

UNIVERSITY OF NEUCHÂTEL
Faculté des lettres et sciences humaines
UNIVERSITY OF APPLIED SCIENCES AND ARTS NORTHWESTERN SWITZERLAND
NCCR – on the move

**Minority and Majority Adolescents' Attitudes
Toward Mutual Acculturation**

A Dissertation submitted for the degree Doctor of Philosophy in Humanities and Social
Sciences: Migration Studies

by

Petra Sidler

Committee in charge:

Professor Dr. Gianni D'Amato (University of Neuchâtel, Switzerland)
Professor Dr. Wassilis Kassis (University of Zürich, Switzerland)
Professor Dr. Elena Makarova (University of Basel, Switzerland)
Assistant Professor Dr. Katharina Lefringhausen (Heriot-Watt University, United Kingdom)
Junior-Professor Dr. Miriam Schwarzenthal (University of Wuppertal, Germany)

Thesis defended on March 13, 2023

IMPRIMATUR

La Faculté des lettres et sciences humaines de l'Université de Neuchâtel, sur les rapports de M. Gianni D'Amato, co-directeur de thèse, professeur, Université de Neuchâtel ; M. Wassilis Kassis, co-directeur de thèse, professeur, Fachhochschule Nordwestschweiz et Université de Zurich ; Mme Elena Makarova, professeure, Université de Bâle ; Mme Katharina Lefringhausen, professeure assistante, University of Warwick, UK ; Mme Miriam Schwarzen-thal , Jun.-Prof., Université de Wuppertal, Allemagne autorise l'impression de la thèse présentée par Mme Petra Sidler en laissant à l'autrice la responsabilité des opinions énoncées.

Neuchâtel, le 13 mars 2023



Le doyen
Louis de Saussure

Abstract

Global migration movements have led to societies becoming increasingly culturally diverse and therefore to intercultural contact between individuals and groups with diverse languages, ways of life, clothing styles, religions, and traditions. The cultural and psychological changes individuals and groups experience through intercultural contact is defined as *acculturation* (Berry, 2019). The body of research on acculturation is vast, and its common focus lies in minority-group members' acculturation and thus how ethnic minorities or immigrants adjust to their country of residence. It is only very recently that researchers have taken an interest in majority-group members' acculturation and therefore how the incorporation of aspects of minority cultures leads to changes in the dominant mainstream culture.

Yet, studying either minority or majority acculturation presents only one side of the story. To acknowledge the mutuality of the acculturation process, it is essential to assess minority and majority acculturation simultaneously, which presented a research gap. This thesis contributes to filling this research gap through the conceptualization and validation of a novel mutual acculturation attitudes measurement within the school context in Germany, Greece, and Switzerland. Moreover, mutual acculturation attitudes were analyzed for adolescents with and without a migration background based on either nationality and place of birth or self-identification. Finally, mutual acculturation attitudes were analyzed cross-nationally in relation to psychological adjustment. Overall, the empirical findings highlight the value of a mutual acculturation framework that includes not only the majority and minority perspective but also minority, majority, and institutional acculturation. In practice, the results emphasize that most students favor mutual integration and thus expect schools to enhance intercultural contact and exchange.

Keywords: Mutual acculturation; Acculturation attitudes; Majority acculturation; Migration; Psychological adjustment; Adolescents; School context

Résumé

Les mouvements migratoires mondiaux ont conduit à ce que les sociétés deviennent de plus en plus diversifiées culturellement et donc à des contacts interculturels entre des individus et des groupes ayant des langues, des modes de vie, des styles vestimentaires, des religions et des traditions différents. Les changements culturels et psychologiques que les individus et les groupes vivent grâce au contact interculturel sont définis comme l'acculturation (Berry, 2019). Le corpus de recherches sur l'acculturation est vaste, et son point commun est l'acculturation des membres de groupes minoritaires et donc la façon dont les minorités ethniques ou les immigrants s'adaptent à leur pays de résidence. Ce n'est que très récemment que les chercheurs se sont intéressés à l'acculturation des membres des groupes majoritaires et donc à la manière dont l'incorporation d'aspects des cultures minoritaires entraîne des changements dans la culture dominante.

