrangement with other students about the distribution of texts). More importantly, by reformulating his information request (l.08), Fritsche demonstrates that he does not read Pashali's CIK as indicating a real lack of knowledge. Hence, by providing a reformulation of the question (l.08), Fritsche exhibits a disalignment from Pashali on two levels.

- Fritsche disaligns from Pashali's formulated cognitive state – while Pashali claims that he does not know, Fritsche's reformulation displays his understanding of Pashali's CIK as indicating a problem in providing an answer related to the FPP and, more precisely, a problem in understanding the question.
- Fritsche disaligns from Pashali on the actional level – whereas Pashali closes down a sequence with a non-answer response, the teacher reopens an adjacency pair and he calls for the same type of answer as before (i.e. the reasons for the selection of the text).

It is noteworthy that Pashali does not refute Fritsche's reformulation of the question (l.09-10) even if he said that he does not know why he had chosen the text. Pashali could for instance have repeated the CIK straightforwardly (cf. Hutchby, 2002), thereby insisting on the fact that he does not know why he has chosen this text. However, Pashali here indicates that he understood the question (cf. gaze and absence of repair-initiating action, l.09) and launches a turn-beginning with a hesitation marker (l.10). By means of this turn launching, Pashali re-aligns to Fritsche's course of action as he projects an upcoming answer. This realignment (and the absence of a vehement repetition of 'I don't know') is a recurrent observation in the data. It embodies on the hand the asymmetrical roles of teacher and student, and on the other hand it can be read as confirming that Pashali's *ich weiss nicht* (l.07) had been deployed by him as a device for handling the halted progressivity rather than indicating his lack of knowledge.

In the continuation of the excerpt, Pashali still does not supply the answer and again, sequence progressivity (cf. inter-turn pause, l.09) but also intra-turn progressivity are broken (cf. hesitation markers, intra-turn pause; l.10). Note at this point the options that Fritsche has for continuing the interaction in the light of Pashali's claim of non-knowledge and the continuing absences of answers: Fritsche could abandon his question by solely accepting the ignorance account. A possible response would therefore be 'ok, but anyway, you have to chose an easier text next time'. Another option is to provide a candidate answer that can be confirmed or disconfirmed by Pashali. Importantly, by contrast to display questions, the teacher cannot provide the answer himself or re-assign the question to another student (as Pashali has epistemic primacy). What Fritsche does is to work towards a closure of the course of action by again narrowing down his question (l.12) and

finally by providing Pashali with a candidate answer (l.15-16, l.18; cf. also excerpt 33). The work accomplished by Fritsche to get an answer to his question qualifies the preference for answers over non-answer responses (Stivers & Robinson, 2006), and it converges with Keevallik's (2011) observation of mundane conversation where participants work hard in providing answers. Note however that the course of action is closed without Pashali explicitly ratifying whether the teacher's interpretation of Pashali's choice is appropriate or not. This is a good example where the teacher finally favours the progression of the course of action towards completion and the explicit indication of final mutual understanding is secondary.

In sum, excerpt 45 clearly demonstrates that Pashali's 'I don't know' functions as a device for handling progressivity by completing an adjacency pair in a sequential position where (sequence and intra-turn) progressivity has been broken. The technical adjacency pair completion does however not re-install completely progressivity. Indeed, the analysis shows that claiming non-understanding as a means of managing sequential progressivity does not imply a definite closing of the course of action. The teacher first disaligns from the student's closing but then works toward the *accomplishment of the pending information* rather than just abandoning the FPP or by allocating the turn to someone else. In sum, even though Fritsche could have abandoned the course of action, he worked on closing it and attempted a complying response, which nevertheless remains absent. The excerpt illustrates that when progressivity towards the completion of a course of action is halted, participants may change the trajectory of how to achieve the course of action, in this case by means of different types of questions.

In excerpt 46, participants are again confronted with a substantial impingement on both sequential and intra-turn progressivity. As in excerpt 45, the student indicates that he understood the question but he displays a problem in responding to it. The excerpt demonstrates how the design of the CIK is adapted to the activity at hand (Pashali's does not have exclusive epistemic primacy) and is responsive to the specific sequential context (overlapping talk). The excerpt stems from a lesson where all students of the class have to stage a radio broadcast. Each student has to sit in front of the members of the class (cf. figure 69) and read a piece of news that they have invented themselves. Previously to the excerpt, Pashali has read his text in front of the class – he reported on a fight between two guys that occurred in a disco because of a girl. Subsequently to this reading, Fritsche asks Pashali whether he had already witnessed a similar situation (people fighting). Pashali affirms that he had not, and Fritsche proposes an account for this by stating that the village where Pashali lives (*Termen*), is a rather small one (l.01-05). After an initial problem in understanding (l.08-l.12), Pashali claims insufficient knowledge (l.12).

Excerpt 46

Corpus SG, [PA_IN_100624_1ereheure]

01	Fri	well termen it's a small village
	Pas_gz	*ja termen, (0.5) termen ist ein kleines dorf,& *->fri->*

- 17 Fri but you do sometimes play outside don't you
aber du bist auch manchmal draussen oder?
- 18 (.)
- 19 Fri in the street
auf der [stra]sse.
Pas [ja.]
yes
- 20 (0.5)
- 21 Fri playing football
spielst fussball.
- 22 Pas_hd nod
- 23 Pas yes
ja.=
- 24 Fri there are never quarrels
=(gi)bt es da nie streit?
- 25 Pas_hd shake
- 26 Fri everyone very peaceful
alle ganz friedlich.
- 27 (.)
- 28 Fri ganz lieb miteinander.
very kind with each other
- 29 Pas_hd nod

[Fri main teacher, Pas HI student]

By referring to the small size of the village where Pashali lives, Fritsche accounts for Pashali not having witnessed fights (based on the assumption that small villages are less likely as a place of a lot of fights; l.01-05). Due to syntactic completions but simultaneous continuative prosodic intonation (l.01 and l.02), it is not straightforwardly clear whether his turns have to be heard as confirmations requests or mere statements without making relevant any further action. The longish silences at line 02 and line 04 may be indicative of a possible problem in interpretation. At line 02, Pashali and Fritsche simultaneously remedy to the break in progressivity of 0.8 seconds-pause: Fritsche completes the sequence (incremental expansion, l.02), and Pashali provides a confirmation (l.03). To summarize, by means of the turn from line 01 to 05 Fritsche makes explicit to what extent the size of the village *Termen* may be an explanation for why Pashali had never witnessed a fight. At line 07 then, Fritsche accomplishes an FPP by requesting confirmation (by means of tag question appended to the prior statement). By means of the tag question, Fritsche portrays himself as the participant who has lesser epistemic access to this state of affairs (Heritage, 2012a, 2012b) than Pashali, who lives in Termen and has therefore epistemic primacy to this fact (Stivers et al., 2011). Pashali however does not respond to this FPP (l.08-09) and Fritsche repairs

his question by repeating the name of the village he refers to (with enhanced initial accentuation, l.10). In response to this repair, Pashali launches a turn (l.11) - the use of the marker *ah* indicates that Fritsche's turn at line 10 allowed for the resolution of an understanding problem (Heritage, 1984b). It is in line with Imo's (2009) description of *ah* as marking some information as new and as being closing-implicative (*Erkenntnisprozessmarker*, Imo, 2009; success marker according to Bergmann, 1981). However, as a closing third of a repair sequence, studies on German interactional data have rather revealed *ach* and *achso* as change-of-state tokens (Golato & Betz, 2008; Imo, 2009). While Golato & Betz (2008) showed that both *ach* and *achso* mark that repair information has been received, only *achso* indicates that it has also been understood. This insight is based on the observation that *ach* makes relevant further negotiation, while *achso* is sequence-closing and regularly freestanding. While Golato & Betz (2009) do not mention the use of *ah* in the same position, I suggest that this particle is used in my data in a similar way as *achso* (of which I have no occurrence). Two hypotheses may be advanced for this difference: first, *ah* may be a variant used in Swiss German; second, the use of *ah* may be related to a particular sequential environment, namely as displaying understanding after an other-initiated *self-repair of a question*: the *ah* is sequence-closing with respect to the repair, but this closing makes then relevant the continuation of the turn with the answer to the prior question (the repaired trouble source).

Because of the lengthened particle of *ah* (l.12) it should be noted however that it is not unambiguous whether it could not also be considered a hesitation marker. In any case, the particle suggests that the prior turn has been understood to the extent that also a hesitation marker projects an upcoming turn (that is not a repair initiator). Thus, at this point, Pashali has launched a turn and indicated that he understood the question. Nevertheless, there is a further break in progressivity (l.12, intra-turn silence of 0.3 seconds). Pashali finally produces a CIK (l.12), and simultaneously to this he is smiling (cf. also excerpt 45). In contrast to excerpt 45, the CIK is accomplished as a freestanding unit with final intonation. Additionally, in example 46 the CIK is accompanied by the use of a two-handed palm-up movement without a head shake but rather an inclination of the head. Moreover, Pashali produces the CIK with slightly higher volume in contrast to the short turns at lines 03 and 12. This enhancement may be responsive to its overlap with the teacher's continuation (*kämpfen*, 'to fight', l.13). By means of the CIK, Pashali technically completes the adjacency pair after several troubles in sequential and intra-turn progressivity (l.02, l.04 and l.12).

The interactional consequence of Pashali's CIK can be summarized as consisting of a disalignment of Fritsche and further attempts to supply an answer to the question. Thus, despite the fact that Pashali claims that he does not know whether there are a lots of fights in *Termen* or not, Fritsche insists on the question. First, Fritsche responds to the CIK by turning it into a question (*weisst du nicht*, 'don't you know', l.15). This seems to be a routine practice for handling claims of insufficient knowledge in classroom interaction (not only in my corpus but also in other data, cf. excerpts 47, 49 and 50 as well as Sert, 2011). Sert (2011) suggests that this practice aims at re-opening the floor for other students to bid for a turn at talk and answer a question. In the data

under study here, teachers never allocate their questions to other students when the hard-of-hearing student produced a CIK; thus, this interpretation does not seem to hold for this setting. I suggest that the teacher's candidate understanding as a specific repair initiator invites the CIK-producer to revise his (non-)answer and provide a more preferred answer. Pashali orients to the candidate hearing as a request for confirmation (cf. confirmation 1.16). The follow-up of the interaction however suggests that Fritsche deploys the candidate hearing as a means for foreshadowing a problem of acceptability (Svennevig, 2008). According to Svennevig (ibid.) participants make use of hearing repair initiations as prefaces to repair initiations that address a 'more serious' problem, namely a problem of acceptability (cf. contrastive marker in the turn at 1.17). This functioning is based on a 'preference for the least serious construal of problems' (ibid.). In the light of this, the recycling at line 15 provided Pashali with a further opportunity to modify his claim of insufficient knowledge and provide an answer (instead of a non-answer).

The teacher's disalignment from Pashali's CIK is further made explicit when Fritsche treats the knowledge about fights in *Termen* as something that Pashali should know as a consequence of his experience of what is going on in the village (1.17, 1.19, for example on the basis of playing outside in the streets of the village). Fritsche suggests that when Pashali plays outside he is supposed to know because he has *sensory evidence* of what happens in *Termen*. This recalls Keevallik's (2011) observation that participants can account for an absence of knowledge by invoking an absence of *sensory evidence*. While Pashali confirms that he plays outside, and hence that he has sensory access to what happens in *Termen* is established, the answer is still pending. In the continuation of the course of action, Fritsche designs several polar questions (1.24, 1.26, 1.28) that address the calmness of *Termen* and its absence of violent people. Fritsche's polar question at 1.24 recycles the very initial confirmation request, and therefore Pashali's answer (1.25, 1.29) actually completes the course of action that has been launched at lines 05 and 07. At this point, the account for why Pashali has never seen a fight is finally provided.

It is significant in this excerpt that there may be other students from the class that have epistemic access to the fact whether in *Termen* there are lot of fights or not. This implies that Fritsche could also allocate the turn to another student (in the sense of Stivers & Robinson's, 2006, preference for progressivity over preference for selected speaker to answer). However, instead of changing the participation framework and involving other students, Fritsche chooses to maintain the two-person framework at hand. This is a very important feature of the momentary interaction because it suggests that what is important to Fritsche at this point is not so much being provided with a specific piece of information about the village *Termen* (presence or absence of fights), but his endeavor consists rather in making Pashali participate in the interaction. With this respect it is interesting to note that despite the several opportunities that Fritsche provides for taking a turn at talk, Pashali's participation is competent (precision timing and conditionally relevant) but rather minimal (no expansions; cf. 1.20, 1.23, 1.24). The course of action is finally closed down at 1.30 and the teacher then launches a closure of the participation framework.

All in all, excerpt 46 provides further evidence for the fact that claiming insufficient knowledge is a practice for managing progressivity when, in response to a question, sequence and intra-turn progressivity have been broken. Particularly, the CIK is precisely designed for a specific activity and sequential context – the student enhances the visual resources as well as volume of his speech, as a means of responding to the overlapping talk by the teacher. It is important to note that like in excerpt 45, the CIK in this example is not the ultimate step and is not sufficient to close down the overall activity. Nevertheless, the follow-up of the CIKs shows how progressivity is re-established by the teacher who works towards a closing of the course of action.

The next example adds further evidence to the fact that hard-of-hearing students claim insufficient knowledge as a means of promoting sequence progressivity rather than for displaying cognitive states. In this example, a *cognitive reading* of the CIK is unlikely because it responds to a question that asks for a personal opinion (cf. also Hutchby, 2002). In contrast to excerpts 45 and 46, excerpt 47 stems from an activity in a small group. Nikolas, the hard-of-hearing student, sits around a table with four other students of the regular classroom (Aylin, Cyril, Carolyn¹⁰⁹ and Besian). The excerpt starts with Carolyn asking Nikolas what profession he would like to practice. Note that Nikolas has exclusive epistemic primacy over the issue and this implies that, as in example 45 (reasons for the choice of a text), the co-participants cannot relevantly supply the answer or ask another participant for the answer. After several self-repairs of the question by Carolyn, Cyril and Montebello, Nikolas indicates that he understood the question (l.19). After a substantial break in progressivity, Nikolas however closes the sequence without answering the question (l.21).

Excerpt 47a

Corpus SG, [JNV_IN_100607]

01	Car	*°nikolas.°
	Nik_gz	*->cyr->*
02	(0.3)	
		*(1.2)
03	Nik_gz	*->car->*
04	Car	what do you want to be later. professionally
05		<°was möchtest du später einmal werden.>
		beruflich.°
		*(1.6)
06	Nik_gz	*"->left side->*
	Nik_nv	"hides head behind his right hand
		*(0.7)
07	Nik_gz	*->car->*
		*(0.7)
08	Nik_ex	*furrowed brows

¹⁰⁹ Carolyn wears a hearing aid but she is not part of the bilingual-bimodal students. She is fully integrated in the hearing class. The teachers did not provide me with further information concerning this student.

09 Car *what do you want to be later*
 <°was möchtest du später einmal werden.>

10 Nik_gz **(1.8)*
 Mon_nv **"->left side->**
"approaching the group

11 Mon *I think you are very quiet*
 Nik_gz **°du bist >ich glaub(e) *du bist sehr leise.°*
->car-> **->mon->**

12 (0.6)

13 Nik_gz **(0.5)*
->car->

14 Car *what do you want to be later*
 was möchtest du später einmal werden.

15 Nik_gz **(0.5)*
**left side*

16 CYR *... [*tap(nik)*
 Nik_gz **->cyr->**
 17 Car *[beruf.*

18 Cyr *what do you want to work later*
 was möchtest du **arbeiten**. **später**.

19 Nik *oh*
 Nik_gz **°°ah-°°*
 Nik_nv **->on his desk->*
**leans head in hand*



Figure 70

Figure 2

20 (4.6)

- 21 Nik → "(1.5)
 Nik_ex "°wei- ni-°
 Nik_nv "mouth corners down
 Nik_hd "turning in middle
 "slight shake
- 22 Nik_gz *(1.1)
 ->mon->
- 23 Mon you don't know yet
 weisst du noch nicht?
- 24 Nik_ex "**(0.4)
 Nik_hd "mouth corners down
 "shake
 Nik_gz *->his hands->*
- 25 Nik no
 Nik_ex "(nein.)
 Nik_ex "mouth corners down
 "shrug of shoulders
- 26 Nik_gz *(0.9)
 ->mon->



Figure 71

[Car H student, Cyr H student, Nik HI student, Mon teaching assistant]

When Caro and Nikolas established mutual reciprocity (l.02), Caro requests information from Nikolas (interrogative turn, l.04-05). At first possible completion of her FPP, Nikolas withdraws his gaze to the left side and thereby indicates a possible launching of a turn (l.06). However, after 1.6 seconds, he redirects his gaze toward Caro (l.07) and furrows his brows (l.08). Caro interprets this as a display of non-understanding and she provides Nikoas with a reformulation of her FPP (l.09), dropping only the adjective *beruflich* ('professionally'). Her remedial action suggests that she understands Nikolas' problem as being related to a problem in perceptual access to the just prior turn. The revision of the FPP is again followed by Nikolas' gaze withdrawal to his left side. At the same time, the teaching assistant Montebello¹¹⁰ is approaching the group. She first stands and then squats beside Carolyn, in front of Nikolas. Addressing Carolyn she then states that the latter speaks very quietly.