Pourtant, l'étude de l'acculturation des minorités ou des majorités ne présente qu'un aspect de la question. Pour reconnaître la mutualité du processus d'acculturation, il est essentiel d'évaluer simultanément l'acculturation des minorités et des majorités, ce qui présente une lacune dans la recherche. Cette thèse contribue à combler ce manque de recherche par la conceptualisation et la validation d'une nouvelle mesure des attitudes d'acculturation mutuelle dans le contexte scolaire en Allemagne, en Grèce et en Suisse. De plus, les attitudes d'acculturation mutuelle ont été analysées pour les adolescents avec et sans origine migratoire basé sur la nationalité et le lieu de naissance ou l'auto-identification. Enfin, les attitudes d'acculturation mutuelle ont été analysées au niveau transnational en relation avec l'ajustement psychologique. Dans l'ensemble, les résultats empiriques soulignent la valeur d'un cadre d'acculturation mutuelle qui inclut non seulement la perspective de la majorité et de la minorité, mais aussi l'acculturation de la minorité, de la majorité et des institutions. En pratique, les résultats soulignent que la plupart des étudiants sont favorables à l'intégration mutuelle et attendent donc des écoles qu'elles améliorent les contacts et les échanges interculturels.

Mots clés: Acculturation mutuelle; Attitudes d'acculturation; Acculturation majoritaire; Migration; Ajustement psychologique; Adolescents; Contexte scolaire

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Acknowledgements

This dissertation would not have been possible without the professional and personal support of many, to whom I would like to say thank you!

First, thank you to Gianni and Wassilis for your supervision and support so that I could take an innovative and novel perspective on acculturation research. I am particularly grateful to Wassilis for his support and specifically for the many hours of discussions on statistical calculations from which I benefited. Furthermore, thank you, Wassilis, for connecting me to Elena, from whom I have learnt a great deal concerning acculturation in the school context and with whom collaborating was always a pleasure (thank you, Elena!). Next, I would like to thank Clarissa for sticking together through an international and longitudinal project during a pandemic! Thank you to Beyhan for contributing in terms of data preparation and management and the nice coffee breaks. Thank you to Céline and Dilan for being such nice office companions and for the nice barbecues. Thank you to the research assistants who supported the data collection, particularly to Aya, Husein, Ilaz, Anna, Imân, Ilona, and Ramon for a great collaboration. Given the international dimension of this project, various teams were involved: Thank you to Ulrike and Christian for handling the data collection in Germany and thank you to Raia and Christos for handling the data collection in Greece. Special thanks to Raia for welcoming me in Greece and giving me insights into the Greek context. I am grateful to the whole team for their collaboration and valuable input on one article that is part of this dissertation.

Because this dissertation was embedded within the National Center of Competence in Research [NCCR] – on the move, which is funded by the Swiss National Science Foundation, I have benefited immensely from an interdisciplinary network of PhD students, postdoctoral

collaborators, project leaders, the team within IP26 (thank you Eva and Didier), the gender equality peer group (thank you Leslie, Mia, Roxane, Paula, Livia, Liliana, Sandra, Lisa, Eva, Laura, Laure, Angie, Katrin, and Juliana), and the network office (special thanks to Raquel, Robin, Gina, Aldina, Lorenzo, and Annique). Moreover, I have begun to collaborate in other research projects and have benefited from discussions and topics that go beyond this dissertation (thank you Didier and Carlo). Furthermore, through a research day of the NCCR – on the move, I found my mentor Güseli, to whom I am immensely grateful for many hours of statistical guidance and discussions. Overall, I have greatly benefited from regular feedback and exchanging ideas, in person or online, so that writing this thesis was not a solitary endeavor. Thanks to Mia for our regular online meetings to work together from home during a pandemic and for editing this thesis. Thank you, Aurélie, for amazing writing retreats in the French-speaking part of the Valais and for having me in Malmö. Thank you, Matthieu, for your valuable input and fascination with emotions and acculturation. Thanks to Frowin for online coffees and the tour of Copenhagen.

Additionally, I have benefited from a research stay at the Culture, Society, and Behavior lab at the Psychology Department of the University of Oslo in Norway and from the feedback and network of Jonas and Kinga, thank you! Moreover, I had a fantastic time in the lab, which is thanks to Kiki, Nora, Synne, Silvia, Ann, Christian, Olivia, Agnes, and Gulnaz. *Tusen takk!*

Finally, thank you to my family and friends for questioning what I was doing while supporting me all along. Most of all, thank you Duncan.