Caro's reformulation (l.14) is again followed by Nikolas' gaze withdrawal from her (l.15) and a lack of answer. Cyril then taps on Nikolas' shoulder (l.16; attention-getting device) at the same time as Caro expands her reformulation by adding the lexical item *beruf* (l. 17; 'profession'), more explicitly referring to professional career than the collocation *was willst du werden* ('what do you want to be?', l.04, l.09, l.14). In a similar vein, Cyril proposes the verbal construction *möchten*

¹¹⁰ Montebello is not a proper teaching assistant but a speech therapist who helps out in this lesson because Karpf is sick and Micheli is in another lesson.

arbeiten (l.18; ‘want to work’) followed by the temporal marker *später* (‘later’, ‘in the future’). This also makes much more explicit the information request. Both students therefore interpret the lack of 0.5 seconds (l.15) as displaying some continuous problem in understanding, more precisely grasping, rather than hearing. Both participants, Caro and Cyril, embody thereby a shift in the diagnosis of Nikolas’ difficulty: after having addressed a perceptual difficulty, the participants propose remedial actions that attempt to establish epistemic access to the FPP (cf. Svennevig 2008 on initially diagnosing hearing problems before ‘more serious’ problems such as understanding). Special attention should be given to Cyril’s turn because it is designed so as to address lexico-semantic problem on the one hand, but also to prevent possible problems in perceptual access on the other hand. In fact, the initial syllables of the words *arbeiten* (‘to work’, l.18) and *später* (‘later’, l.18) are both visually enhanced: Cyril quickly tilts back his head and thereby optimizes visual access to his articulation (cf. transcript bold letters for indicating visual enhancement).

It is noteworthy that in response to Cyril’s reformulation, Nikolas displays understanding and explicitly marks a change-of-state or more precisely the success of the repair sequence by a very low-voiced *ah* (l.18; Heritage, 1984b; Imo, 2009; Golato & Betz, 2008). Further evidence for this interpretation is provided by Nikolas’ gaze withdrawal to the desk and his staging of a thinking process (head leaning on his right hand) and therefore a possible imminent response (l.19). After some time, Nikolas changes his head position and he starts playing with his crayon beside his head. Cyril produces a slight laughter during which he blinks at Montebello (l.20). This may point to the ‘bizarreness’ of marking understanding and then not providing any response.

After some time, Nikolas deploys a range of simultaneous resources that contribute to marking the end of his engagement in a private process of thinking. First, at line 21, he produces a very low-voiced CIK that is backed up with a slight head shake and a mouth configuration consisting in the pulling down of the corners of the mouth. Second and simultaneously to this, Nikolas drops his arm and crayon down, he straightens up his upper body up (and head) and he shifts his whole body to the middle. Third, also simultaneously unfolding with the CIK, Nikolas’ gaze orientation marks the end of his thinking process as it shifts in direction of the teaching assistant Montebello (l.22) and suggest an embodied invitation for help (cf. Goodwin & Goodwin, 1986; Goodwin, 1987). In any case, it is noteworthy that whereas Caro has addressed the FPP to Nikolas, Nikolas is addressing the CIK not to Caro but to the teaching assistant (cf. gaze orientation). Note at this point that just as in excerpt 46, the student’s CIK is responded to by the teaching assistant with a candidate hearing (cf. interrogative syntax, l.23) which is confirmed by Nikolas (l.24).

When Nikolas states that he does not know what profession he will chose, he does not formally provide the information asked for by Caro’s information request, but the CIK nevertheless completes the adjacency pair in a relevant manner. This implies that at this point, participants could either address the same information request to another student or they may close the activity of ‘talking about future profession’. However, in the continuation of the excerpt, Montebello deploys several resources to prolong Nikolas’ engagement and to make him participate despite his

(displayed) restricted epistemic access (as in excerpts 45 and 46). Nikolas responds to these attempts with a second CIK (l.29). Only after two more attempts (l.31, l.44; without the self-repairs) to get an answer to her question, Montebello finally closes down the course of action finishes with a reallocation of the turn to another student (similarly to the observations made by Sert, 2011; renegotiation of participation framework).

Excerpt 47b

Corpus SG, [JNV_IN_100607]

- 27 Mon you don't have any wish
hast du keinen wunsch.
- 28 Nik_gz *(2.0) *(1.4)
 ->left side-> *->his hands->*
- 29 Nik → I don't know
Nik_ex *°ich weiss nicht.°
 *shrugs shoulders
- 30 Nik_gz *(0.8)
 ->mon->
- 31 Mon → do you want to be a teacher
 möchtest du: lehrer werden?
- 32 (0.2)
- 33 Nik pardon
 wie?
- 34 (.)
- 35 Mon teacher
 LEHRer?
- 36 (1.0)
- 37 Nik (what's that)
Nik_ex "(wa isch da?)
 "smiles
- 38 (0.4)
- 39 Mon do you want to become a teacher
 möchtest du °lehrer werden.°=
- 40 Nik no
 =nein.
- 41 (0.2)
- 42 Mon no
 nicht?

43 (1.9)

44 Mon → *you don't have any idea*
hast du keine idee?

45 (0.5)

46 Nik *no*
nä-ai.47 Mon *and what do you (all) want to be*
und was wollt ihr werden?*[Nik HI student, Mon teaching assistant]*

Nikolas has already stated that he does not know what profession he would chose (l.21, 24-25,). Micheli's reformulation at line 27 functions as a further confirmation request or rather as another opportunity for Nikolas to provide a more complete or appropriate response. Nikolas however completes the adjacency pair by means of a second claim of insufficient knowledge (l.29), reallocating the next turn to Montebello (cf. gaze at l.30). Similar to the other instances, the CIK comes after a break in progressivity (cf. 3.4 seconds absence of answer, l.28). In contrast to the first CIK (l.21), the speech volume as well as the shrug of the right shoulder is enhanced in the second CIK (l.29). It suggests that after an initial trial to close down the course of action, Nikolas increases the density of his assertion by means of a use of a maximization of resources involved in the CIK. By means of such a reinforcement of his initial CIK, Nikolas in some sense resists the teacher's action of disaligning from the students' CIK as a cognitive disclaimer. Note that such an enhancement of resources in a *second CIK* that occurs in the same course of action is observable also in the other instances of *doubled CIKs* (excerpts 48, 49 and 50).

Note that in contrast to the first CIK at line 21, as well as those in the previous excerpts, the one embedded in this precise position (l.29) impossibly responds in a relevant way to the questions that Montebello addresses to Nikolas:

- The CIK at l.04 (and its reformulations at l.09, l.14, l.18)
 - 'what to you want to become' – 'I don't know': *a CIK can get a cognitive reading*, as one can relevantly not know what one wants to chose as a profession.
- The CIK at l.27
 - 'do you have a wish' – 'I don't know': *a CIK cannot get a cognitive reading*, because one is supposed know about the absence or presence of a feeling or an opinion.

This specific sequential embedding of the CIK therefore supports the interpretation that the CIKs are actually used as a sequence-closing device, just as Hutchby (2002) showed it for children in counselling sessions. In the follow-up, Montebello further maintains Nikolas' participation by

proposing a candidate profession (l.31, and repairs of this on l.35 and l.39) before she closes the course of action by re-addressing the question to the rest of the group (l.47).

All in all, after several self-repairs accomplished by Caro, Nikolas displays a change-of-state (l.20) before he displays a lack of understanding through embodied resources (l.21). By accomplishing a closing of the adjacency pair, Nikolas partially promotes progressivity of the interaction. However, just as in the other excerpts, the teaching assistant does not align to a direct closing of the overall course of action even if this would be possible. Instead, she deploys resources which prolong Nikolas' participation. It is only ensuing a second, enhanced, verbal and explicit ignorance account (l.29) that the teaching assistant moves on towards a closing of the course of action by first proposing a candidate answer and then finally re-allocating the turn to another student.

When students are other-selected by teachers for the accomplishment of an answer, they can supplement this answer with a claim of insufficient knowledge by using the formulation *ich weiss nicht*. Some of these claims have been discussed in this section. They reveal the following common characteristics:

- the FPP is an *information request* (i.e. not a display question);
- the student is supposed to have *epistemic primacy* to the answer (Stivers et al., 2011);
- the student displays understanding of the previous turn by means of (a) an absence of repair initiation, and (b) a turn-launching (e.g. hesitation marker that projects a turn-beginning) or (c) a change-of-state token;
- the student is engaged in a multiperson participation framework, i.e. a framework that comprises more than two persons (speaker and recipient)
- the student's CIK occurs when sequence and turn progressivity are substantially compromised (the student's CIK occurs after several reformulations of the original FPP)

The analyses in this section have shown that the interaction that students get accomplished by means of using CIKs is tightly related to the issue of progressivity. When progressivity is substantially broken, the student promotes progressivity by technically addressing the conditional relevance and by providing an account for the absence of answer. Substantially broken means that sequential and intra-turn progressivity are broken and that even after a first reformulation of the question the student does not provide an answer.

When a student claims insufficient knowledge in response to an information request for a first time, the teacher/teaching assistant more or less explicitly disaligns from the CIK by calling into question whether the student does not know (cf. Koole, 2012b for observations on the teacher's authority over students' problems). Thus, the teacher neither abandons the activity that he has

launched through a question, nor does he re-allocate the turn to another student. By contrast, the teacher attempts to make the student further participate by re-addressing the FPP in reformulated versions. The student first aligns to the teacher's attempts and displays further engagement in providing an answer. After several attempts however, the student may accomplish a *second CIK*. The second CIK is again suggesting a closure of the course of action.

The students' use of CIK as a means of technically completing adjacency pairs exhibits their competence in managing breaks in progressivity.

- Providing a CIK in response to an answer is a dispreferred action (non-answer response). However, a non-answer response nevertheless addresses the conditional relevance of the question.
- By combining displays of understanding with a claim of insufficient knowledge the student indicates that a recycling of the question is not necessary (no repair). Moreover, by means of a display of understanding, the student embodies that he is actively engaged in the interaction, that the lack of answer is not due to a lack of participation or of engagement.

With regards to the management of the student's status within the classroom, the following points can be highlighted:

- While explicit accounts referring to a lack of understanding or a lack of hearing a rather rare (cf. section 2 of this chapter), claims of insufficient knowledge are regularly occurring in response to requests for information. This may be related to the fact that lack of knowing is not highlighting the student's hearing loss or his status as a language learner. It is striking also that CIKs are always preceded by rather long repair sequences which are finally closed through the student's display of understanding which is then however followed by a CIK (a demonstration of understanding is lacking). Thus, relying on a display of understanding and a CIK could potentially be a practice for dropping out of longish repair sequences – but this is difficult to empirically prove on the basis of a participant's perspective.
- The teacher who insists on the initial question by reformulating it after the students' claim of insufficient knowledge portrays himself thereby as the person who is entitled to close down an activity (or not).
- It is noteworthy that the teacher closes down the course of action by means of 'stepping out' of the activity, i.e. he does not abandon the course of action nor does he just reallocate the turn to another student (unless it is the second CIK). By means of this, the student's displayed inability to provide an answer is de-emphasized.

Schematically, the courses of action can be illustrated as follows in the table below:

Participant	Action	Description
A	FPP-reformulation	The first speaker accomplishes a reformulation of an initial question (information request)
B	Display of understanding and absence of answer	The second speaker displays understanding by (1) Gaze withdrawal (+ staging thinking) or (2) Bodily reorientation
A	FPP-reformulation	The first speaker provides a reformulation
B	Display of understanding and absence of answer	The second speaker launches a turn by means of a change-of-state token or hesitation marker
	Delayed CIK	The second speaker claims insufficient knowledge
A	Closure	The first speaker launches into a closure by means of candidate answers
B	Closure	Ratification, no ratification
Table 21		

3.2 Claims of insufficient knowledge after non-ratified answers to display questions

The present section focuses on cases where students claim insufficient knowledge after having provided an answer to a question that has not been ratified by the questioner (7 occurrences; 51, 80, 111, 117, 269, 236, 267). By contrast to the CIKs in section 3.1., the CIKs in this section respond to display questions (cf. chapter IV, section 3.3.). The difference between information requests and display questions is consequential for the type of remedial actions the co-participants (mostly the teachers) can offer in case of a problem in responding. With respect to display questions, the teacher/teaching assistant has the option to either provide himself the ‘correct’ answer or to re-allocate the turn to another student (when the activity is unfolding in a multiparty framework). Interestingly however, this is not what they actually do. Instead, teachers turn the state of affairs that has been referred to and that did not receive an answer into a learning object. So, it appears that a first CIK by the hard-of-hearing student launches a course of action in which the categories ‘teacher’ and ‘learner’ are clearly exhibited, as the teacher tries to bring the student from a state of non-knowledge (–K) to a state of knowledge (+K; Heritage, 2012a). Note that when such an extended course of action occurs, it is finally closed down either because the student actually comes to a state of knowledge and can provide an answer, or the course of action is closed down on the basis of a second CIK deployed by the student.

Excerpt 48 demonstrates how the student deals with a considerable break of progressivity. The excerpt is taken from a grammar exercise that Pashali has to do individually in his workbook. The task at hand consists in modifying indicative statements, which include a protagonist and a *verbum dicendi*, into indirect speech. The precise statement Pashali works on is the following: *Tamara meint: “Ich beschwere mich bei der Schulleitung.”* The outcome Pashali has to write down would be: *Tamara meint, sie beschwere sich bei der Schulleitung.* The change from direct to indirect speech implies first a shift of the personal pronoun (ich>sie), of the reflexive pronoun (mich>sich)

as well as a change of the mode (indicative>subjunctive; 1st p.sg.>3rd p.sg.). A source of confusion for Pashali appears to be that in contrast to other verbs, no apparent difference has to be made between indicative and subjunctive form for the specific case of *beschweren*¹¹¹. For reasons readability I discuss the excerpt in several fragments. In the first fragment, Pashali seeks for help from the teaching assistant (l.02), who provides an explanation of what Pashali has to do.

Excerpt 48a

[PA_IN_100422]

- 01 +(52.2) ((pashali is writing))+
- 02 Pas *I don't know*
 Pas_nv "°ich weiss *nicht.°
 Pas_gz "leaning back, putting hands under desk
 ->mic->
- 03 Mic *so*
 MIC "°a:lso.° (1.6) das (.)&
 "... PNT(sheet_pas) -h
- 04 Mic *I only tamara can say 'I'*
 &[ich] (.) kann tamara nur selber sagen.
 05 Pas [ich]
- 06 (3.0)
- 07 Mic *you cannot say that you are not tamara*
 MIC ">das kannst du nicht sagen "du bist nicht tamara.<
 "PNT(pas) -h->" "PNT(pas) -h->"
- 08 Pas_hd *(0.5)
 *shake
- 09 Mic *no you say 'she'*
 MIC → nein du sagst "(..) "sie,
 "... "PNT
- 10 Pas_nv *(0.8)
 *orients to paper
- 11 Pas_or *(°sie,°)
 Pas_nv *orients to paper
- 12 Pas_nv *(2.9)
 *starts writing

[Pas HI student, Mic teaching assistant]

The fragment begins with Pashali's claim of insufficient knowledge as an opening device for an explanation sequence (cf. also Fasel Lauzon, 2009; also Koole, 2012b, but with 'I don't understand'), similar to what Lindwall & Lymer (2011) observed for claims of non-understanding (l.02). Micheli aligns to the opening move through the discourse marker *a:lso* (l.03; 'so') and

¹¹¹ In contrast to e.g. *Pashali sagt: 'Ich will noch mehr davon'* that has to be modified into *Pashali sagt, er wolle noch mehr davon*.

starts an explanation. She explains that the pronominal reference *ich* ('I') from direct speech must be modified into a third person reference. For this Micheli states that only Tamara can say *ich* but that Pashali cannot because he is not Tamara (l.07). After this explanation, Micheli makes use of a *designedly incomplete utterance* (DIU, Koshik, 2002; cf. continuative intonation at the end of l.09) and thereby projects that Pashali completes the turn. The turn makes relevant that Pashali provides the sentence '*sie beschwere sich bei der Schulleitung*' ('that she would complain to the school administration'). In response to this, Pashali repeats the start of Micheli's turn (l.11) and finally he starts writing down something (l.12). This conduct suggest that he relevantly takes into account Micheli's *designedly incomplete utterance* of line 09 but instead of providing the missing part of the sentence he launches an action that projects the writing down of the requested part of the sentence. In the follow-up Pashali and Micheli appear to be engaged in two concurrent courses of action: Pashali is concerned with the correct writing or pronunciation of *beschweren* ('to complain'), while Micheli focuses on missing pronoun that should complete the sentence (*sich*, 'herself'/reflex. pronoun). The divergent engagement results from the fact that the students' responses do not get straightforward ratifications by the teacher.

Excerpt 48b

[PA_IN_100422]

		<i>she comp(lains)</i>
13	Pas →	°sie be(s*wört.)°
	Pas_gz	*->before->mic->*
		*(1.8)
14	Mic_hd	*slow nod
		*(4.3)
15	Pas_nv	*writes
	Pas_gz	*->sheet->*
		(plains)
17	Pas →	*s(ch)wö(rt.)
	Pas_gz	*->mic->*
		*(1.8)
18	Mic_hd	*shake
19	Pas	°besw-°
		complains (cond.)
20	Mic →	be(.)<schwe:re.>
21		*(0.2)
	Pas_nv	*writing
		she complains
22	Mic	sie beschwere.
		*(2.6)

- 23 Pas_nv *writing
- 24 Pas → complains
Pas_nv "beswäre(n).
"shrugs shoulders
- 25 (.)
- 26 Mic → mhm I complain (reflexive) and
MIC "mhm. (0.6) "ich (.) beschwere mich, (.) und&
"... "several pointings on pashali's sheet
- 28 Mic she
&s[ie:
29 Pas → [sie beschw[ert.
she complains (without reflexive)
30 Mic [(be;we)

[Pas HI student, Mic teaching assistant]

At line 13 then, Pashali provides an answer to Micheli's *designedly incomplete utterance* and solicits Micheli's ratification by gazing at her at the end of his proposition. Note that Pashali's verbal form phonetically rather resembles the German verb *beschwören* ('to conjure'; 'to adjure') than *beschweren* ('to complain'). Micheli's responds to this proposition with a slow nod (l.14), which Pashali reads as a confirmation and starts to write down (l.15). As a result of the decreased velocity of Micheli's head movement however, this nod suggests two possible readings. A first interpretation suggests that Micheli *partially* confirms the verbal form provided by Pashali, displaying thereby that the syllable *schwö-* is not the correct phonological form. A second interpretation suggests that Pashali's response is *incomplete* at this specific point – this would imply that Micheli does a 'confirmation so far' but that she is still waiting for a continuation (the nod would then be read as a continuer). The further development of the interaction strongly supports the second interpretation (cf. also final intonation at l.13). Note however that both readings are not mutually exclusive.

At line 17, Pashali sorts out the part *schwören* (2nd part of 'to conjure', meaning in German in isolation also 'to swear') as an object of negotiation, and from lines 17 to 26, Micheli and Pashali are concerned with defining the correct syllable and morphosyntax of the verbal form. Micheli then again accomplishes a *designedly incomplete utterance* (l.27-28), projecting the completion of the turn. As the continuation of the excerpt demonstrates, the problem can be broken down to the fact that Micheli and Pashali both expect a different type of follow-up. While Pashali further engages on the production of the verb (l.29, 35, 39), Micheli tries to elicit the reflexive pronoun (the end of the verbal phrase). The concurrent engagement is finally 'resolved' through Pashali's claim of insufficient knowledge (l.43).

Excerpt 48c

[PA_IN_100422]

- 32 Pas_gz *(1.3)
->mic->
- 33 Mic and then
und dann?
- 34 (0.2)
- 35 Pas complains
beschwerert.
- 36 (0.5)
- 37 Mic complains
beschwere,
- 38 MIC *(3.0)
*PNT(tam) POSS(mic) PNT(tam)
- 39 Pas she complains
°sie° beschweret.
- 40 Mic_hd *(0.8)
*slow nod
- 41 Mic (uhm;mhm)
°a=hm?°
- 42 (0.2)
- 43 Pas → I don't know
PAS ">ich "weiss nicht.<
MIC "palm-up
"...PNT*
- 45 Mic but instead of 'me'
MIC &"aber anstatt mich?
"PNT(sheet)->"
- 46 (1.2)
- 47 Mic only tamara can say this tamara would say I complain
>das kann nur tamara selber sagen tamara würde
48 sagen ich beschwere "mich.<
MIC "POSS(mic)
49 (.)
- 50 Mic and now you speak of tamara
und "du sprichst jetzt von ["tamara.]

**Figure 72**

	MIC	"PNT(pas)	"PNT(tam)
51	Pas		reflexive pronoun [sich]
52	Mic_hd	*(0.3) *nod	
53	Mic	right richtig.	
54	(.)		
55	Pas	complains (+ reflexive pronoun) beschwere sich.	
56	Mic	mhm?	

[Pas HI student, Mic teaching assistant]

A long silence of 1.3 flags the divergent expectations of both participants (l.32). Finally, the silence is resumed by Micheli who tries to further the progress of interaction by prompting Pashali to continue (l.33). Micheli's prompting is cast in terms of a 'continuation' or a further step (*und dann*, 'and then'; l.33). Contrary to this forward-orientation however Pashali self-repairs at line 35 by again modifying the inflection of the verbal form. It is striking that Micheli, rather than explicitly confirming or disconfirming this verbal form, solely recasts the form by providing Pashali with the appropriate version (l.37). Thereby the confusion and the engagement in two different courses of action are prolonged. After another proposition by Pashali (l.39), Micheli repeats a slow nod (l.40).

As a last resort, one might say, Pashali finally responds to the question by means of a claim of insufficient knowledge (l.43). This CIK is produced quickly and it is accompanied with a rapid and energetic hand movement that resembles a one-handed wh-question (palm-up). Through this specific combination, the CIK is designed to indicate that Pashali cannot supply the answer, but probably also that he does not know what the teacher actually requests him to do. To sum up, the sequence has been opened at l.09, and then re-actualized l.28 and l.33. Several candidate answers (Pashali) and several revisions of the first pair part (Micheli) demonstrated that Pashali and Micheli did treat different aspects of the exercise as being the relevant object of negotiation, and this divergent engagement has been enforced by a clear assessment of Pashali's propositions by Micheli (cf. the absence of straightforward closing thirds).

Whereas Pashali's CIK should account for his absence of response by claiming insufficient knowledge, Micheli treats this account as not valid in the follow-up. Her disalignment from Pashali's CIK is cast in terms of a re-actualization of her question (l.45 and l.47-50) and is further backed up with the contrastive conjunction 'but' (l.45; cf. also excerpt 46). The disalignment and the recasting of the question attest that Micheli refuses Pashali's previously claimed epistemic access – whereas Pashali claims that he does not know, Micheli works toward an access to

knowledge, and thereby claims that Pashali in fact has access. More importantly, Pashali's ensuing embodied response to Micheli's disalignment (l.46) does not contest her interpretation but instead realigns to her course of action: He orients to the sheet Micheli is pointing at, displaying thereby his engagement in the task of providing an answer. In other words, the absence of a persistent reaction such as 'but I really do not know' by which he could again contest Micheli's disalignment enhances the interpretation of his CIK as a practice to further the progressivity of talk rather than to 'translate' a real cognitive state. Finally, Micheli clearly sorts out the reflexive pronoun as the object she is asking for: She does so by accentuating the pronoun *mich* ('me') that has to be replaced (l.45, l.48), but also by an emphasized use of hand gestures (l.48, l.50). The sequence is finally resolved at line 51 - Micheli accentuates the pronominal reference to Pashali and then to Tamara (l.50). This last accentuation is paralleled with Pashali's correct answer, namely the isolated designation of the reflexive pronoun '*sich*' ('himself') that is necessitated for the intransitive use of *beschweren* ('to complain').

In sum, it appears that the problem in answering did in fact not lie on a level of epistemic access, but in a problem of an intersubjective understanding of the actional expectations – whereas Pashali searched for an inflection, Micheli waited for the continuation of the target utterance. Micheli's treatment of Pashali's CIK has indicated that she does not accept it as a definitive closure of the course of action - she rather oriented to it as indicating a problem in responding that can be evincible – which was actually the case. In fact, Micheli's ensuing turn allowed her and Pashali to get refocused on the same object: the reflexive pronoun. Note that it is very rare where a student finally accomplishes himself the answer to an FPP to which he first responded with a non-answer response. In all other cases it is the teacher who considerably contributes to the progressivity of interaction either by providing the answer (particularly to display questions) or offering candidate answers (particularly to information requests). The example discussed above illustrates how progressivity is managed in a situation where the teacher cannot solely re-allocate the turn to another student as a consequence of the two-person participation framework. Nonetheless, Micheli could have provided Pashali with the solution. By leaving undone such a provision, Micheli orients to the business at hand as a pedagogical activity in which her role is to support and mediate the students in their understanding and learning in regular classroom.

On the basis of the examples discussed so far it becomes apparent that the teachers' options for how to continue after a CIK are intimately related to the participation framework at hand (number of potential respondents) and to the action type implemented by the teacher's FPP (information request vs. display question). For example, in participation frameworks where other students can potentially be selected as next speakers, the turn can (but must not) be re-allocated to another student. In courses of action initiated by display questions, the teacher can supply the answer when it cannot be provided by a student. In courses of action where only the selected participant has epistemic access to the response, neither of these two options can be put into practice. Instead, the

questioner can reformulate, prompt and give hints or he can simply abandon (i.e. interrupt) the course of action.

Excerpt 49¹¹² shows a case where the re-establishment of progressivity is a complicated endeavor as the teacher's hints do not seem to be helpful for the student in the coming to a state of knowledge (vs. excerpt 48). The base first pair part consists in the question 'why the parents have been kidnapped' and is not presented in the transcript. The initial part of the sequence is not discussed in detail here, because it resembles the sequential organization of the fragments discussed so far. When the fragment begins, substantial impingements on sequential progressivity with claims of understanding have already occurred. The first fragment shows how Micheli tries to pursue an answer from Pashali by providing examples of reasons for a kidnapping.

Excerpt 49a

Corpus SG, [PA_IN_100528_2eheure]

		but a kidnapping a kidnapping has always a reason
18	Mic	aber (0.5) eine entführung (0.3) +(1.1)
19		((clears her throat))+ eine entführung (0.5)
20		hat immer einen <u>grund</u> .
21	(0.2)	
		because for example someone wants some money
22	Mic	→ zum beispiel weil jemand (.) "geld haben&
	MIC	"GELD
		or wants something else
23	Mic	→ &will, (0.4) oder sonst etwas haben *will.
	Pas_gz	*->sheet->*
24		(4.7)
		the war taken then (give me money)
25	Pas	*(x:) (.) der krieg (genommen) (0.4) dann (gib mir geld)
	Pas_gz	*->mic->*
26		(0.3)
		a kidnapping is that someone has taken the parents
27	Mic	eine entführung ist (.) dass jemand (0.2)
28		((clears throat)) (0.2) die eltern (0.6) gefangen
29		genommen hat.

Micheli specifies that there is always a reason for getting kidnapped, implying that Pashali's previous answer did not refer to a valid reason (l.18-20). Micheli then continues by exemplifying a common reason for why a person may get kidnapped, namely for money (l.22-23). Through this turn, Micheli re-actualizes the initial question, why and by whom have Daniel's parents been kidnapped, that did not get an acceptable answer yet (acceptable by Micheli). Micheli's

¹¹² The fragment stems from an activity already discussed previously: the story about a kidnapping.

explanation and exemplification provide Pashali with some further background information as a means of pursuing a response (e.g. Pomerantz, 1984b, Krafft & Dausendschön-Gay, 1993). A further answer by Pashali (l.25) is again treated by Micheli as not complying with her question and she accomplishes a considerable step backwards by defining what a kidnapping actually is (l.28-29). This remedial activity suggests that Micheli identifies Pashali's problem in answering as being potentially related to a very basic lack of knowledge of what 'kidnapping' actually means. Note however that orienting to Pashali as not understanding the question is contradictory to the fact that Pashali does not initiate repair and that he continuously claims understanding by providing responses (which are not ratified by the teacher).

Only after this definition, Micheli redoes a first pair part asking Pashali 'why' persons may get kidnapped (l.31). At this point the answer is still pending and finally Pashali produces a first CIK (l.34), as showed in the continuation of the excerpt:

Excerpt 49b

Corpus SG, [PA_IN_100528_2eheure]

- 30 (1.1)
- 31 Mic why
"warum?"
"wh-question"
- 32 (2.0)
- 33 Pas_gz *(1.6)
->sheet->
- 34 Pas → I don't know why
Pas_gz *°ich weiss nicht warum (x).°
->mic->
- 35 (0.3)
- 36 Mic you don't know why
Pas_gz du weiss nicht war*um?
Pas_hd *->sheet->*
*shake
- 37 (1.0)
- 38 Pas → (just) write (xx)
nur (eifach) (xx) schreiben.
- 39 (1.3)
- 40 Mic but then you have to think about why
aber dann musst du dir ausdenken warum.
- 41 Pas_gz *(19.2)
->sheet->

- 42 Pas → I don't know why
ich weiss nicht warum.
- 43 (0.5)
- 44 Mic you have to imagine it
du musst es dir ausdenken?
- 45 (2.8)
- 46 Mic with your fantasy
mit deiner fantasie:?
- 47 (.)
- 48 Mic it's a story you tell
es ist eine geschichte die du erzäh:lst.
- 49 (23.2)
- 50 Mic you know sometimes sometimes somebody gets
weisst du (0.5) manchmal (0.6) manchmal wird jemand
- 51 kidnapped and then in this case
entfüh:rt (1.0) und dann (.) wird (2.1) in dem fall
- 52 the children maybe get a letter
bekommen vielleicht (.) die kinder einen bri:ef
- 53 and the letter says
(0.5) und in dem bri:ef steht geschrieben [(0.8)&
- 54 Pas [ja.
yes
- 55 Mic we have kidnapped your parents if you
&wir haben die eltern entführt (0.6) wenn ihr (0.8)
- 56 pay money then we let the parents free again
geld zahlt (0.5) dann lassen wir die eltern wieder
- 57 frei.

After several answer attempts that have not been ratified by Micheli, Pashali responds to the question with a CIK, stating that he does not know why Daniel's parents got kidnapped (l.34). On the formal level, the CIK is not freestanding but followed by the interrogative particle *warum* ('why'). In contrast to a freestanding CIK (as in excerpts 46, 47, 48), this specific CIK is designed so that it demonstrates that Pashali understands the action type of the FPP as being a *wh-question*. Additionally, a hand movement consisting in a palm-up hand and a rapid return to *home position* (Sacks & Schegloff, 2002[1975]) accompanies the CIK. In contrast to this enhancement by visual resources, the CIK is rather low-voiced. The precise positioning of this CIK reveals again that progressivity has been considerably broken, that Pashali has displayed understanding of the question at several moments, has displayed his engagement in responding, but that despite the teaching assistant's remedial actions Pashali is not able to complete the sequence in a manner that is judged acceptable by the teaching assistant.

After a confirmation request and its confirmation (l.36), Pashali apparently proposes a different procedure in writing the story, namely not to write the reason of the kidnapping (l.38). Thus, after several trials to re-establish progression of the course of action towards a specific goal (to think about reasons) by means of candidate answers and a CIK, Pashali finally proposes to change the specific goal at hand (to write down xy). Micheli's next turn however displays a continued orientation to the 'kidnapping reason' by requesting Pashali to think up the reasons (l.40). Thereby she does not accept Pashali's ignorance account, a refusal that is backed up with a contrastive conjunction (*aber dann*, 'but then'). Through this turn, Micheli implicitly redoes her first pair part that is still pending for a fourth time (l.09, l.14, l.31) (the contrast does not refer to the same as in other excerpts). Similarly to what has been shown in the previous excerpts, Pashali does not reaffirm his absence of knowledge in a direct and straightforward manner. Instead, he shifts his body and gaze towards the working sheet. Taking into account the analyses of chapter VII, and particularly section 3.1.2., the orientation to the working sheet is read as a display of continuing engagement in finding a response (l.41), despite the fact that the response is not written on the sheet but 'somewhere in Pashali's mind'. On the one hand this engagement display allows Pashali to realign with the activity proposed by the teaching assistant while self-portraying as a 'cooperative student'. On the other hand, this re-alignment supports Micheli's interpretation of Pashali's CIK as a sequence-closing device rather than a real cognitive disclaimer. After having displayed continued engagement in the task by gazing at the sheet (l.41), Pashali nevertheless finally repeats his claim of insufficient knowledge (l.42). Moreover, and in contrast to the first CIK, the repetition is accomplished by a slight enhancement of resources – Pashali accompanies his CIK by leaning back in the chair, which underlines thereby his disengagement from the activity. Again, Micheli does not orient to this as a valid account (l.44-48).

Micheli's refusal of Pashali's CIKs is noteworthy with respect to the specific action type at hand. As a matter of fact, the action that Pashali should perform does not appeal for a binary knowledge of something, as he is free to invent a kidnapping story. Micheli emphasizes this by her several post-first turns (l.44, 46, 48) that work in favor of a response by Pashali. By referring to the fact that this is a story Pashali should tell (l.48), Micheli highlights that her requested action is not related to yes/no knowledge, but to something Pashali is free to think of. However, in contrast to this supposed 'openness'/'non-directiveness' of the question, Micheli's turns make evident that Pashali is not completely free to invent - the story about a kidnapping makes relevant specific commonly shared world knowledge and Micheli is working towards precisely this world knowledge (kidnappers aim at getting a ransom)¹¹³. After this long and unresolved course of action, Micheli finally provides a possible answer that Pashali accepts. It is striking that in contrast

¹¹³ It may be that the problem in a successful sequence closure is related to the fact that Micheli and Pashali do not share the same knowledge about kidnappings. Note that as a member of a Sri Lankan family, Pashali may be familiar with the reality of kidnappings during the civil war where not only ransom but also recruitment for the army or political reasons may account for kidnappings. In this sense, kidnappings can be considered as a current reality of wars as a way of repression, and may not have particular reasons related to money or other types of ransom as suggested by Micheli.

to other excerpts, it is the teaching assistant who finally manages the break in progressivity by bringing the very long silence of more than 20 seconds to an end (l.49). This may be a consequence of the fact that Pashali has already accomplished a multitude of resources for indicating that he is unable to provide the answer Micheli is seeking for (double CIK, proposition of changing the action to accomplish).

In sum, Pashali deployed two CIKs as a means of closing down the sequence, whereas Micheli did not align to these propositions; instead she tried to make Pashali respond to her questions by providing him with basic knowledge about what a kidnapping is and what regular (commonly shared) reasons a kidnapping can have. Finally, the teaching assistant provides the expected answer and Pashali merely confirms it. This confirmation is inappropriate in Micheli's perspective (cf. l.66) as it displays a state of knowing, which is in fact contradictory to the previously displayed problems in responding. Pashali handles this issue by means of a demonstration of his understanding in Sack's terms (1992a): He reformulates the teaching assistant's proposition and thereby demonstrates that he has access to the state of affairs expressed by her (l.68).

In addition to what has been seen in the previous examples, a last excerpt shall highlight an important point: Excerpt 50 illustrates that the question whether one has epistemic access to a state of affairs or not is dynamic, thus non-knowledge can be claimed, disclaimed and negotiated within the same interaction. Additionally, the excerpt bears testimony to the fact that problems in progressivity are not solely related to the hard-of-hearing student but can pertain also to the hearing participants' linguistic and/cultural competence. The excerpt is taken from a negotiation of the lexical item *bank* ('bench') between Jacob and the teaching assistant Micheli. After having provided a response that is not positively assessed by the teaching assistant, Jacob finally claims that he does not know (l.13). However, when Micheli provides Jacob with the correct answer, he claims that he actually knows what a bench is (l.74).