It is not our differences that divide us.
It is our inability to recognize, accept,
and celebrate those differences.
Audre Lorde

1 Introduction

Global migration movements have led societies to become increasingly culturally diverse. In 2020, almost 281,000,000 people lived outside of their countries of birth, representing 3.6% of the world's population (International Organization for Migration [IOM], 2022). Cross-border migrants are a diverse population, not only but also in terms of age: There are approximately 37,000,000 child migrants and 13,500,000 child refugees living outside their place of birth (IOM, 2020). However, crossing borders does not always mean crossing cultures, and crossing cultures does not necessarily involve crossing borders. Next to international migrants and refugees, there are people whose parents or grandparents have migrated and people whose families have not migrated for many generations. However, given the amount of global migration movements, individuals still living in their country of birth have probably more or less frequent intercultural contact and adjust in one way or another to cultural diversity. Thus, cross-border movements often lead to intercultural contact between individuals and groups with diverse languages, ways of life, religions, and traditions. Yet, cultural diversity due to cross-border movements is noticeable across not only societies but also within societies and their institutions. Institutions such as schools interact with national contexts, while being embedded in them (Bronfenbrenner, 1979). Global migration movements therefore not only render societies more culturally diverse but also diversify their institutions (e.g., schools).

The cultural and psychological changes individuals and groups experience through intercultural contact is defined as *acculturation* (Berry, 2019). Thus, cultural diversity and

intercultural contact, which may take place in person or digitally (Ferguson, 2013), are a pre-condition for acculturation to take place. Acculturation as a concept does therefore not provide a normative answer on whether cultural diversity or intercultural contact are good for minority or majority group members or a specific society. On the contrary, without cultural diversity and physical or digital intercultural contact, no acculturation process would exist to be examined. However, acculturation research contributes to the understanding of what specific groups and individuals think about cultural diversity, whether they react in exclusionary or integrative ways to new cultural influences (Ozer, 2019), and how specific groups and individuals can be supported in their positive adjustment when facing the facticity of cultural diversity and intercultural contact.

The body of research on acculturation is vast, and its common focus lies in minority group members' acculturation. The main research question within acculturation research is therefore related to how ethnic minorities or immigrants adjust to their host country, what acculturation orientations they have and how they are connected to their sociocultural and psychological adjustments, and what acculturation expectations majority group members have toward ethnic minorities or immigrants. It is only very recently that researchers have taken an interest in majority-group members' acculturation (Lefringhausen & Marshall, 2016; Haugen & Kunst, 2017; Kunst, Lefringhausen, Sam, et al., 2021; Lefringhausen et al., 2021). This new strand of research has assessed how majority group members adjust to minority group members and how the incorporation of aspects of minority cultures leads to changes in the majority culture. Like in research on minority members' acculturation and adjustment, the relation between majority members' acculturation and adjustment has been of interest (Lefringhausen & Marshall, 2016). Yet studying either minority or majority acculturation presents one part of the

story. To acknowledge the interactive nature and thus mutuality of the acculturation process (Berry, 2009; Chirkov, 2009), it is essential to assess minority and majority acculturation simultaneously. Mutual acculturation relates to how both minority group members and majority group members acculturate, and, consequently, mutual acculturation attitudes relate to attitudes toward both minority and majority acculturation. A simultaneous assessment of mutual acculturation attitudes as well as how such mutual acculturation attitudes would relate to adjustment presented a research gap, which this dissertation aimed to tackle.

Acculturation attitudes are commonly assessed from minority and majority group members' perspectives. Group categorizations are key to making different experiences and attitudes visible (Criado-Perez, 2019). However, categorizations can also lead to stigmatization, stereotypes, and discrimination (Horvath, 2019). Moreover, research findings may depend on the nature of categorization, so it is crucial to be mindful in the use of self-identification, country of birth, nationality, and migrant and generation status (Moffitt & Juang, 2019). Migrants may be categorized in terms of migrant or refugee status, place of origin, and length of stay in the country of residence. Descendants of migrants may be categorized in terms of migrant generation (first-generation migrants have migrated themselves, second-generation migrants have parents who both have migrated, 2.5-generation migrants have one parent who has migrated, and third-generation migrants have grandparents who have migrated), migrant status (which is connected to freedom of movement and work permissions), binational variations (both parents having a different nationality outside the country of residence, one parent having the mainstream nationality and one not, parents being binational themselves,...), migration background (a combination of place of birth and nationalities), and self-identification (being a migrant and/or a

local).¹ Assessing mutual acculturation attitudes from the perspectives of minority and majority group members using diverse means of categorizations presented another research gap.

Through tackling the mutual acculturation research gap, this dissertation is both a theoretical and an empirical contribution to the broad field of acculturation research. Its main aim was to take a first step toward gaining knowledge on mutual acculturation by conceptualizing and empirically analyzing a mutual acculturation attitudes scale within the context of public schools in three national contexts: Germany, Greece, and Switzerland. Specifically, this dissertation takes a cognition and affect perspective to assess cultural orientations of minority and majority group members and their relationship with psychological adjustment. Moreover, following reflections on the use of categories in quantitative research, these mutual acculturation attitudes have been analyzed for adolescents with a migration background and majority adolescents using country of birth and nationality as well as self-identification measures. This dissertation shows that the insights gained through this novel approach to measuring mutual acculturation attitudes are of theoretical, empirical, and practical value, and I hope that this mutual acculturation attitudes assessment will be developed further in various contexts to serve culturally diverse communities by bringing better understanding on how individuals and groups with diverse cultural backgrounds can peacefully live together.