Excerpt 50a

Corpus SG, [JNV_IN_100603]

01	Mic Mic_nv	what does one do with that ="was macht man damit? "shrug shoulders
02		(1.1)
03	Jac	*(0.7) *-m-
05	Mic Mic_nv	what can one do with that [<was kann man> machen "damit? "shrug shoulders
06	Jac	(must;with) [(°muss;mit°)

- 07 (0.3)
- 08 Jac → (must;with) chair
(muss;mit) stuhl.
- 09 Jac_gz *(0.6)
*mic->
- 10 Mic → huh?
hm?
- 11 Jac_gz *(0.2)
mic->
- 12 Jac_gz *(0.3)
*>left
- 13 Jac → one can also with (1.4) I don't know (exactly)
Jac_gz *kann man auch mit (1.4) °*ich weiss nicht (genau)°
>on his left-> *>mic->*
- 14 (0.8)
- 15 Mic this is this
Jac das ist (0.3) [(das)
[(aber muss) nich(t) mit gebärden.
(but don't have to) sign
- 16 Mic no you don't have to sign
nee musst du nicht gebärden.
- 17 (0.4)
- 18 Mic this is plural this is plural (colloquial)
das ist (...) plural das ist mehrzahl.

Micheli's first display question seeks for a definition of the previously introduced lexical item *bänken* ('benches') by questioning what one can do with a bench (l.01). After a self-repair by the teaching assistant, Jacob provides a response with *muss* or *mit* followed by *stuhl* ('chair') (l.08). His answer therefore comprises an item with a clear semantic relationship with the object in the question, namely 'bench'. Jacob's answer has reached completion after *stuhl* (l.08) and at this point he gazes at Micheli. Micheli does not ratify the answer but initiates a repair sequence (cf. *open class repair initiator*, Drew, 1997; l.10) - in response to Micheli's repair opening, Jacob provides a reformulation (l.13) by recycling Micheli's formulation in the FPP (l.01, and l.05 was *kann man machen damit* > l.13 *kann man auch mit*), thereby establishing a formal link to the teaching assistant's question ('format tying' back to the turn at line 05). This way of self-repairing his provided answer (l.08) suggests that he reads Micheli's repair initiation (l.06) as foreshadowing or accomplishing a negative evaluation from the answer provided in l.08. His self-repair is however halted for 1.4 seconds (l.13). During the turn-beginning and the 1.4 seconds

pause, Jacob is gazing at his left and stages a self-directed process of thinking. The substantial intra-turn halting of progressivity is finally resumed through Jacob's claim of insufficient knowledge that is accompanied with a return of gaze to the teaching assistant.

The interactional consequence of Jacob's claim of insufficient knowledge consists in Micheli's newly designed display questions that aim at bringing Jacob from a state of non-knowledge to a state of knowledge. The next fragment shows that when Micheli finally re-asks the question what one can do with a bench, Jacob first claims insufficient knowledge (1.72). When Micheli provides the correct answer however, he responds in a way that suggests that he actually knew (1.74).

Excerpt 50b

Corpus SG, [JNV_IN_100603]

- 53 (0.4)
- 54 Jac *(x[x)
 Jac_gz *->*sheet*->*
- 55 Mic [was ist eine bank?
 what's a bench
- 56 (0.3)
- 57 Jac *(fem.) bench*
 Jac_nv "ei:::ne ba(nk)
 "writes down
- 58 Mic *a(fem.)*
 Jac_gz *eine.
 *->*mic*->*
- 59 (0.2)
- 60 Jac *a(fem.)*
 Jac_gz *ei:ne.
 *->*sheet*->*
- 61 Mic *a(fem.) bench*
 eine [bank.
 62 Jac ["°eine°
 JAC ["writes down
- 63 (1.0)
- 64 Jac *(bank)
 Jac_gz *->*mic*->*
- 65 Mic *what's the article of that*
 wie ist der artikel davon?

66 Jac → (xx) with strips
 JAC → *(xx) mit *"streifen."
 Jac_gz "FB_long rectangle
 ->hands->-mic->*



Figure 73



Figure 74

67 (1.6)

68 Jac or
 oder?

69 (0.5)

70 Mic and then what does one do with that
 und dann? was macht man damit.

71 *(1.8)
 Jac_gz *->left side->*

72 Jac → I don't know (that)
 Jac_exp "(°weiss ich nicht°)
 "shrugs shoulders



Figure 75

73 Mic → don't you know a bench that's to sit on
 weisst >°du nicht°< eine bank ist zum drauf sitzen.=

74 Jac yes
 Jac_hd ="mhm?
 "nod

76 (1.0)

77 Mic what yes
 Mic_hd was "mhm.
 "nod

78 Jac like a sofa
 wie ein sofa.

- 79 Jac but (similar)
aber (ähnlich.)
- 80 Mic as a sofa but outside and (wooden or) (.) yes or metal
wie ein sofa aber draussen und aus [holz oder] (.) ja
oder metall.
- 81 Jac [(xx)]
- 82 (2.5)
- 83 Mic exactly that's a bench
genau das ist eine bank.
- 84 (.)

Micheli asks what a bench is (l.55) and then from lines 58 to 61 Micheli and Jacob exhibit a focus on form, namely on the ending of the indeterminate article (cf. accentuations, lengthening). This focus on form presumably ends when Jacob launches a writing period (l.62) and then repeats the form while he redirects his gaze toward Micheli. Micheli orients to the end of the writing by asking Jacob another question (l.65), namely what the article of 'bench' is. Serially, this question is followed by Jacob's hybrid turn: a vocal turn part composed of an unintelligible part and the word *streifen* (l.66; 'lathes'), and a visual turn part depicting several 'strips' (cf. figures 73 and 74). This turn presumably answers in a non-contingent manner to the question at line 55 (*was ist eine bank*). An argument for this interpretation is the iconic content of Jacob's gestures, depicting the lathes of a bench. There are however no other displays or markers that would indicate its non-contiguous positioning (*misplacement markers*, Schegloff & Sacks, 1973). The answer may have been deferred by the participants' focus on morphosyntax and writing down (l.56-63). In any case, Jacob's (non-contingent) answer does not get any evaluation through a third turn (l.67) and he tries to remedy that by post-completing his turn with a tag question marker (*oder*, 'or', l.68). Again without explicitly assessing Jacob's proposition, Micheli counters with a new question which is in fact the original question: 'what does one do with a bench' (l.70). After a display of understanding and a noticeable absence of answer (l.71), Jacob finally re-affirms his absence of knowledge with a second CIK.

It is striking that just as in excerpt 48, participants have been engaged in different courses of actions and that Jacob's answer did not get any explicit evaluation. Jacob's second CIK follows a display of understanding cast in terms of a gaze aversion and a thinking face. It is accompanied by a head shake as well as a shrug of the shoulders. In comparison with the first CIK at line 13, the shrug of the shoulder constitutes a further resource that enhances the 'formal density' of the second CIK (cf. figure 75). Jacob's second CIK comes in a position where he has already attempted several times to answer Micheli's question (l.06, l.08, l.12 and l.66). Micheli however treated these candidate answers neither as appropriate nor as clearly inappropriate. Instead of this, she reopened the adjacency pair newly at line 73 (instead of providing the answer and progress in the activity). After having recycled Jacob's claim of insufficient knowledge (l.73), Micheli provides Jacob with the expected answer: a bench is to sit on. Jacob in turn responds to this with a

rather surprising action: he confirms Micheli's answer (l.74). Of course, on the basis of Jacob's two CIKs referring to the utility of a bench, a mere confirmation is quite unexpected. A change of state token (Heritage, 1984b) that indicates a shift from a status of non-knowledge (-K) to a status of knowledge (+K) would have been more likely (cf. Heritage, 2012a; Heritage & Raymond, 2012). By not displaying any change in epistemic access but rather confirming Micheli's answer, Jacob in fact claims that this information is not new for him. This is unexpected and treated as such by Micheli's ensuing repair initiation which locates the trouble source clearly on the confirmative *mhm* in Jacob's previous turn (l.77, *was mhm*, 'what uhu'). In response to this, Jacob formulates a turn that very nicely proves that he not only *claims* knowing but that he really knows what one does with a bench: he demonstrates his epistemic access (Sacks, 1992) by proposing another term of the same semantic field, namely *sofa* (while bench and to sit have already been mentioned) and stating that sofa and bench are similar.

It is important to highlight that at least one answer (l.06) actually referred to the semantic field of 'sitting', but Micheli did not evaluate it and finally Jacob abandoned responding with a CIK (l.10). It may be advanced that Jacob answered a second time in a relevant and appropriate manner to the definition question at line 66, where he produces a turn containing the term *streifen* ('lathes') and a gestural depiction of long rectangular forms. This depiction suggests a reference to prototypical benches consisting of several most commonly wooden lathes. Micheli however does not orient to this embodied answer (l.67), and her ensuing countering turn displays that she considers it as insufficient (be it for normative or understanding problem reasons) (l.70). It is important to note, that she does neither negatively assess Jacob's previous answer (*streifen*). Rather, there is an absence of any observable orientation to it, hence there is no evidence of whether Micheli understood it or not.

The examination of excerpt 50 supports the argument that epistemic non-access can be negotiated not only by the teacher's refusal, but also the student can finally re-affirm epistemic access. Such a movement makes relevant some demonstration of knowing, and this is what Jacob does (cf. also Koole, 2010). In this sense, this excerpt is a case in point for demonstrating that an epistemic disclaimer must not be the translation of a real epistemic access but can be deployed in the service of other tasks. In addition, this excerpt points to the fact that not only the student's state of knowledge or understanding can be an obstacle to the interactional progressivity. In this specific case, it appears that also the teacher's non-understanding of the student's responses blocks the progressivity of interaction. Finally, it is the student who solves the halting of progressivity. He does so by reaffirming that he does not know, which in fact may put into question his status as a good student. However, when Micheli finally provides Jacob with the answer, Jacob reaffirms his status as a good student by demonstrating that he actually has epistemic access. This means that whereas he affirmed two times that he does not know, he finally renegotiates this by affirming that in fact he knew.

In response to FPPs formulated by a teacher, the students can claim insufficient knowledge by means of *ich weiss nicht*. The claims that I have examined in this section present the following common denominator: the FPP is a *display question* (i.e. not an information request)

- the FPP is a *display question* (i.e. not an information request)
- the student displays understanding of the FPP through (a) absence of repair initiation, and (b) prior attempts to answer the FPP, which are not ratified by the teacher though
- the student is engaged in two-party and two-person interaction with the teaching assistant
- the student's CIK occurs when sequence and turn progressivity are substantially compromised (the student's CIK occurs after several reformulations of the original FPP; identical to what happens in the excerpts from section 2.1.)

The examination in this section revealed that the use of CIKs in response to questions allow the hard-of-hearing students to manage substantial breaks in progressivity. The teaching assistant launches an adjacency pair sequence by means of a display question. The student addresses the conditional relevance of the question and attempts an answer, but this answer is *not treated by the teaching assistant as being appropriate and acceptable*. Instead of an explicit evaluation of this attempted answer, the teaching assistant launches a reformulation of the same question, proposes new questions or other-initiates self-repair. These reformulations are then again followed by either embodied displays of understanding or further beginnings of candidate answers, but then the student closes down the sequence by means of a CIK. The CIK is then followed by a disaligning move from the teacher who attempts to further engage the student in a procedure of coming from a state of *non-knowledge* a state of *knowledge*. If it is already the second CIK in the same course of action, then the CIK can be followed by a closing sequence that consists of a provision of the answer. The interactional organization of a small collection of CIKs in response to display questions can be schematized as follows.

Participant	Action	Description
A	FPP-reformulation	The first speaker accomplishes a reformulation of an initial question (display question)
B	Display of understanding	The second speaker displays understanding by (1) Gaze withdrawal (+ staging thinking) or (2) Bodily reorientation
	Candidate answer	The second speaker provides an answer
A	Negative evaluation; absence of evaluation	The first speaker does not orient to the answer as being acceptable
	FPP-reformulation	The first speaker provides a reformulation
B	Display of understanding	Cf. above
	Delayed CIK	The second speaker claims insufficient knowledge
A	Closure	The first speaker launches into a closure; providing an answer
B	Closure	Ratification, no ratification

Table 22

The difference between the CIKs in section 3.1. and section 3.2. is minimal. A first difference relates to the action type of the FPP (information request in 3.1. vs. display question in 3.2.). A second difference relates to the ways of how students display their understanding of the FPP (turn-launchings vs. candidate answers). The examination of some exemplary excerpts of CIKs in response to display questions has highlighted the following findings.

- Despite the teacher's possibility to provide themselves the answers to display questions (in contrast to real information requests), this is not what they do at first. By withholding the answer, the teacher turns a state of affairs into a learning object. Moreover, he thereby exhibits specific self- and other-categorizations of him 'doing being a teacher', and the student as being 'a learner'. It is noteworthy that the student aligns to these categorizations, by further portraying himself as a cooperative and acceptable student who works hard in providing an acceptable answer despite an initial CIK (instead of insisting on the fact that he does not know).
- The state of affairs in section 3.2. can actually be out of one's epistemic domain (grammar, lexicon; vs. the cases of section 3.1. where questions relate to opinions, wishes, intentions).

It is surprising that the students never produce *more than two CIKs* in a same course of action, even in cases where it gets very long and progressivity is substantially broken. This fact suggests the following relationship between progressivity and the student's role in classroom: even though progressivity is an ubiquitous issue and clear indications of a preference for progressivity have been observable, additional issues are at stake in this specific setting namely those pertaining to the students' job of being a learner. First, in specific contexts, participants orient to 'doing learning' as being more important than progressivity: long periods of thinking occur (extended wait time), a lot of reformulations are provided and therefore the base adjacency pair is unclosed for a long period of time. In these instances, the process of learning or of coming from a -K to a +K may be an objective in itself. Hence, the institutional goal overrides the preference for progressivity in the sense that when a lack of knowledge is discovered, the local aim of the interaction can be changed and modified into a goal of learning. Strictly related to this is the fact that 'doing being a student' is compatible with breaks in progressivity because there are moments where learning and a preference for intersubjectivity override the preference for progressivity (Heritage, 2007). It is noteworthy also that ultimately it is the teacher who is in the position of deciding whether a breach in progressivity is too important and must finally be resolved, by abandoning the activity or the goal.

3.3 Claims of insufficient knowledge in response to requests for action

A further small subcollection consisting of 4 instances (53, 106, 232, 279) occurs in response to requests for actions. These instances are characterized by the fact that they occur with precision-timing to the completion of the FPP (i.e. turn progressivity is not breached). The CIKs occur in

different participation frameworks (dyadic interaction with teaching assistant either in parallel to plenary, during group work or during individual work) and in different activities (explanation of task, exercise in plenary). Within this subcollection, some CIKs replace one specific requested action (e.g. the student is requested to write down a word and he responds *I don't know*) or a whole series of requested actions (e.g. the student is requested to accomplish an exercise comprising diverse actions and he responds *I don't know*).

In a CA approach, requests are described as first pair parts that make relevant either a grant (preferred action) or a refusal (dispreferred action). Requests/orders are also commonly used as a method to provide assignments that make relevant the accomplishment of a specific action (preferred action). If the relevant next, the accomplishment of the action, cannot be accomplished, the student may either initiate repair or he may account for the absence of action (dispreferred action). With respect to conditional relevance, it has to be pointed out that there is a fundamental difference between different action types (information request, request for action, display question) because the relevance and the appropriateness of responsive action(s) can be either immediately observable or not:

- *information requests* and *display questions* make relevant one or several answering turns; this answer makes immediately observable whether the FPP has been understood or not.
- *requests for action* make relevant the accomplishment of one or a series of actions; in some cases the accomplishment of the action(s) can be observed by the co-participants, in others it cannot; therefore, the demonstration of understanding through the accomplishment of the request is made observable immediately or deferred to a later moment. Examples:
 - a. The accomplishment of the relevant action in response to a request like 'cry out loud' is observable immediately, and the relevant action demonstrates an understanding of the request.
 - b. The accomplishment of the relevant action to a request 'write down x' is observable immediately and it documents the understanding of the request, under condition of visual access to the artifacts; without this access, it is not observable (e.g. on the video recording in my case)
 - c. The accomplishment of the relevant action to a request 'write a story about a xy' is observable immediately under condition of visual access to the artifacts', however, the accomplishment of the relevant action is unfolding over a stretch of time and therefore the demonstration of understanding is not occurring right after the request but extends over a period of time.

It is important to highlight that this difference relating the observability of the accomplished action is consequential for the participants' building of *intersubjectivity*. Generally, the respondent to an FPP documents his understanding of the FPP in the second turn position. Subsequently, in the

third turn, the FPP-producer can confirm or disconfirm the co-participants' understanding displayed in the second turn (cf. chapter III, section 2.2.1.). However, if the FPP makes relevant a whole series of actions that are not directly observable by the FPP-speaker (case c above), then the co-participant who accomplishes the requested actions lacks an immediate 'proof' of his understanding of the request. This might have consequences on how students respond to action requests in contrast to display questions. After display questions, students provide answers and if they exhibit a wrong understanding of the question, the teacher can immediately remedy the problem. By contrast, following a request for action, the student can engage in an exercise for half an hour, and the teacher has access to the student's work only at the end of the exercise and may only then see that the student did not understand the assignment.

In this section we are concerned with cases where the student accomplishes a CIK as a replacement of a requested action. By means of this, the student resists a request that has been launched by a teacher/teaching assistant. The specific timing of those CIKs, i.e. at first possible transition points and without any delay, responds to the very specific constraints of the action type to which they are responsive.

A first example of a CIK in response to an action request is shown in excerpt 51 below. The excerpt stems from a grammar exercise (modification of adjectives) administered by the main teacher Roth in the plenum. Students bid for turns and provide the teacher with the adjectival forms that Roth writes on the blackboard. Micheli requests Nikolas to participate in the plenary by requesting him to bid for a turn. It is Jacob who responds to this request by saying that he does not know (l.03).