The coming sections address the research project, in which this thesis is embedded, and the political as well as the school contexts in which the data collections took place. Then, the

¹ Most of these diverse *migration background* categorizations have been utilized in the scientific publications constituting this dissertation. I have employed diverse definitions for two reasons: first, to gain insights for these specific groups, and second, to show how definitions and thus categorizations shape research findings. Most importantly, to acknowledge societal power hierarchies, I used the terms *minority group* (referring to all subgroups of migration background individuals) and *majority group* (referring to non-migration background individuals) from Social Psychology Theories. The term *majority* does not relate to a numerical majority (even though this often is the case) but rather to the dominant position in the relevant social and political context. Thus, the terms *minority group member* and *migration background individual* are used interchangeably throughout this dissertation. The same holds for *majority group member* and *non-migration background individual*.

theoretical background will first address the link between acculturation and culture, then turn to the acculturation framework consisting of conditions, attitudes, and outcomes, then address how acculturation attitudes and outcomes are related in the school context before turning to the conceptualization of mutual acculturation and, finally, the categorization migration background. Afterwards, the research gap and methods are addressed. Then, scientific and science communication outputs as well as key findings are presented. Finally, limitations and future directions are discussed, and the thesis is concluded. All scientific articles are found in the annex.

2 Research Project

This dissertation was embedded within the project *Overcoming Inequalities in the Labor Market: Can Educational Measures Strengthen the Agency and Resilience of Migrants, Refugees, and their Descendants?* of the NCCR – on the move, funded by the Swiss National Science Foundation. The project’s aim was to enhance the understanding of the labor market disadvantage of individuals with a migration background. The project was divided into two subprojects examining the conditions under which individuals with a migration background gain agency and move from being objects of discrimination and inequalities related to (1) education and (2) the labor market. The subproject focusing on *Overcoming Inequalities with Education: School and Resilience* aimed at better understanding educational inequalities (Organization of Economic Co-operation and Development [OECD], 2021) by studying adolescents’ resilience, protective and risk factors, well-being, and mutual acculturation attitudes through a longitudinal and international survey in secondary schools in Germany, Greece, and Switzerland. Resilience, well-being, and acculturation are factors influencing adolescents’ performance and school outcomes and therefore influence adolescents’ future life opportunities (OECD, 2021). This is

particularly important for adolescents with a migration background, as previous studies found that their developmental and achievement outcomes worsen as their time of residence in the host country proceeds (Motti-Stefanidi et al., 2012). Following Berry et al. (2011),

Schools and other educational settings constitute the main acculturation context for immigrant children and youth. They can be viewed as a miniature society of settlement; schools represent and introduce the new culture to immigrant children. School adjustment can be seen as a primary task, and as a highly important outcome, of the cultural transition process. (p. 326)

Thus, the acculturation process plays a crucial role for adolescents with a migration background in the school context and acculturation outcomes can be measured through students' a) psychological adjustment to the school environment (like well-being and self-esteem); b) sociocultural adjustment like building social relationships with peers and teachers and acquiring skills; c) achievement outcomes and educational aspirations (Makarova & Birman, 2015). Yet, understanding acculturation better is not only key for adolescents with a migration background but also for majority adolescents, as acculturation affects both groups (Baysu et al., 2021). In multicultural schools, students have contact with a variety of cultural backgrounds through peer interactions, no matter their own migration background (Miklikowska, 2017). Because both minority and majority group students experience intercultural contact and therefore acculturation at school, this dissertation contributes to the project's goal of understanding school outcomes better by studying mutual acculturation attitudes at school, how such attitudes differ between minority and majority group members, and how they relate to psychological adjustment that affects school outcomes.

3 Political Context

The contextual approach in acculturation research emphasizes that the relationship between acculturation and adjustment (or acculturation outcomes) is defined by the surrounding context (Birman & Simon, 2014). Moreover, as adolescents' acculturation takes place in various microsystems, its orientation may differ according to context and migration background. For example, minority group members' acculturation at school may be more oriented toward the mainstream culture, whereas majority group members' acculturation in peer groups may be more oriented toward minority group cultures. At home, however, minority and majority group members may be more oriented toward their heritage culture, this being the mainstream or dominant culture for majority group members. Thus, acculturation outcomes are defined not only by various contexts on the macro and the micro level but also by their interaction (Makarova et al., 2021), which is why taking a close look at each context is key.