Excerpt 51

Corpus SG, [JNV_IN_100623_1ereheure]

01	Rot_nv	writing on the blackboard->*
02	MIC Mic_gz	come on [*palm-up(nik)& *->nik->*
	Rot	good [gut?
03	MIC	come on bid for a turn &[palm-up(BB) handraising now 'good'
	Rot	[jetzt [(.) <u>gut.</u>

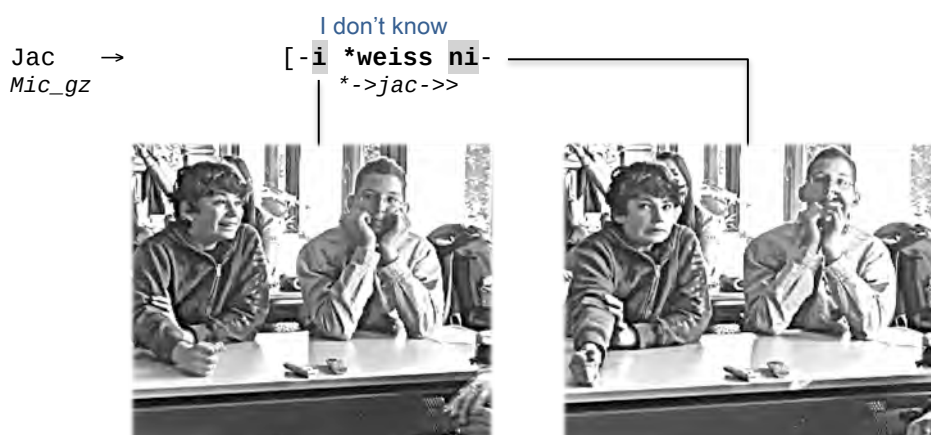


Figure 76

Figure 77

04 Rot ce[dric.
NIK [handraising
Mic [(-ja-)

[Rot main teacher, Mic teaching assistant, Jac HI student, Nik HI student]

Roth is writing an answer provided by a student at the blackboard (l.01), evaluates this solution (l.02) and then launches the next sequence (l.03) by asking for the modification of the adjective *gut* ('good'). Simultaneously, the teaching assistant Micheli looks at Nikolas and produces three hand movements: first, a palm-up hand movement towards Nikolas (l.02), then a palm-up hand towards the blackboard (l.03) and finally a 'handraising' (l.03). Through this visually designed turn she requests Nikolas to actively participate in the activity by bidding for a turn at talk through handraising. In overlap with Micheli's 'handraising', Jacob produces a CIK. It is only during this CIK that Micheli actually also gazes at Jacob. The quality of the CIK is characterized by its absence of voice and an exaggeration of the visual articulation (cf. bold letters). Micheli does not further solicit Jacob for participation, and Nikolas responds to Micheli's request by raising his hand and finally contributing with an answer to the plenary activity.

In order to understand what Jacob accomplishes by using a CIK, this sequence has to be located in its larger context. Previously to the fragment, Micheli solicited Jacob's and Nikolas' attention several times in parallel to the ongoing plenary activity. This was accomplished through either a request to look at the blackboard, or by addressing questions to them. Micheli's explicit requests that the students should participate bears testimony of her reading of the students' conduct as non-participatory (cf. Sahlström 1999 on displaying non-participation), which can be problematic in the light of being supposed to learn through their participation in the regular classroom. In consideration of these facts, Jacob not only resists Micheli's request of actively participating to the plenary. More importantly, by claiming insufficient knowledge in response to Micheli's request, Jacob indicates that his continuous refusal to handraise is not a consequence of him not participating in the activity but because he does not know the answers. This means that Jacob orients to Micheli's previous action not only as a request for handraising, but also as recalling him conforming participation manners. In this vein, claiming insufficient knowledge is used in this

case as an account for the absence of handraising and as resisting an other-categorization of Jacob as a student who is not actively participating. This interactional job that student accomplishes with the CIK may account for its precise timing: instead of accomplishing a CIK in a straightforward manner, Jacob could have only reoriented his gaze towards the blackboard, thereby displaying his attempt to participate and to answer (as in section 2.3.). Such a conduct however would accept and confirm Micheli's other-categorization of Jacob as not being participating in an appropriate manner. By contrast, the CIK shows that the lack of handraising is due to a lack of knowledge, and not a lack of participation.

A similar case is excerpt 52 below, where the student's status as a good student is put into question. Encountering a problem with the accomplishment of a series of exercises noted on the blackboard, Jacob solicits Karpf's help and asks what he has to do. The requested action is the accomplishment of a specific exercise written on the blackboard, therefore the accomplishment of a series of actions. Characteristic for this action request is that its fulfillment should occur immediately, whereas the success of this is not immediately observable for the teaching assistant. Jacob accomplishes a CIK (1.10) precisely at the moment when the teaching assistant completes her request (1.09).

Excerpt 52

Corpus SG, [JNV_IN_100517]

01	Kar JAC	great °super.° -h____
02	Jac_gz	*(0.7) *>blackboard->*
03	Jac Jac_gz JAC	[(aber) *>kar ...
04	Kar	but now I think it's clear what you have to do [>aber etzt (e)s ist (ja) klar was du jetzt
05		machen musst.<
06	Jac	+(0.9) ((sigh))+
07	Kar	okay °also.°
08	(0.5)	
09	Kar	do it mach es?
10	JAC JAC	don't know what to do "(WISSEN) "weiss nicht was machen.
11	Kar	yes you do doch du <u>weis</u> st was.

- 12 Jac at first highlight
zuerst malen,
- 13 Kar yes
>ja?<
- 14 Jac both of them and then
beide, (.) [°und dann°
Kar no just one of them
[nein nur einer.
- 15 Kar just one of them
nur der eine.
- 16 JAC just this one
"PNT(blatt)
Jac "nur diese.=
- 17 Kar yes
=>ja.<
- 18 (0.4)
- 19 JAC tap(nik) (XX) *PNT(sheet)
Jac *-nur-
- 20 (0.2)
- 21 Nik_nv shrug shoulders
- 22 JAC and then read
Jac "NACHHER LESEN
und "dann lesen,
- 23 Kar_or yes
°mhm?°
- 24 Jac and then read text a
und dann text [a vorlesen.
25 Kar_hd [big nod
- 26 Kar exactly
genau.
- 27 (0.4)
- 28 Kar good?
gut?

[Kar teaching assistant, Jac HI student]

After an initial negotiation not represented in the transcript, Jacob and Karpf engage in two divergent courses of action – while Karpf proposes to close the sequence (cf. evaluation at l.01), Jacob remains engaged in the explanation sequence through the absence of a closing move, as well as a hold of the pointing to his sheet (l.02; cf. Groeber & Pochon-Berger, 2013, on holds in sign language interaction). Furthermore, Jacob launches a new manual sign/gesture and a contrastive

turn (l.03). When Jacob has moved his hand out of rest position (dots at line 03 indicating the preparation of the hands out of rest position), Karpf comes in with a disaligning turn by stating that Jacob in fact knows what to do. The *ja* suggests shared knowledge by both participants of the fact that Jacob knows what he has to do (Deppermann & Schmitt, 2009) and the following sigh with a slight smile seems to confirm this fact. However, in response to two more turns that make strongly relevant Jacob's orientation to and accomplishment of the task (l.07 and l.09; cf. imperative form), Jacob rejects the engagement in the teaching assistant's projected course of action by deploying a CIK (l.10). The claim of insufficient knowledge is not freestanding but a complement specifying that he encounters a procedural problem, namely that he does not know what to do. Note that at this point progressivity has been broken through Jacob's lack of response (l.06, l.08) and Karpf's reformulated request (l.09). As in the other excerpts discussed in this chapter, Karpf does not accept the CIK but overtly claims that Jacob actually knows what to do. In this case, Karpf not only refuses the CIK as a closing device as in previous excerpts, but by explicitly attributing knowledge to Jacob she annihilates his claim of insufficient access as a non-cooperative and untrue statement. Thereby she talks into being Jacob's conduct as non-cooperative. Jacob partly realigns to the teaching assistant's turn by not repeating and insisting on the absence of knowledge, and by proposing a candidate understanding (or rather a 'candidate knowing'): he has to color both of the texts (l.12 and l.14). This 'candidate knowing' permits that the teaching assistant can confirm that he actually does not know (and provide necessary information), or that he knows and can re-engage in the individual activity of solving the task.

Jacob's candidate is overlapped by Karpf's disconfirmation (to read both). This in turn resolves Jacob's difficulty for which he initiated an assistance sequence (before the fragment cited) and he also provides Nikolas with this piece of information (l.19). Finally, it appears that Jacob did not know and that the CIK may have functioned as a real cognitive disclaimer. However, this does not exclude that it is also used for all practical purposes, and specifically the purpose of not losing the assistant's engagement on the one hand, and displaying his investment in solving the exercise, on the other hand.

When students are other-selected by teachers for the accomplishment of request of action, they can supplement the grant or the accomplishment of the action with a claim of insufficient knowledge by using the formulation *ich weiss nicht*. Some of these claims have been discussed in this section, revealing the following common characteristics:

- the FPP is an *request for action*
- the CIK occurs in precision-timed manner to the completion of the FPP

The excerpts have shown that when students claim insufficient knowledge, they deal with different interactional purposes:

- CIKs are deployed in the service of *resisting a launched course of action*.

- CIKs are deployed in the service of *resisting the assignment of a non-conforming conduct* by the teacher.

The timing of the CIKs in response to requests for action is noteworthy: by contrast to all other CIKs, they come precisely-timed to the completion of the request. Recall that in sections 3.1. and 3.2. the CIKs were preceded by the students displaying that they understood the prior turn; the delay between the FPP and the SPP was displayed as ‘doing thinking’. Hypothetically, when such a delay would occur in courses of action where the student’s classroom-conform conduct is already put into question, the student would display his alignment with the teacher’s understanding. By contrast, a precision-timed CIK that straightforwardly resists the other-categorization may be especially relevant for ‘claiming’ to be a good and a conform student.

3.4 A deviant case: claiming insufficient knowledge after claiming insufficient understanding

In this section I propose an analysis of an excerpt that merits particular attention for its singularity: It comprises a claim of insufficient knowledge and a claim of insufficient understanding (cf. section 1), and finally an explicit reference to Jacob’s hearing status¹¹⁴.

The excerpt comes from a grammar exercise conducted in the plenum. Previously to the excerpt, the class has struggled to provide the three requested tenses relating to the verb *hineintreten* (‘enter’) written on the blackboard (*hineintreten*, *trat hinein*, *hineingetreten*). When the students finally provided all three forms, the main teacher Roth other-selects Jacob for repeating those three forms (l.01-03). The moment of other-selection may be responsive to Jacob’s displayed inattentiveness (cf. Fasel Lauzon & Pochon-Berger, 2010). The first fragment shows this moment of other-selection and how Jacob reacts to it.

Excerpt 53a

Corpus SG, [JNV_IN_100623_1ere]

		who can recite all three forms for the last verb
01	Rot	"wer kann jetzt (.) fürs letzte verb noch einmal <u>alle</u>
02	Jac_gz	drei formen sagen? "unsure(direction blackboard)->*
		"(0.4) —————
03	Jac_gz	"lifts his head
	lif	"->rot->*



Figure 78

¹¹⁴ The excerpt has been analyzed with another focus of attention in Groeber (2012).

04 Rot jacob?



Figure 79

05 Jac_gz "(1.0)
"->blackboard->*



Figure 80

The main teacher allocates her request to Jacob (l.01-04) but the 1-second absence of answer (l.05) suggests that he encounters some problem in responding. A close look at the bodily orientation of Jacob reveals some important features: During Roth's request (l.01-02), Jacob is leaning his head onto his right hand and gazing in direction of the main teacher. Already during line 03 then, when no address term has been produced yet, Jacob is already straightening up his upper body while still gazing in the direction of Roth. This conduct suggests that Jacob perceives a non-vocal display from Roth that foreshadows her subsequent (vocal) turn allocation (l.04). Jacob then withdraws his gaze and directs it to the blackboard during his absence of answer (l.05). As figure 78 shows, Jacob's head remains steady and only his eyes are moving in direction of the blackboard (body torque, Schegloff 1998). This may be interpreted as a reduced engagement in launched course of action (repetition of forms).

In the continuation of the segment, Jacob and the main teacher accomplish different remedial actions treating the impingement on progressivity constituted by the pause at line 05. Whereas Roth provides Jacob with further information that should help him in providing the requested action (procedural information, localization of the target verb), Jacob fills in the slot that has been created by the FPP; he does so by means of a claim of non-understanding (l.06) and then by means of a claim of insufficient knowledge (l.14).

Excerpt 53b

Corpus SG, [JNV_IN_100623_1ere]

- 06 Jac → I didn't understand
Jac_gz [°ich *habe nicht verstanden.°
->rot->
- 07 Rot basic tense one
[grundform eins.
- 08 (1.1)
- 09 Rot for this verb
Jac_gz von diesem *verb da.
->blackboard->
- 10 (1.6)
- 11 Fi1 (he) sleeps
°(er) schloft.°
- 12 (1.0)
- 13 Jac_ex "(2.6)
"mouth corners down
- 14 Jac I don't know
Jac_gz → °ich *weiss nich(t)°
->rot->
- 15 (1.1)

After the noticeably absent response (l.05), Roth expands her turn by stating more explicitly which of the three forms Jacob should provide (l.07, *grundform eins*, 'base form one'). This remedial action is forward-oriented (does not recycle a previous turn) and is overlapped with Jacob's account for his absence of answer that may function as a repair initiation as well (l.06). It is clear that the use of *verstehen* is ambiguous with respect to its reference to either perceptual or epistemic access; it remains therefore vague whether Jacob did not 'hear' (e.g. the previously accomplished answers) or did not 'grasp' (e.g. he did not grasp the activity preceding, what they did, etc.). The object of the hearing or grasping remains in any case underspecified, but based on the fact that the task is to repeat something, the interpretation of 'hearing problem' may be more prominent.

Roth potentially did not hear Jacob's claim of insufficient understanding because of the overlap with her first turn expansion and Jacob's turn. Note that after another long lack of answer (l.08), Roth offers another occasion for Jacob to respond, by renewing a TRP through a specification of the verb she refers to (l.09; probably with a pointing, but no access on the video). Roth seems to interpret Jacob's problem in accomplishing the requested action as relating to a lack of understanding the current activity and knowing where they are. With respect to the type of remedial action that Roth proposes (localization and specification of the verb), it is interesting to see that Jacob's postures before getting other-selected by Roth actually displayed divided attention to the lesson. The teacher's localization of the relevant verb may be an indication that she actually interprets Jacob's lack of answer as resulting from inattentiveness. The comment of one of the

students, however not intelligible with certainty on the recording, would support this interpretation (l.11).

Against the background of those interpretations, the account ‘not having understood’ may accomplish different purposes on several levels of interactional organization. On the sequential level the CNU comes technically completing the adjacency pair by addressing the conditional relevance. On the actional level, the CNU accounts for the absence of answer (rather than opening repair). And finally with regard to identity, the CNU is deployed as a means of resisting an other-categorization as a ‘bad student’ (inattentive student). It is interesting in this respect that Roth does not orient to the student’s identity as a ‘hard-of-hearing’ as a potential account for his lack of answer (Zimmerman, 1998).

In the face of the growing pressure to respond and the absence of further remedial actions by the teacher (l.10-12), Jacob deploys a second account for the absence of answer by means of a CIK (l.13-14). Note that at this moment Jacob still portrays himself as ‘regular student’, to the extent that not answering because of a lack of knowledge is routinely accomplished by all students within the classroom. The follow-up of this CIK however clearly reveals that the teacher qualifies Jacob’s account(s) as being non-valid:

Excerpt 53c

Corpus SG, [JNV_IN_100623_1ere]

14	Jac	<i>I don't know</i> °ich weiss nich(t)°
15	(1.1)	
16	Rot	<i>didn't you listen well you always heard</i> >hast du nicht< zugehö:rt >du hast< ja immer gehört.
17	Rot	<i>well I repeated it each time</i> ich hab's ja immer wieder <u>holt</u> .
18	(3.0)	
19	Rot	besian.

Based on the fact that the action made relevant by Roth is a repetition and not really displaying some knowledge, to claim a lack of knowledge is inappropriate. Roth’s refusal to accept this account is observable in her treatment of the CIK in the following turns. Roth asks if Jacob didn’t listen, which could account for the difficulty in repeating. Despite its interrogative morphosyntax, it is not designed as a real information request because Roth straightforwardly continues with a second part of turn. However, it reveals that she interprets Jacob’s lack of answer as being related to the fact that he did not listen (*hast du nicht zugehört*; ‘didn’t you listen’). She thereby makes relevant a possible inattention as a reason of not responding. Furthermore, Roth directly refuses a

potential account that would relate to a problem in perceptual access (*du hast ja immer gehört*; ‘well you always heard’), and she underscores this refusal by accounting that she always repeated the forms that were accomplished by the students (l.17). By affirming that Jacob actually did hear (similarly as ‘yes you know’, for instance in excerpt 45), Roth refutes that Jacob cannot answer because he has not understood in the sense of ‘heard’. Importantly then, as the student’s task consists of a repetition of something he heard, Jacob’s conduct is a) not compliant with an expected classroom behavior, and b) does not enable him to execute the expected action.

Noteworthy is also that the sequential embedding of the CIK is in line with the collection of claims of insufficient knowledge in response to questions: they are never straightforward and precision-timed, but are deployed as a resource for managing breaks in progressivity of interaction by proposing a closing of a halted sequence after substantial delays. There is however one crucial difference between the sequential embedding of the CIK in this excerpt and the CIKs of the rest of the collection:

- I have shown that CIKs are routinely used after the students having displayed some understanding of the previous action(s) by means of different resources: gaze behavior, change of state tokens or hesitation markers (*ah*, *äh*) as well as attempts of responses.
- The CIK within the excerpt quoted above is a deviant case: the CIK occurs without any prior claim of understanding. More precisely, it is even preceded by an explicit claim of non-understanding (CNU). I suggest that this contributes to the reading of the CIK as an inappropriate resource and highlights the fact that Jacob is not translating his epistemic and perceptual access but rather using CNU and CIK as a means of managing interactional pressure in a moment where he has been inattentive. Roth orients to this by sanctioning Jacob and by tagging his conduct as being not compliant with the classroom norm.