The eco-developmental outline of human development states that adolescents' development is embedded in their immediate environment (Bronfenbrenner, 1979). This includes various microsystems such as the family, peer group, and school class as key contexts for adolescents' development and acculturation. Moreover, according to Bronfenbrenner's ecological perspective, microsystems are embedded in the wider societal environment, meaning that schools are embedded in national contexts and schools can interact with nation states as distal contexts. Nation states as well as schools impact acculturation experiences through their migration, integration, and diversity policies and climate, making them both important contexts for adolescents' acculturation (Motti-Stefanidi et al., 2012). The focus of this dissertation was to assess acculturation attitudes in the context of public schools. Yet, as public schools are national institutions, three national contexts, namely Germany, Greece, and Switzerland, were chosen to

understand context specificities better. Specifically, the data analyzed in this dissertation was collected within particular regions in three national contexts: in the Baden-Württemberg region in Germany; in Athens, Larisa, and Crete in Greece; and in the German-speaking cantons Aargau, Basel-Stadt, and Solothurn in Switzerland.

In 2015, the number of international migrant stock (% of population) varied from 11% in Greece, to 15% in Germany, and 29% in Switzerland (The World Bank Group, 2015). Then, in 2019, Greece had about 1,340,000 foreign-born residents (13% of the total population); Germany, about 13,380,000 (16% of the total population); and Switzerland, about 2,550,000 (30% of the total population; OECD, 2021). More recent yet local numbers in 2020 concerning permanent residents with a migration background (which includes migrant' descendants born in the relevant country) varied from 27% in Germany (DESTATIS Statistisches Bundesamt, 2020) up to 38% in Switzerland (Federal Statistical Office, 2020a). No such local data was available for Greece. Contextual differences matter when comparing such numbers: First, the migration background definitions vary across contexts, therefore these numbers are again not directly comparable. Moreover, following the Migrant Integration Policy Index (MIPEX, 2020), Switzerland has stricter naturalization policies than Germany, meaning that if a person in Germany had gone through naturalization after a specific amount of time, the same person would still count as a migrant in Switzerland, even though the same amount of time had passed.

These three national contexts are interesting case studies because they have overlapping as well as dissimilar migration histories and integration policies toward immigrants (MIPEX, 2020). Moreover, a diverse population means that schools, school directors, and teachers face the challenge of accommodating students with diverse cultural backgrounds (Makarova, 2019), thus making it interesting to study commonalities and differences across countries and learn from the

various contexts.

The school systems are similar in terms of all three contexts providing primary, secondary, and tertiary levels of education with an additional second secondary / post-secondary / upper secondary level that provides vocational training. Also, pre-school, primary and lower secondary education is compulsory in all three countries. Yet, the three contexts also show some differences: In Germany, there are day nurseries and daycare staff for children of age 1–5, followed by four years primary school for children aged 6–9, then six years of secondary school (Realschule) or secondary general school (Hauptschule) or nine years of comprehensive school (Gesamtschule) or academic secondary school (Gymnasium; The Federal Government, n.d.). In Greece, there are one to two years of kindergarten, followed by six years of primary school (Demotiko), where children are admitted at the age of six, and three years of upper secondary education at the Unified Upper Secondary School (Eniaio Lykeio) or the Technical Vocational School (TEE; Hellenic Republic, 2022). In Switzerland, there are one to two years of kindergarten, followed by six years of primary school, and three years of secondary school with each canton having different names for the diverse school levels (educationsuisse, n.d.). Whereas national contexts are the same for schools within each national context, schools' specific diversity policies may still be heterogeneous across schools (MIPEX, 2020), as it will be discussed later in this chapter.

In terms of integration policies, the MIPEX assesses policies for integrating migrants to create a multidimensional picture of equal rights and migrants' opportunities to participate in society. The MIPEX (2020) classified Germany's and Switzerland's integration approach as "temporary integration," meaning that foreign citizens can obtain targeted support for equal chances, but they lack the long-term security to stay permanently, engage in integration, and

participate as full citizens. Greece's integration approach, however, is classified by the MIPEX (2020) as "equality on paper," meaning that Greece barely goes halfway in ensuring fundamental rights and long-term protection for immigrants and that support for equal chances is lacking, particularly when compared to nations that take a broader approach. Immigrants in Greece have fewer rights and possibilities for integration than in the majority of MIPEX nations. Moreover, Greece's present "equality on paper" policy encourages Greeks to regard immigrants as outsiders rather than equals. In 2019, Germany scored 58 (no unfavorable ratings), Switzerland scored 50 (slightly unfavorable ratings in anti-discrimination and access to nationality), and Greece scored 46 (unfavorable rating in political participation and slightly unfavorable ratings in education and access to nationality) on the MIPEX 100-point scale. The scale assessed migrant integration policies in relation to health, anti-discrimination, access to nationality, permanent residence, labor market mobility, family reunion, education, and political participation.