3.5 Summary

In the present section we have been concerned with courses of actions where students make use of claims insufficient knowledge (CIKs) in response to an FPP. The students thereby technically complete an adjacency pair without providing a fitted answer (section 3.1. information request, section 3.2. display question) or without complying with a request (section 3.3.).

When participants do not provide an SPP this absence is accountable. A routine account for this absence is claiming insufficient knowledge. The analyses in this section have further detailed this observation by focusing on the larger sequential embedding of CIKs that are accomplished by HH students in response to teacher’s questions or requests. The analysis has demonstrated that when the HH students use CIKs, they *orient to*, *manage* and *exploit the principles of progressivity*.

With regard to the sequential embedding of CIKs, the following points can be highlighted:

- HH students regularly deploy CIKs in response to a teacher's FPP.
- HH students deploy CIKs in response to information requests, display questions as well as requests for action.
- In response to information requests and display questions the CIKs are preceded by some indication that the student has understood the FPP.
- In response to information requests and display questions the CIKs occur with a delay. This delay is twofold:
 - Previously to the student's CIK, the teacher has provided several recyclings of an initial FPP. Sequential progressivity is substantially impinged upon.
 - Previously to the student's CIK, the student has launched a turn-beginning but then pauses or hesitations occur. Within-progressivity is broken.
- In response to requests for action, the CIK occurs in precision-timed manner.
- The follow-up of the students' CIKs is noteworthy: teachers routinely refute the students' CIKs. This becomes observable by the teacher's explicit disalignment markers (*aber* 'but' in excerpts 46, 48, 49; *doch* 'yes you do', excerpt 52). Moreover, when the student has claimed insufficient knowledge, the teacher nonetheless attempts that the student accomplishes an answer (qualifying the preference for answer over non-answer responses, Stivers & Robinson, 2006). Thereby, the teacher to some extent 'overlooks' that the student 'does not know'. Even when display questions are at stake, the teacher does not provide himself the answer or assign the turn to another student. Importantly, the student then re-aligns to the teacher, i.e. he not evasively insists by re-claiming insufficient knowledge.
- For pursuing an answer by the student, the teacher launches several reformulations and recyclings of his FPPs and thereby provides the student with new opportunities to accomplish an answer (i.e. a fitting instead of a unfitting response). It is noteworthy that initially the teacher never assigns the FPP to another student.
- When the teacher prolongs the reformulations of the FPP, the student may finally accomplish a second CIK (excerpts 49 and 50). The follow-up of such a second CIK is regularly the closing down of the course of action (e.g. by means of candidate answers provided by the teacher).

The details of their sequential embedding highlight the fact that students regularly deploy CIKs with a non-cognitive meaning. This interpretation is further supported by those cases where CIKs are responsive to questions concerning feelings or opinions, i.e. where *not knowing* is hardly possible. The purposes that students carry out by means of claiming insufficient knowledge are related to the issue of *managing a problem in progressivity*.

- Students handle the pressure for providing an answer to the extent that by means of claiming insufficient knowledge the students account for breaks of progressivity.

- Moreover, when students use CIKs they do not only account for a break of progressivity but they actively contribute to the re-establishment of progressivity:
 - Sequence progressivity is re-established
 - Progressivity of the overall course of action is not re-established, but the students' CIK is followed by several reformulations of the teachers that attempt to close the course of action. A second CIK within the same course of action is followed by a closure.
- Some CIKs occur in students' responses to teachers' FPPs that call into question the students' conformant conduct. By claiming insufficient knowledge, the student can *refute such an other-categorization* as a non-conforming student.
- CIKs that are used by students as a means of replacing or resisting to the accomplishment of a requested action in contrast (section 3.3.) come in a direct and precision-timed manner.
- It has been shown that this timing may be a contingently adapted use of a sequence completion. In other words, a precision-timed CIK in lieu of a delayed CIK may be related to the specific job they accomplish, namely to resist the teachers' other-categorization of the student as a deviant or an uncooperative student and to maintain the engagement of the co-participant.

A deviant case discussed at the end of the section has highlighted the importance of the fact that displays of understanding precede claims of insufficient knowledge. Students indicate that the lack of answer is not due to understanding a prior turn but in not knowing the answer. In the deviant case, the CIK is preceded by a claim of non-understanding. The CIK is then followed by an explicit reference to Jacob as a student who did not listen.

4 Discussion

Chapter IX was dedicated to hard-of-hearing students' claims of lack of understanding and knowing, focusing on the use of formulations of restricted epistemic (I didn't understand, I don't know) and perceptual access (I didn't hear) in response to first pair parts.

In previous chapters I have first shown that hard-of-hearing students are able to provide precision-timed answers to questions and actions to requests for action (chapter VII, section 2). I have also shown, that when they display some trouble in providing an answer, they make mutually observable whether they understood the prior turn or not (chapter VII, section 3). I suggested that by means of several visual resources (thinking face, gaze conducts), students manage sequential breaks in progressivity by minimally displaying what the trouble is. They do so precisely-timed to the completion of the FPP. In this chapter I have shown that when the trouble in providing an SPP is prolonged, students supply the answer or accomplishment of an action with claims of non-

understanding or insufficient knowledge by means of formulations such as *ich habe nicht verstanden* or *ich weiss nicht*.

Claims of non-understanding with *ich habe nicht verstanden* are rare. Interestingly, they are not oriented to as repair-initiating actions. The instances can be set in two different activity environments (but not in terms of strict sequential descriptions).

- Students make use of CNUs within courses of action where repair is problematic does not seem to be successful (section 2.1., 2 instances). By claiming non-understanding, the student provides an account for an insert sequence (repair).
- Students make use of CNUs within courses of action where they are involved in a repetition task (section 2.3., 3 instances). In these sequences the students claim non-understanding in response to a first pair part that makes relevant the repetition of one or several previous turns. If these claims are preceded by displays of divided attention, teacher refuses them (excerpts 44 and 35). If in contrast these claims are preceded by the teachers' request for a display of understanding, a repair follows the CNU (excerpts 41 and 43).

In addition to the use of *ich hab nicht verstanden* in response to FPP, the students regularly claim insufficient knowledge by using *ich weiss nicht* in response turns. The following practices have been described:

- A first practice consists in delayed claims of insufficient knowledge after having claimed understanding of the FPP and after a substantial break in sequential and turn progressivity (sections 3.1. and 3.2., 12 plus 7 instances.). Their job consists mainly in the re-establishment of sequential progressivity that finally also contributes to the progression of the overall course of action.
- A further practice consists in precision-timed CIKs in response to a request for a specific action (section 3.3., 4 instances). These CIKs are related to an endeavor of resisting a request whose design makes relevant an other-categorization of the student as an uncooperative student. In other words, through the CIK, the student self-categorizes as a cooperative student and thereby resists the teacher's other-categorization as well as the launched course of action. The timing of these CIKs is especially relevant – by not delaying these CIKs, the student omits displaying 'doing thinking' but he straightforwardly claims that he is cooperative. Furthermore, the precision-timed launching of the CIK enables the student to maintain the mutual engagement with the teacher.

By means of both types of formulations, *ich weiss nicht* and *ich hab nicht verstanden*, the student claims insufficient epistemic access that is necessary for the provision of the SPP. The examination of claims of insufficient knowledge as well as claims of non-understanding has revealed the following common denominators.

- First, both occur in responsive turns and address the conditional relevance set by the FPP.
- Second, teachers rarely read them as cognitive disclaimers.
- Third, teachers regularly orient to them through the accomplishment of a disaligning next action¹¹⁵.
- Fourth, the hard-of-hearing students do not insist on the claim but realign to the co-participants' disalignment. This in turn strengthens the interpretation of those disclaimers as non-cognitive. The disalignment by the teachers bears testimony of the question of who in the setting is entitled to close down courses of actions as well as who has the right of claiming and disclaiming epistemic access. It is striking in this sense that teachers assign or refute the students' claimed and a priori private cognitive states.

On the basis of the analysis of hard-of-hearing students' use of formulations of restricted epistemic (not knowing, not understanding) and perceptual access (not hearing) in responsive turns, I put forward five essential points:

- (1) The hard-of-hearing students deploy CIKs and CNUs for all practical purposes. More precisely, the claims of insufficient knowledge or non-understanding can be described in terms of practices that contribute to the production of (interactional) order on diverse levels of interaction.
 - On the sequence level, the students deploy CIKs and CNUs as a means of technically completing the adjacency pair and thereby reallocating the turn to a co-participant.
 - Furthermore, on an actional level, the students' CIKs and CNUs can be described as accounting for breaks in progressivity. In some cases this is accomplished by accounting for an absence of answer (replacing the answer), in other cases by accounting for the initiation of an insert sequence.
 - Finally, with regard to identity, some CIKs and CNUs are clearly deployed as a means of resisting other-categorizations making relevant categories like 'bad student' or 'uncooperative student'. In contrast to these categorizations, the formulations are locally exploited as resources for 'doing being a good student'.
- (2) Managing progressivity in interaction and more or less substantial impingements on it is an important endeavor for all participants to interaction. This management necessitates specific practices that make part of the participants' interactional competence. Practices that are used for working towards the re-establishment of progressivity as well as practices that are deployed for accounting for breaks in progressivity are key to present oneself as a competent participant: They enable the participant demonstrate competence

¹¹⁵ Interestingly this is not the case for stagings of thinking which in fact may express exactly the same but non-verbally, namely 'I attempt to respond but I don't know'. This is in line with Heritage (2012b) who suggests that 'thinking faces' are 'wordless assertions' of a state of non-knowledge (a K- position) (ibid.:40).

relative to sequence organization and precision-timing despite troubles in providing a type-fitted answer or a requested action.

- (3) It appears that an explicit account of ‘not knowing’ is a more acceptable option of displacing a response than an explicit account of ‘not understanding’. This observation clearly highlights that (at least in these moments) the hard-of-hearing students are oriented to as ‘regular students’ who are held responsible for listening and hearing just as the rest of the class, the ‘regular students’ are.
- (4) A close look at the semiotic resources deployed by the hard-of-hearing students sheds light on the nature of their competence. First, the students make use of a range of resources drawing on spoken German, on Swiss German Sign Language, as well as on gesture and artifacts. Most importantly, the choice of the resources is not random but it is deployed contingently to the affordances of the participation frameworks as well as the sequential environments at hand. Second, the students’ competence is not abstractly determined as an internalized ‘knowledge’ of forms and functions. Contrary to this, the competence is local, situated and shared. This implies for example that the students’ use of resources that are not understandable by the co-participant (cf. for example excerpt 9) does not permit for the establishment of intersubjective meanings. Consequently, the students’ competence is moulded by the competence of his co-participant.

Formulations of non-knowledge or non-understanding re-establish sequence progressivity. The progressivity of the overall course of action is then further handled by means of the teacher’s proposed reformulations. We may therefore differentiate between turn, sequence and course of action progressivity.

Chapter X – CONCLUSION

1 Overview

Several studies converge on pointing to the difficulties that deaf and hard-of-hearing participants encounter when participating in spoken language interaction, and this despite the growing possibilities for these participants to benefit from the advances in hearing aid technology (chapter II, section 1; chapter III, section 4). For DHH children, the issue of how they manage to participate in classroom interaction is of particular relevance. In the field of education and linguistics, such participation has already been examined, for example by studying the number and mean length of the DHHs' utterances, the accomplishment of pragmatic speech acts or the DHH participants' way of requesting clarification in case of problems in understanding. The present study adds to previous results by proposing an approach to the DHHs' participation that (a) focuses on naturally occurring interaction, (b) adopts an interactive and collaborative perspective on interaction and competence, (c) takes into account verbal and non-verbal resources, and (d) studies participation independently from linguistic competence.

In this study I attempted to get a sense of how four adolescents with a prelingual hearing loss actually participate in a hearing classroom, qualified as integration classroom. Notwithstanding the difficulties these participants encounter with spoken language lexicon, grammar as well as with speech and hearing, the study has been concerned with an initial investigation of hard-of-hearing adolescents' competent way of participating in interaction. In this endeavor, the study investigated the interactional competence of four adolescent students who attend integration classrooms. This investigation consisted in revealing and describing a range of interactional practices by means of which the hard-of-hearing adolescents participate in the integration classroom. Such an examination of HH individuals' participation in a hearing community of practice is of fundamental import for fostering a better understanding of the interactional competence these individuals deploy in real-life interaction, as well as the specific challenges they encounter when attending lessons in integration classrooms while being accompanied by a hearing teaching assistant.

1.1 The issue of participation through the lens of progressivity

Two major issues of participation have been singled out for the analysis of the students' interactional competence. Both of these issues can be related to the principle of progressivity in interaction on two different levels of granularity (chapter IV):

Competing constraints. When students are participating in classroom interaction they are faced with two competing constraints: they have to secure their understanding of ongoing activities in

order to be able to further follow this same activity, to respond potentially upcoming questions addressed to them, or to manage tasks they are requested to accomplish; at the same time, the possibility of interrupting the ongoing activities within the classroom may underlie some constraints with respect to the moments and the extent to which such breaks in progressivity can occur. The presence of a teaching assistant provides the HH students with particular opportunities to deal with these constraints. Hence, the first major objective was to reveal the various forms of participation that the HH participants and their co-participants exhibit in the integration classroom, and how managing the competing constraints is related to these different forms of participation.

Participation in question-answer sequences. In this thesis special attention has been paid to those moments where HH students have to respond to questions or requests for action accomplished by their hearing co-participants (predominantly teaching assistants or main teachers). This is a moment where the HH students have to deal with various immediate challenges. First and foremost, in order to provide a relevant next action, the student must have understood the question or the request for action. Furthermore, the student must know the answer or be able to accomplish the requested action. However, several factors may hinder the accomplishment of the second pair part: problems in hearing or understanding the FPP, as well as problems in knowing can compromise the students' delivery of a relevant next action. Importantly, when this is the case, sequence progressivity is broken. It has been explained in chapter IV that progressivity is broken when *the next one due* (a word or an action) is not coming in a straightforward manner. Hence, subsequently to a first pair part, the sequential progressivity is compromised when:

- the second pair part is not precision-timed, i.e. when a gap between FPP and SPP occurs
- no response at all is provided (i.e. no meaningful action, absence of reaction),
- a non-answer response is provided, i.e. a repair initiator, a claim of insufficient knowledge (or a counter).

Such breaks in progressivity are not uncommon and they are not a priori associated with interactional incompetence. However, against the background of common knowledge about the students' hearing loss on the one hand and their status as learners on the other hand, breaks in progressivity may be prone to foreground the students' hearing loss or lack of knowledge.

In sum, when the HH students are selected for participating by means of provisions of responses to questions, issues of sequence progressivity become especially relevant:

- There are normative expectations relative to the *timing* of responsive actions.
- There are normative expectations relative to the completion of question-answer sequences.

1.2 Research questions

The precise research questions as stated in this study are the result of an initial and rather finegrained inspection of the data (cf. chapter V, section 3). The research questions that have been established during the initial stages of the research and that have further guided this investigation fall under three main categories. The first aim was to provide a ***description of the specific***

classroom organization and the opportunities and constraints that it provides for the students' participation (chapter VI). The precise research questions were:

- (1) What are the settings' stable characteristics in terms of participants, spatial organization as well as activities implemented in the classroom? (section 1)
- (2) What characteristics of the setting and the participants are consequential for how interaction is shaped? (section 1)
- (3) What are the specific constraints and opportunities that students are faced with based on the organizational structure of the classroom? (section 2)

The second aim was to identify and describe the practices deployed by hard-of-hearing students when participating in question-answer sequences. The first part of the analysis was concerned with practices deployed by hard-of-hearing students for **displaying understanding and non-understanding of previous first pair parts when they have been other-selected by a co-participant** (chapters VII and VIII). The research questions relating to this aim were:

- (1) Do students promote progressivity by responding to first pair parts in a precision-timed manner? (chapter VII, section 2)
- (2) How do students display their access to previous turns when problems in responding occur? (chapter VII, section 3)
- (3) How do they display a lack of access to a prior FPP? (chapter VIII)
- (4) How do co-participants orient to those displays? What interactional consequences arise from these practices?
- (5) What do these sequences unveil about the status of the student in the regular classroom?

The second part of the analysis with respect to the students' participation in question-answer sequences focused on **the practices deployed by hard-of-hearing for completing adjacency pairs by means of formulations of insufficient epistemic and perceptual access** (chapter IX). The precise research questions were:

- (1) In what sequential environments do students complete adjacency pairs by claiming insufficient epistemic and perceptual access?
- (2) How do students design these formulations?
- (3) What interactional consequences arise from these practices?
- (4) What do these courses of action reveal about the status of the student in the regular classroom?

The methodological and epistemological framework chosen in this thesis is Conversation Analysis with an emphasis on current reconsiderations of traditional CA notions within a perspective on interaction as a fundamentally multimodal approach (cf. chapter V). At its most basic, studying a phenomenon through the lens of CA entails the investigation of naturally-occurring data, the adoption of an emic perspective and a finegrained sequential analysis of the participants' social actions (rather than their linguistic forms). In what follows I summarize some major findings of this thesis and discuss them with regard to interactional competence.

1.3 Summary of the results

Classroom organization and forms of participation (Chapter VI)

The classroom presents a multitude of different possible participation frameworks, which are constantly changing, adapted by the participants for the achievement of locally relevant activities and tasks. Beyond the participation frameworks that are commonly encountered in classroom interaction, the ‘integration classroom’ allows for the establishment participation frameworks specific to this setting:

- interaction with the main teacher
- interaction with the teaching assistant during individual desk work
- refrain from interaction with the teaching assistant
- interaction with teaching assistant in subordinate interaction to the plenary

The way how the HH students engage in different forms of participation reflects at the same time how they deal with the competing constraints (cf. section 1.1. of this chapter).

Precision-timing in responses to questions (Chapter VII)

The analyses in chapter VII (section 2) have demonstrated that students are able to precisely time responsive actions to the TRP of the previous action-turn. Precision timing has been described for vocal conducts (section 2.1.), but also for signs and gestures as well as practical physical actions (section 2.2.). The *visual precision timing* observed in these data points to the importance of co-participants having visual access to the responding participant: what appears to be a lack of response through the vocal silence turns out to be in fact a precision-timed response that unfolds in a ‘silent’ manner.

When a student does not provide an answer or a requested action in precision timed manner, he nevertheless minimally displays, i.e. he makes mutually recognizable, that he understood the prior turn (the FPP) and, thus, that a recycling of the FPP is not necessary. For so doing, the student relies on the following practices that fall under two main categories:

- Vocal pre-beginnings that display understanding of the prior turn:
 - Vocal hesitation markers (*ähm*)
- Visual pre-beginning that display understanding of the previous turn: precision-timed gaze and posture movements
 - Gaze withdrawal with ‘thinking face’ (chapter VII, section 3.1)
 - Bodily reorientation to relevant artifacts with body and gaze (chapter VII, section 3.1)

The HH students rely extensively on visual pre-beginnings, namely gaze withdrawal with thinking face or bodily reorientations to relevant artifacts with body and gaze. There are very few vocal pre-beginnings produced by the HH students. Moreover, by displaying their understanding and by staging thinking, the students (non-verbally) narrow down the possible reasons for the break of progressivity – co-participants understand from these accounts that the break of progressivity is not related to a problem with their question or request, and that no recycling of the FPP is

necessary. The analyses reveal that there is in fact a regular organization between these visual pre-beginnings and the interactional consequences: when students use vocal or visual pre-beginnings in response to an FPP, the teachers propose remedial actions that consist in new and further information, rather than redos of the same prior information. On the basis of these observations, the pre-beginnings have been described as displays of understanding.

Repair initiations in response to questions (Chapter VIII)

Breaks in progressivity can also be related to a lack of understanding of the prior turn, be it with respect to the perceptual access (hearing) or the epistemic access (understanding). The analyses in chapter VIII have revealed that students regularly display troubles in providing an SPP to the co-participant's question or request for action. Subsequently to the students' displays of non-understanding, the hearing co-participant engages in redoing his FPP. These courses of action are described as other-initiated self-repair.

The practices that students deploy for displaying non-understanding of the previous turn while a break in progressivity occurs fall under two main categories:

- Vocal displays of non-understanding (chapter VIII, section 2):
 - o OCRIs (*was*)
 - o OCRIs (*wie*)
- Visual displays of non-understanding (chapter VIII, section 3):
 - o No gaze withdrawal when mutual gaze is established during the FPP
 - o Quick establishment of gaze when no mutual gaze is established during the FPP

It is noteworthy that there is very scarce use of vocal repair initiators by the HH students. By contrast, HH students abundantly use visual practices (cf. section 4 below). The findings show that mere gaze conduct, that occurs in specific sequential and temporal positions, is competently used by the HH students for making mutually recognizable that they encounter troubles with the prior FPP.

Formulations of lack of understanding (Chapter IX)

Formulations that indicate non-understanding (perceptual or epistemic) by means of *ich habe nicht verstanden* are very rare in the corpus under study. This has been one of the most surprising observations, given the fact that they have been reported to function as repair initiators and that repair initiators were expected to occur extensively. A further interesting observation has been that co-participants treat none of the students' claims of non-understanding CNU as repair initiators. This means that the CNUs are not implementing the action of initiating a repair because the co-participants do not respond to them by carrying out a repair.

The explicit reference to non-understanding implements quite different actions. Basically they are used as a means of accounting for breaks in progressivity. These accounts occur:

- in extended problematic repair where they are deployed as accounts for the initiation of repair sequence;

- in repetition tasks where the students are asked to repeat a previous turn, but where the students deploy a CNU as an account for the absence of a relevant next action.

The use of CNUs in this specific environment bears testimony of his interactional competence. In moments where repair is a difficult endeavor, the explicit account for why understanding is not established may be crucial. This is especially the case with regard to the students' hearing status, where 'not understanding' may be either related to hearing or to grasping. Moreover, claiming not understanding and accounting for the lack of an answer in moments where the student has to repeat something bears testimony of the students' competence is playing with conditional relevance by adapting the resources to the local contingencies of interaction. Hence, while non-understanding is a relevant and acceptable account, claiming non-knowledge in response to a repetition task may be inappropriate – this is warranted by the deviant case analysis (excerpt 53), where the student's conduct is made observable as being non-conforming to the classroom norm after having claimed non-knowledge in response to a repetition task.

Formulations of lack of knowing (Chapter IX)

There are moments where the students do not only account for breaks in progressivity but they actively deal with these breaks by attempting to reinstall the progressivity of interaction. In so doing, they make use of claims of insufficient knowledge.

An important number of claims of insufficient knowledge (CIKs) in the corpus under study appear in sequential environments where a substantial disruption of progressivity has occurred. By *substantial* I mean that the student claims insufficient knowledge in moments where the FPP-speaker has accomplished an initial FPP and *one or more reformulations* of it, but the SPP has still not been accomplished or it has still not been explicitly ratified by the speaker of the FPP. Additionally, in some cases also turn progressivity is broken, i.e. the SPP-speaker launches a turn but then intra-turn delays (hesitations, pauses, cut-offs) occur.

The accounts of non-knowledge in these sequential positions are operating on the sequence organization level by technically closing the adjacency pair that has been opened. Thereby, the CIKs deal with breaks in sequential progressivity by closing down the sequence and thereby accomplishing the job of replacing the expected SPP. Practically, when the adjacency pair is complete, there is no relevant pending action. Furthermore, some of them also operate on the turn organization level by functioning as turn-exit devices when a response turn has been launched but is then interrupted.

However, the question that has launched a specific course of action is to some extent still in play. This implies that the minimal sequence (i.e. the adjacency pair) has been closed, but the progressivity of the overall course of action is not reinstalled totally. Participants deal with this in different manners. In ordinary conversation, other participants may supplement the answer by self-selecting (Stivers & Robinson, 2006). In classroom interaction, the teachers engage in interactional work that aims at getting the question answered in some way: One possibility is to renew the FPP and to address it to another student, which has been documented by Sert (2010). In my case, this

procedure is never applied for the HH students, even when the teachers had the possibility to select another student. By contrast, the same FPP is re-addressed to the same student. To sum up, the analyses in chapter VIII have revealed the following points with regard to the interactional consequences ensuing the CIKs deployed by the students:

- the teacher regularly disaligns from the students' CIK: he suggests that in fact the student does know (regular use of contrastive marker *aber* 'but' or of candidate hearing *du weißt nicht?* 'don't you know?')
- the teacher never directly re-addresses the question to another student (as in Sert, 2011)
- the teacher does not provide the answer by himself, even if he could (in case of display questions)
- the teacher does not directly abandon the course of action, i.e. cancel the initial action of the sequence

While the student closes down the sequence and reinstalls the progressivity on the sequential level, the teacher works hard on progressing also on the level of the overall course of action that has been launched by the initiating action. This means that the teacher will attempt to obtain an answer to his question by opening new adjacency pairs, namely by recycling the question and re-addressing it to the same student (not another student). These instances are very insightful in terms of participants' priorities in interaction: when a teacher readdresses questions to the same student rather than choosing another student, he embodies a local prioritization of issues other than progressivity. In the examples discussed in this study, two observations are relevant:

- (1) The issue of learning appears to override the principle of progressivity: the teacher turns something into a learning object, and does not simply provide an answer (questions are a way of making understand).
- (2) The issue of making the students participate in an interaction overrides the principle of progressivity: the teacher does not close down a course of action but provides the student with opportunities to further elaborate his answer.

When students claimed insufficient knowledge to provide an answer but the teacher disaligns and pursues an answer by redoing the FPP, the student displays renewed engagement in the course of action. Hence, at first they do not insist on their claimed state of non-knowledge. However, when progressivity is further substantially broken, the student may accomplish a second CIK, which is closing-implicative. An interesting point to highlight is that this second CIK within a same course of action is regularly emphasized, but that a third CIK never occurs. In sum, despite the fact that the students' CIKs cannot completely reinstall the overall progressivity, they actively contribute to the management of progressivity by completing the sequence and re-allocating the next action to the teacher.

A significant aspect is also that before the HH students claim insufficient knowledge in response to an FPP, they regularly display their understanding of the FPP (cf. gaze withdrawal from the co-participant, turn-launchings by means of vocal hesitation markers or change-of-state tokens that flag the students' launching of a response turn). The display of understanding may be a useful

device for showing one's engagement and cooperative and appropriate participation to the interaction.

2 Discussion

2.1 Constraints and opportunities of the integration classroom

The partial integration of DHH students is a widespread education model, consisting in an offer where DHH individuals attend specialized classes for some subject matters and regular or mainstream classes for others. For their attendance in the mainstream classroom, which I labelled here the 'integration classroom', students can be accompanied by a sign language interpreter or by a specialized teacher, a teaching assistant. The latter is the case for the HH students under study in this thesis. A fundamental question is, to what extent the HH students participate in classroom interaction and how the teaching assistant's presence affects this participation.

The analysis of the integration classrooms under study provided a detailed picture of the complexity of the interactional setting, and the constraints and opportunities that the HH students encounter when they attend to such integration classroom. First and foremost, the presence of the teaching assistant provides the HH students with the opportunity to engage in interaction with a person who occupies the official role of helping the students. This possibility provided by the structural organization of the classroom is actually exploited, as both teaching assistants and the students regularly engage in interaction in order to clarify e.g. procedures that the main teacher has explained in the plenary. This is a participation opportunity that potentially remedies to poor listening conditions during plenary interaction (e.g. background noise) or more generally understanding problems related to the student's status as a language learner. Second, the teaching assistant's presence offers two particular types of participation that are specific to the classroom organization: **(1)** when the HH student is requested to answer a question in plenary, the teaching assistant can provide the student with help; and **(2)** when the HH student is a recipient in the plenary and encounters an understanding problem, he can initiate a repair sequence with the teaching assistant simultaneously to the ongoing plenary. I briefly discuss these two participations formats in what follows.

(1) Responding to a question in plenary

The presence of the teaching assistant provides the HH student also with the possibility to support him when he is not able to provide an answer to the main teacher during a plenary activity. Though, the students under study clearly *refrain from initiating* such assistance sequences in these specific moments. The data reveals that such assistance sequences are frequent, but it is always the teaching assistant who initiates them. It has been argued that these examples clearly highlight the students' attempt to align to a participation format that does not distinguish them from the hearing students, embodying thereby also their responsibility as a regular student. This observation will be further discussed in section 2.2.

(2) Initiating question-answer sequences simultaneously to plenary

During plenary interaction the HH students regularly initiate sequences with the teaching assistant that unfold in parallel to the ongoing plenary interaction. This dual participation framework allows the HH students to deal with competing constraints in a quite particular way: the students' understanding can potentially be re-established thanks to a repair sequence, and at the same time the progression of the plenary activity must not be interrupted. This is relevant in many ways. First, this subordinate interaction provides an opportunity to clarify meaning in order to be able to further follow the plenary activity. Second, by means of such repair sequences in subordinate interaction the students can initiate repair immediately when the trouble occurs. Such a latching of the repair initiator to the trouble source turn enhances the chances to clearly localize the trouble (Drummond & Hopper, 1991:305; cf. chapter III, section 2.3.), a task that has been shown to be particularly challenging for HH participants. Third, the subordinate interaction allows the participants to orient to the progression of the classroom activity and to minimize the impact of the 'integration classroom'. Indeed, in moments of such dual participation frameworks, the 'integration' classroom is visible due to the simultaneous interaction between the teaching assistant and the student, but it has no impact on the sequential organization of the the plenary interaction. This appears like an important achievement of all participants in order to organize integration classroom as unobstrusively as possible. And finally, the subordinate interaction is not only an interactional space where understanding can be negotiated, but it can also be seen as a locus where a) the HH students exhibit their participation and engagement by asking questions (or making comments), and b) the teaching assistants can demand the students to display their participation.

Two more points have to be highlighted that invites us to critically look at these subordinate interactions. First, some examples in this study have clearly unveiled that the negotiations between the student and the teaching assistant are not always successful, hence that subordinate interaction has been engaged but had to be abandoned without success (excerpts 11 and 12). In both excerpts the student and the teaching assistant had great difficulty in establishing mutual understanding on what the student is struggling with. In excerpt 11 this difficulty potentially results from the fact that the student employs an unspecified repair initiator and that the teaching assistant lacks information of what the problem is. In excerpt 12 by contrast, the student uses a more specified repair initiator and he relies on speech, gesture and sign. In this case the teaching assistant's limited knowledge of sign language is contributing to the longish negotiation sequence. In both excerpts, the subordinate interaction is finally closed by Micheli who explicitly requests the student to wait. These closings are occurring at specific moments, namely when the main teacher provides information that is highlighted as especially relevant (with deictic 'here', discourse markers 'now' or gaze by the main teacher towards the teaching assistant/student). A second point shall briefly be commented on with respect to the presence of the teaching assistant. As already discussed by Ohna (2005), a second teacher who functions as a mediator for the DHH students actually contributes to the maintenance of *two groups* within one class. This is contrary to current education policies advocating for the inclusion for students (Hinz, 2002), characterized by the construction of one heterogenous group. This critical reflection further underscores the relevance

of looking precisely at how students really participate in these classrooms, revealing the micro-moments of successful and difficult participation. Such insights can build a basis for comparing different education models and complete results of studies that have highlighted the students' advances in speech, hearing, sign language competence.

2.2 Interactional competence of hard-of-hearing students

The integration of DHH students in a spoken language classroom provides the students both with the necessity of deploying interactional competence in order to participate competently in the classroom, and at the same time it offers the student the opportunity to further develop this competence. In this thesis interactional competence is understood as a participatory competence (chapter II, section 3.1.; Goodwin & Goodwin, 2004). Participation refers to an activity where participants see and/or hear each other and co-construct together an activity in a structured way by means of different practices (ibid.). These practices can be formed out of linguistic and non-linguistic resources, but they can also integrate only non-linguistic resources (e.g. displaying reciprocity). As a consequence, participatory competence can be studied independently of an assessment of the linguistic competence. In the present study, interactional competence has been examined with a focus on *temporality* and *sequentiality* rather than linguistic forms. These dimensions are crucial constituents in the organization of social interaction, but have not been taken into account in current descriptions of how DHHs' use language for communication. Hence, the present thesis' findings call for broadening the perspective on the DHHs' competence by resituating the study of DHHs' language use in its "*natural (...) niche for language*", i.e. social interaction (Schegloff, 2006:70).

In this thesis two main facets of the students' interactional competence have been demonstrated on the basis of **(1)** the students' management of dual participation frameworks, **(2)** the students' dealing with sequence progressivity.

(1) Management of dual participation framework

In section 2.1. I have discussed to what extent the presence of the teaching assistant provides the participants with specific opportunities to favor the progression of the plenary classroom and simultaneously negotiate the students' understanding. Two essential aspects shall be highlighted:

- (1) *The sequential embedding of the student's initiations.* The initiations do not come at any moment in interaction; they reflect the students' fine monitoring of the teachers' and the teaching assistants' actions. A first important observation is that students launch repair sequences in moments where the main teacher has emphasized some information as being particularly relevant for the teaching assistant and, consequently, the students (by means of prosody and gaze). A second finding is that the students' initiations are placed at those moments when the main teacher is not gazing in their direction. By means of this their initiation is unambiguously addressed to the teaching assistant.
- (2) *The resources used.* The progressivity of the overall activity is respected by means of a minimization of the resources used for the initiation of the sequence and for its accomplishment. In this vein, the students have been shown to rely on the teaching

assistant's frequent monitoring conduct that consists of gazing in alternation at the main teacher and at the students (excerpts 9 and 10). In moments when the teaching assistant does not gaze at the students, they can establish mutual engagement by means of visual resources (conventional WAVE used in signed interaction) or even by launching a signed turn and restarting it when mutual gaze has been established (excerpt 11).

The students' way of dealing with the competing constraints by launching a dual participation bears testimony to their competence for participating in (this specific) classroom interaction. The students evidence that they finely monitor the ongoing interaction and that they use resources in a context-sensitive way. These aspects of interactional competence are fundamental for the students so they can make best use of the teaching assistant's presence. Note that revealing the complexity of this participation framework but also the interactional practices and resources it makes relevant, from the student and from the teaching assistant, is only made possible through an analysis of naturally occurring data. Thus, an important benefit that research from educational and linguistic research on DHH participants/students can take from a CA approach is precisely this: discover aspects that are relevant for the participants themselves in their everyday participation in social interaction.

Two more points shall be highlighted with respect to the examination of the HH students' interactional competence: first, the examination of the management of dual participations frameworks underscores that interactional competence goes beyond the use of linguistic resources; it includes the management of temporality, monitoring and coordination. Second, the analyses clearly reveal that the success or failure of these repair sequences cannot be assigned to one or the other participant. The establishment of the participation framework and the repair as such are fundamentally collaborative.