Concerning education, the MIPEX captures how accessible education is for migrant students, how teachers are being trained in dealing with cultural diversity at school, and whether migrant students' special needs are considered. Having a closer look at education, Germany scored 55, Switzerland 48, and Greece 36 on the MIPEX 100-point scale. Thus, education is a major integration obstacle in Greece, with the Greek education system not ensuring equal access to all types of schools for immigrant students and doing little to accommodate the various needs of students, teachers, and schools. Whereas Greece has slightly unfavorable access to education, Germany and Switzerland were rated as halfway favorable: Education policies in Germany have marginally improved as a priority for integration policies after the 2015/6 arrivals, with slightly above-average policies for Western European/OECD nations. Germany has made progress in meeting the special needs and possibilities of immigrant students at all educational levels by

increasing federal and state standards and guidance. In comparison to the international top ten (e.g., the Nordics), German states do slightly less to require that schools provide equal access to all levels of the education system and address the needs of immigrant students through comprehensive orientation, language support, and teacher training. Switzerland has average education policies in comparison with other Western European/OECD nations. Swiss cantons are adjusting schools to the needs and advantages of a diverse classroom with targeted guidance, training, and language assistance. Swiss schools have various potential areas for improvement, namely offering complete access to both obligatory and non-obligatory education as well as addressing issues of segregation and diversity at school (MIPEx, 2020).

4 Theoretical Background

The body of research on acculturation is vast, and the first definition goes back to 1936, referring to first-hand intercultural contact leading to behavioral and attitudinal changes (Redfield et al., 1936). Anthropologists and sociologists were among the first to study acculturation and were interested in the dynamics of diverse cultural groups coming into continuous contact (Boas, 1948; Burgess & Park, 1933; Redfield et al., 1936). Decades later, social and cross-cultural psychologists started to study the subject. However, psychologists were more interested in the individual level, focusing on how individuals rather than groups adjust to a change in cultural context (Rudmin, 2009). Educational scientists became interested in the acculturation process because migrant students' individual development and educational achievements are embedded in their acculturation process (Makarova & Birman, 2015, 2016). Particularly the link between acculturation and sociocultural and psychological adjustments received special attention within acculturation research (Ward, 2001). Affect, behavior,

cognition, and development are four major perspectives on acculturation and adjustment (Ward & Szabó, 2019). Affect relates to the stress and coping framework, which assumes that acculturation influences the acculturating individual's well-being, life satisfaction, health, and psychosomatic complaints. Behavior relates to the culture learning approach, which assumes that acquiring new skills is essential when having intercultural contact and experiencing acculturation. Cognition relates to cultural orientations and intercultural relations, which ranges from attitudes to identity and an individual's self-identification with cultural groups. Finally, development relates to developmental processes, stressing the relationship between acculturation and adjustment over time. The focus on the connection between acculturation and adjustment illustrates again that acculturation research aims at providing insights into how diverse individuals and groups adjust best when they have continuous intercultural contact.

This dissertation relates to acculturation theories from the social psychological and the cross-cultural psychology traditions (Ward & Leong, 2006). Social psychology examines acculturation through intercultural relationships between dominant and non-dominant groups, hence the designations minority and majority groups. The latter does not necessarily relate to a numerical majority but rather the dominant majority relating to social and political power hierarchies. Cross-cultural psychology examines acculturation on the cultural and thus the group level as well as on the psychological and thus the individual level. The latter focuses on changes that individuals experience during their acculturation and the effects of their adjustment to the change in cultural environment (Berry, 2005).

In this dissertation, *minority acculturation* is conceptualized as minority group members' or migrants' acculturation, meaning that the individual or the group that is experiencing acculturation belongs to an ethnic minority or a migrant group. Both minority and majority group

members can have a perspective on and thus an attitude toward minority acculturation. Similarly, *majority acculturation* is conceptualized as majority group members' acculturation, meaning that the individual or the group that is experiencing acculturation belongs to the national majority and therefore to the dominant group. Again, minority and majority group members can have a perspective on and thus an attitude toward majority acculturation. As will be discussed later, *mutual acculturation* incorporates minority as well as majority acculturation and is best analyzed from both minority and majority group members' perspectives (Sidler et al., 2022).