(2) Dealing with sequence progressivity

Precision timing and delay. A basic finding of this study is that HH are able to precisely time the turn-beginnings of their answers to questions. It is on the basis of this observation that all those turns that do not occur with precision-timing can relevantly be said 'delayed'. When a gap occurs between the SPP and the expected next action, the FPP-speaker may engage in several diagnoses of the lack of answer. It has been suggested that in such cases, inter-turn silences or gaps are *import-laden* and that FPP-speakers 'guess, infer or determine what the trouble is' (Pomerantz, 1984b:155; cf. chapter IV, section 4.4.2.) on the basis of the gap itself. And against the background of the students' prelingual hearing loss, co-participants could relevantly diagnose a problem in hearing or in linguistic understanding to be at the basis of the break of progressivity (cf. Heritage, 1984a). However, such 'guesses' on the basis of gap as it suggests a rather *passive role* of the participant who is supposed to answer (as there is just a 'lack of answer'). By contrast, in this thesis, I propose that DHH students *actively* design lacks of responses in such a way that they display their understanding or non-understanding of the prior turn. The systematic organization of these displays can be unveiled through a sequential analysis, provided that the analysis takes all observable bodily conducts into account. Practically, students deploy a range of visual practices for indexing within these gaps whether or not they did hear/understand the FPP

that has been addressed to them. It is on the basis of these displays, and not a mere 'blank', that an FPP-speaker searches for the reasons of the students' (momentary) lack of precision-timed response. Hence, the students are in fact responding by means of 'doing silence' (Local & Kelly, 1986). All in all, this account confers a more active role to the recipients of the questions or requests who do not answer with precision timing. Practically, this result underscores the necessity to assess HH students by taking into account not only the linguistic resources (spoken or signed), but also non-linguistic resources. The same may apply to participants with normal hearing, e.g. language learners.

Moreover, with regard to interactional competence, the absence of vocal hesitation markers as pre-beginnings and displays of understanding are noteworthy. From a normative perspective it may be suggested that the HH students should deploy pre-beginnings in a similar manner to the hearing participants within the classroom. While hearing students deploy both types of pre-beginnings, the vocal hesitation markers are much more frequent. However, within an emic perspective on the students' competence, the significant point is whether the participants themselves treat these displays as competent contributions to the interaction. As mentioned, the visual pre-beginnings are not only accepted by the hearing teachers but they are systematically treated as displays of understanding. Thus, their use within the specific setting is collaboratively warranted as a competent way of participating in interaction. However, whether that is the case outside of this community of practice is a question that has not been addressed in the present study.

Repair initiations in response to questions. With regard to interactional competence, the prevalent use of visual practices is noteworthy. Similarly to what has been stated above, when considered from a logocentric perspective where verbal contributions are the baseline and are considered more appropriate than non-verbal conducts, the students would be considered as inappropriately initiating repair. While non-verbal repair initiators or unsolicited requests (staring at the table) have previously been qualified as lack of competence in initiating repair, the analyses presented in this thesis propose a different perspective. First, the use of visual initiators is routinely used and systematically treated by co-participants, and, moreover, it is never sanctioned by co-participants as an illegitimate way of requesting repair. On the contrary, the use of visual instead of vocal repair initiators may be an indication of the students' dealing with multiple issues simultaneously, namely minimize the disruption of the repair, which can be a way of dealing with the sensitive issue of 'not hearing' or 'not understanding' as an integration student, or, when this occurs in parallel to plenary, not disturb the whole-class interaction. It may therefore be understood as a specific feature of the students' interactional competence, by adapting the interactional practices to the local contexts where they are used. With regard to the assessment of hard-of-hearing plurilinguists, this observation calls for an assessment that is not constrained to verbal resources but includes the whole set of semiotic resources that the participants can draw on (cf. also Lichtig et al., 2011).

2.3 Contributions to the notion of interactional competence

The current study has been concerned with the interactional competence of HH students with a prelingual hearing loss. The scope of the study was however not to compare the students' practices with those of the hearing students or of hearing participants more generally. Hence, at least some of practices may also be part of hearing participants' interactional competence. What is more, the investigation of interaction with participants using a signed and a spoken language allowed us to zoom in on fine details of turn and action design. As a consequence, the findings of this study make a contribution to current conceptualizations and empirical descriptions of interactional competence within the field of CA-SLA (Hall, Hellermann & Pekarek Doehler, 2011). Basically, the study adds to the current body of research by highlighting two aspects of interactional competence:

- (1) Interactional competence encompasses not only vocal practices but also *visual practices*. It is by no means uncommon in CA-SLA to include multimodal aspects into the analyses and the description of how language learners participate in interaction. The present study's originality however lies in the fact that it has demonstrated the systematicity of 'mere' visual conducts, which permitted in turn to argue that the participants under study make use of these visual conducts as *practices*.
- (2) The focus on such visual practices raises interesting questions relative to the conceptualization of interactional competence. In this study the use of specific gaze conduct (in specific sequential environments) has been described as a practice. Gaze is a resource that could neither be seen as a feature of German language nor of Sign language. Moreover, interactional competence encompasses not only linguistic and non-linguistic semiotic resources, but includes fundamentally interactional constituents such as *temporality* and *sequentiality*. For instance, the participants' ability to deal with the normative expectation for progressivity relates to facets of competence that go beyond their knowledge of grammar and lexicon. These aspects underscore that an 'additive view' of interactional competence, consisting in the idea that participants have one interactional competence in L1, and another in L2, may result in an incomplete picture. Moreover, the study of how semiotic resources other than grammatical and lexical elements are exploited in interaction emphasizes that interactional competence is not only *plurilingual* but rather *plurisemiotic*.

2.4 Contributions to a holistic approach of social interaction

The current study has adopted a methodological and epistemological framework that understands and approaches social interaction as a fundamentally multimodal accomplishment (chapter III, section 3). The findings demonstrate that participants rely on visual resources in a routine manner, which makes them recognizable for the co-participants as implementing specific actions in social interaction. This thesis contributes to current attempts of discussing conversation-analytic concepts on the basis of a holistic approach to social interaction by means of the following points:

Previous studies have shown that before a turn properly begins, *pre-beginnings* (Schegloff, 1996) can foreshadow this upcoming talk and establish or maintain reciprocity of co-participants (e.g. Ford & Sticke, 2013; Mortensen, 2009). This study's findings presenting regular use of visual practices such as gaze aversions and thinking faces in pre-beginning position and their interpretation as displays of understanding contributes to the reflection of whether *pre-beginning* is actually a relevant way of describing these elements. Pre-beginning entails that an element is something that is pre-positioned to the proper turn, whereby at least the terminology suggests that this element is less important than what follows. Therefore the term *pre-beginning* resonates with a syntactic view on turn and TCUs, as it has been implicitly vehiculated since Sacks et al. (1974) initial description of the turn-taking machinery (Ford et al., 1996). By contrast to this, a range of studies have already demonstrated that bodily-visual conducts, which may precede a vocal and verbal turn, are accomplishing important interactional work with regard to coordination and mutual orientation. The observations in this study add to these findings by pointing out that the analysis of such bodily-visual conducts may be ill-conceived when considering that they simply *precede* potential turns; by contrast, it has been shown that they integrally accomplish interactional purposes, e.g. when they indicate whether a participant has (claimedly) understood a prior turn or not.

Moreover, the findings of the present study feeds into discussions with respect to the questions of what criteria must be met for considering a phenomenon as a practice and not as a mere conduct. I have shown phenomena that are situated at the borderline between necessary conducts and practices: the preparation phase of signs and gestures are considered necessary parts of responsive actions when these are accomplished by signs or gestures. Likewise, the examination of gaze towards a relevant artifact may be necessary for providing an answer in some cases, but not in others. These observations raise the question of how to decide whether and from what moment on a conduct can relevantly be called a social practice. The analyses have put forward that for some phenomena it is impossible to decide whether it is a necessary conduct or not, and it is precisely this impossibility that may be exploited by participants for using them as an interactional resource.

Taking seriously a holistic approach to social interaction entails some important reconsiderations of notions that have their origins in analyses that took vocal speech as a baseline for social interaction (cf. also Schmitt, 2005b). This is the case for example for the categorization of repair practices. As I exposed in chapter III, self-repair can be either self-initiated by the trouble source speaker or other-initiated by the co-participant who is the recipient of the trouble source turn. The description of visual repair initiators in chapter VIII has demonstrated that the border between these two procedures (other- or self-initiation) is in fact not straightforward when considering the whole bodily-visual ecology of interaction. The results emphasize the fundamentally collaborative nature of repair sequences and of social interaction more generally (cf. already Goodwin, 1979 on collaborative construction of sentences) and underline the difficulties in assigning clear-cut categories to social actions that are integrated in the dynamically and collaboratively unfolding social interaction.

The status ‘no gaze withdrawal’ as repair initiators and as social practices may be disputed. Previous studies have proposed that different body movements can be repair-initiating: head pokes, leaning forward, wrinkling nose, furrowed brows, putting hand to the ear (Mortensen, 2012; Pajo, 2012; Seo & Koshik, 2010; Skelt, 2006; Tye-Murray & Witt, 1996). In line with Hougaard & Hougaard (2009), these practices rely on bodily movements in specific sequential positions. By contrast to these bodily movements, the absence of gaze withdrawal in my case does not consist in a movement, but is characterized by a mere absence of any conduct/movement. Whether such phenomena can be accounted for as a social practice is to be discussed. I argue for considering them as a practice on the basis of the following observation: The interactional consequences of this gaze conduct in the specific sequential position are systematic. This implies that FPP-speakers orient to these conducts in a regular manner, namely by providing reformulations that are highly equivalent with the initial FPP. These reformulations (repair turns) may involve prosodic, referential and morphosyntactic modifications, but, importantly, they basically accomplish the same action as the initial FPP. Tye-Murray & Witt (1996) observed that the relationship between non-verbal initiators and the type of repair carried out are quite disparate, reporting that non-verbal initiators were followed by repetitions (32%) and by restructurations of the original message (27%), and to a lesser extent with reductions of the original message (18%). While the linguistic forms may differ, they seem all designed for addressing a problem in hearing or understanding the just prior turn, providing a redoing of the initial FPP. What is noteworthy is that Tye-Murray & Witt (ibid.) report that in 18% of the cases, the co-participant has not addressed the non-verbal repair initiators at all. This is not observable anywhere in my data.

2.5 Terminological and methodological contributions

On the methodological level the study reconsiders and adds two important elements to the CA transcription practice, which are document phenomena not previously taken into account:

- On the basis of some excerpts in this study, the transcription of *enhanced visual articulation (visual prosody)* has appeared as important for a detailed understanding of how participants organize repair in interaction. For transcribing this phenomenon I chose to use bold fonts.
- A further element that has been added to the transcription conventions is the use of hyphens for indicating the articulation of spoken language but in an unvoiced manner (e.g. -house-). Likewise, the use of double degrees (e.g. °°house°°) has been used when spoken language words have been whispered.

In this study I have used some terms not previously encountered in conversation-analytic studies:

- On the basis of the initial analyses in this study I introduced the term *visual precision-timing*. While precision-timing has been extensively discussed with regard to the fine-tuning of vocal speech onset to the TRP of prior turns, I showed that also the preparation phase of signs and gestures as well as the launching of visual physical action can be precisely timed. Moreover, also the lip movements (and not only the voice) should be considered as precision-timed. This implies considering

also so-called pre-beginnings such as lip partings as central to the study of how interaction is organized.

- The study has detailed the notion *progressivity* by showing that progressivity of turn and sequence can be extended with two more facets of progressivity: the progressivity of courses of action and the progressivity of activities. Importantly, I understand the latter as a more non-technical notion of progressivity or of progression of interaction, to the extent that activity progressivity is not strictly related to issues of sequentiality. Rather, the description of activity progressivity makes necessary to refer to an external agenda that forestalls the trajectory and potential completion of an activity (e.g. activity of explaining the procedure of a lesson in classroom).

3 Limits and perspectives

As with any research project, certain limitations have had to be accepted. A certain number of these restrictions have their origin in the initial methodological set up of the study. First and foremost, the limited number of participants and the concentration on one school (two classes) does not allow making generalizations about the HHs' participation in classroom interaction. This methodological decision is related to two factors: On the one hand, within this individual project, the data that could be treated had to be constrained to a manageable amount. On the other hand, while other HH students in integration classrooms exist, they are not normally accompanied with teaching assistants. Thus, the organization of participation from one classroom to the other may be so fundamentally different, that analyzing them together might not make much sense. However, adding data from such classrooms as a basis of comparative studies on the interactional organization and the students' participation would be an interesting undertaking for the future.

The choice of the lessons to be recorded has allowed gathering 21 lessons, mostly German classes and some mathematics lessons. While these data allowed describing the interactional organization of students' participation, issues related to understanding and learning would have benefited from a more systematic recording that aims at documenting the classroom interaction on specific topics / exercises across the classrooms, namely in integration classrooms and in bimodal classrooms. Sometimes I encountered analytical problems because it was not clear whether and what students had already discussed about a topic in previous integration or bimodal classroom lessons. This problem showcases the fact that analysts can be deprived of important background knowledge for successfully analyzing a piece of data, and that the recorded interaction is not always complete unto itself.

In a similar vein, the study could have gained some additional insights by means of interviews especially with the hard-of-hearing students themselves. During the analyses, I often wondered how the students would respond to questions relating to their language preference or their self-perceived membership in the integration or the bimodal classroom, or the hearing or the deaf world. While such information would have been excluded from the analysis itself, it would have

been interesting to compare the analysis of the local negotiation of language and membership with precisely these reports.

An important methodological problem was the recording of the individual HH student in classroom B. Both the audio and the video recordings are of a rather poor quality (as compared to the recordings in classroom A). Unfortunately during the recording period I did not manage to deal with the problem of strong backlight (making sometimes difficult the analysis of Pashali's face and gaze movements) and the poor voice quality. The first problem may have been solved by means of an alteration of the recording situation (changing the students' places in the classroom or lowering the blinds), which I chose not to do in this case for the sake of the authenticity of the situation. For augmenting the voice quality the consultation of a professional for having advice on a more performant audio recorder would have been helpful.

There are some other limitations of the study which are rather related to the analytical choices made in this thesis. Especially three of them and their corresponding research perspectives are:

- In the analyses of this study I concentrated on the interactional practices hard-of-hearing students rely upon, by examining the resources within specific sequential and actional environments. I have shown the organization of these practices especially by spotlighting how co-participants orient to the students' practices in the turn(s) subsequent to interactional practice under study. What may be lacking however is a systematic analysis of the success of the repair carried out. An interesting follow-up of this research would for example be to investigate whether there is a systematic relation between the use of specific repair initiators, repair type and the success of the repair.
- There is extensive use of sign language between mainly two students (Jacob and Nikolas). These interactions have not been analyzed (and transcribed) with systematicity, as it was not in the center of attention of this study. An important follow-up study of the students' interactional competence should however concentrate on the management of progressivity by the same students when they interact mainly in sign language. The findings of such an investigation may further nourish discussions on the conceptualization of the students' interactional competence.
- Importantly, the occurrence and relevance of the practices described in this research may indeed be limited to this specific community of practice. It is not certain for example that the visual repair initiators described here are also used or equally understood in interaction with the family or with unacquainted persons. Consequently, data from other settings and involving different participants should be scrutinized with such a focus of analysis.

The thorough and broad holistic analysis proposed in this thesis shed light on the relevance of approaching interactants with a prelingual hearing loss from a participants' perspective – it invites for further detailed studies on the hard-of-hearing participants' interactional competence within

different settings and especially also with a focus on interaction among the hard-of-hearing individuals.

Chapter XI – References

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Annexe

Transcription Conventions

<i>Tiers (in ELAN)</i>	
Jac:	Articulation by the mouth, voiced or unvoiced
JAC, LH, BH:	Right hand, left hand, both hands
hd:	Movements with the head, mainly shake and nod
expr:	Facial expression, eyebrows, special eye aperture, cheeks, etc.
gz:	Gaze direction
nv:	Other conducts, mainly practical handling actions (e.g. closing a book, walking away)

<i>Transcription conventions for the hand tier (RH, LH, BH)</i>	
BALL	Gloss for standardized sign of DSGS
*BALL	Unusual form of a conventionalized sign
PNT(sheet)	Pointing towards the person/object in brackets
POSS(1), POSS(2), POSS(3)	Possessive pronouns in DSGS (e.g. flat hand on thorax, 'mine')
B-A-L-L	Fingerspelling / Fingerspelled letters (B, A, L)
palm-up	Hands are hold with palms oriented upwards
FB(rectangle)	Productive sign that is a depiction of a an object by a representation of its form: FB <i>Formbeschreibung</i> (signs that depict the form of an object). Normally the comment in brackets refers to the object the hands depict (e.g. a ball, a sheet). When possible I chose to describe in brackets the form that the hands depict. Other productive signs are represented with HH <i>Handhabung</i> (signs that depict how an object is handled), Bwg <i>Bewegung</i> (signs that depict how an object moves), Sbf <i>sich-befinden</i> (signs that depict where an object is located and in what position it is; e.g. a cat sitting on the roof).
((handraising))	Idiosyncratic description of handshape / movement / of gestures
,,,	Retraction of hand(s)
...	Preparation of hand(s)
-h	hold

<i>Transcription conventions for the oral tier</i>	
>lesen<	Quicker speech rate as compared to the surrounding talk
<lesen>	Slowed down speech rate as compared to the surrounding talk
LESEN	Louder than the surrounding talk
-lesen-	Unvoiced
°lesen°	Down-voiced speech
°°lesen°°	Whispered
<u>lesen</u>	Emphasis
(xxx)	Unintelligible
(lesen)	Uncertain
le:sen	Vowel lengthening
=	Latched speech
.	Falling final intonation
,	Continuing intonation
?	Raising final intonation
les-	Cut-off
(0.3)	Silences measured in seconds
(.)	Micro-pause, 0.1 seconds or less
[(xx)]	Overlap between conducts of two different participants
.h, .hh	Inbreath
mhm.	Ratifying, articulated as a first m and followed by hm

<i>Transcription conventions for simultaneity</i>	
"	Simultaneity within the same participant (e.g. hand and vocal conduct)
*->	Onset of a gaze conduct or facial expression
->*	Conduct lasts until the next *
->>	Conduct until the end of the excerpt
*(0.8)	Gaze to the sheet for 0.8 seconds, until the next indication of a *
->sheet->	