As acculturation involves a negotiation of dominance (Zick, 2010), the terms “minority” or “non-dominant group” and “majority” or “dominant group” are used interchangeably in this dissertation. Social power relations are reflected in asymmetrical acculturation expectations as well as legal settings like, for example, political voting rights: In Switzerland, even though all residents are numerically represented by politicians on the national level, active and passive political rights on the national level are confined to Swiss nationals (The Swiss Parliament, n.d.), resulting in Swiss nationals dominating the political debate. Only on some local levels do non-Swiss residents have voting rights in Switzerland. Similarly, in Germany and Greece, the right to vote is generally reserved for those with German or Greek citizenship (Federal Ministry of the Interior and Community, n.d.; Hellenic Parliament, n.d.). EU residents have voting and eligibility rights for local and European elections in Germany and Greece, and non-EU foreigners have these rights for local elections in Greece. Thus, in Germany, Greece, and Switzerland, citizens are the dominating majorities and make choices on behalf of all residents through their voting rights on the national level.

4.1 Acculturation and Culture

Acculturation contains the word culture and means “leading to a culture” in Latin (Zick,

2010). However, many acculturation studies have been criticized for not conceptualizing culture (Bhatia & Ram, 2009; Tardif-Williams & Fisher, 2009). The question of how individuals and groups adapt to a change in cultural context or in intercultural contact involves a change in some sort of culture. Acculturation thus deals with the questions of what exactly is changing in the cultural realm, how people adjust to such a change, and why such a change matters to people (Cresswell, 2009). Whereas enculturation refers to an individual learning cultural elements during socialization (Weinreich, 2009), acculturation refers to the acquisition of yet another culture (Rudmin, 2009).

4.1.1 What is Culture?

Culture is a notoriously difficult concept to define (Spencer-Oatey, 2012). Already 70 years ago, a review of definitions of culture listed 164 different conceptualizations (Kroeber & Kluckhohn, 1952). Let's start with what culture is not: Culture is neither homogeneous nor a thing. There is neither a fixed cultural norm nor an essentialized cultural entity, due to two main and interconnected reasons: First, culture is not timeless and therefore changes over time. Second, there is cultural heterogeneity across individuals as well as across cultural groups. For example, culture often comes in the plural for any individual. Moreover, culture is not uniformly distributed among the individual members of a group (Spencer-Oatey, 2012).

Turning to some key characteristics of culture: First, culture is a descriptive and not an evaluative concept. Whereas it allows to see similarities and differences, it cannot describe cultures as being more advanced or backward (Spencer-Oatey, 2012). Culture has both universal as well as distinctive elements and it is manifested at different layers of depth. Namely, there are observable artifacts like dress codes, there are values that govern behavior, and there are also basic underlying assumptions. The latter are typically unconscious and determine group

members' thoughts, feelings, and perceptions (Spencer-Oatey, 2012). Cultures are coherent and logical systems, and their parts are to some degree interrelated. Moreover, culture affects behavior and how behavior is interpreted. Thus, whereas certain aspects of culture are visible, their meaning is invisible (Hofstede, 1991). Culture is subject to gradual change; thus, a cultural description of a specific society at a specific time is like a snapshot view that would have to be adjusted at a future timepoint (Spencer-Oatey, 2012). Then, culture is learned and not inherited, which means that it can be differentiated from both a universal human nature and a unique individual personality (Spencer-Oatey, 2012). Still, culture influences biological processes in that culturally produced ideas can affect human bodies (Ferraro, 1998).

Additionally, culture relates to social groups, which may relate to national, regional, ethnic, religious, or linguistic affiliations. Moreover, culture may relate to specific views toward gender, generation, age, social class, employment status, or role categories like father and mother (Hofstede, 1991). These group constructs are intersectional and therefore various combinations of affiliations, class, status, and role categories are possible. Whereas culture is a social construct, it is also an individual and psychological construct. Cultural norms are relevant to different degrees for different individuals and failing to recognize individual differences may lead to forming and maintaining stereotypes (Matsumoto, 1996). These individual differences across time and geographical as well as social spaces lead to culture being a fuzzy concept, as it involves fluidity, dynamics, and vagueness (Maclachlan et al., 2004).

4.1.2 Cultural Engagement

As stated above, acculturation refers to the acquisition of another culture (Rudmin, 2009) and culture is learned. Cultural acquisition relates to the acquisition of something of cultural value and may range from cultural adaptation, cultural knowledge, culture adoption, to cultural

appropriation. These terms can be placed under the umbrella of cultural engagement (Lenard & Balint, 2019), which is a conscious as well as an unconscious process.

Cultural engagement is part of human society—in person through global mobility and migration but also digitally through the internet (Ferguson, 2013). Adaptation or adjustment relate to a process of change that enables an individual to adjust effectively to their environment and function in an optimal way in various domains (American Psychological Association, n.d.). Cultural adaptation may involve culture adoption like learning a new language to be able to communicate in a new cultural setting. However, it does not have to involve culture adoption, as adaptation can also mean adjusting to values that are not one's own. Cultural knowledge acquisition relates to acquiring knowledge about specific cultures or intercultural issues and therefore does not imply cultural adoption. However, intercultural knowledge acquisition might lead to culture adoption.

Culture adoption may be experienced as cultural appropriation, which is the subject of many current debates (Lenard & Balint, 2019). This is because cultural engagement does not take place outside the realm of power imbalances and oppression (Matthes, 2019). Hence, there are problematic forms of cultural engagement like cultural offence and cultural misrepresentation, which are currently often referred to as cultural appropriation (Lenard & Balint, 2019). Such forms are problematic due to contextual factors like power imbalances between the cultural appropriator and those from whom is appropriated. Moreover, questions of consent as well as profit may render cultural engagements problematic (Lenard & Balint, 2019).

In this dissertation, culture acquisition is conceptualized as cultural engagement within the scope of acquiring knowledge about culture (like learning about various religions) and adopting specific cultural aspects (like speaking another language in a specific context). Minority

group members are by law expected to adopt specific cultural aspects of the dominant mainstream culture (like a language), and therefore minority group members' culture acquisition has been assessed through whether they should adopt specific aspects of the dominant majority culture. The case for majority group members, however, is not regulated by law. Moreover, given power imbalances and potentially problematic cultural offence and misrepresentation, majority group members' culture acquisition has been assessed through whether they should acquire intercultural knowledge. Such intercultural knowledge may lead to the adoption of specific aspects of minority cultures; however, adoption is not implied by knowledge acquisition. Moreover, intercultural knowledge acquisition may include reflections on power imbalances and problematic cultural engagements.

4.1.3 Mutual Acculturation and Culture

The mutual acculturation assessment developed within this dissertation relates to three cultural areas: first, visible artifacts such as clothing; second, visible behaviors that are based on code systems and rules, such as languages, traditions, customs, and familial culture; and third, fundamental attitudes, values, and beliefs, such as religion, way of life, and gender roles. These three aspects do not exist independently of each other and may therefore overlap. Someone's way of life may relate strongly to fundamental values and beliefs yet also be a visible behavior.

Therefore, the mutual acculturation assessment developed within this dissertation relates to three cultural modes: first, maintenance of cultural characteristics, which relates to the freedom of cultural expression. This dimension has only been assessed in relation to minority group members, as in the dominant mainstream culture context, whether majority group members want to maintain the mainstream culture is rather a question of preference than of freedom. Then, two dimensions assessing cultural acquisition, one in the form of acquiring

intercultural knowledge for majority group members and one in the form of adopting specific cultural aspects for minority group members. This difference reflects social and political power imbalances, as minority group members are legally expected to adopt specific cultural aspects of the dominant mainstream culture (like languages) whereas majority group members are not legally expected to deal with cultural diversity. However, it also highlights problematic cultural engagements like cultural offence and misrepresentation caused by the dominant group (as discussed above and often referred to as cultural appropriation: Lenard & Balint, 2019). Finally, endorsement of intercultural contact and exchange, which was assessed on an institutional level to study whether institutions like schools are expected to use their agency to create time and space for dealing with and understanding cultural diversity.

4.2 Acculturation Framework

Acculturation is a social phenomenon influenced by micro-, meso-, and macrosocial factors. Most commonly, acculturation studies examine the changes that people and/or ethnocultural groups go through during acculturation, as well as the consequences of acculturation on their adjustment to a new environment (Berry, 2006). The acculturation framework relates to acculturation conditions, acculturation attitudes (also called orientations, expectations, modes, and strategies), and acculturation outcomes (Arends-Tóth & van de Vijver, 2006).

4.2.1 Acculturation Conditions

Acculturation is a contextual process (Birman & Simon, 2014); thus, acculturation conditions relate to characteristics of the receiving or host society and of the society of origin, like institutions and law. The political context described in chapter three of this dissertation

therefore describes acculturation conditions in relation to the receiving society, its schools, and its policies. Acculturation conditions also include characteristics of cultural groups and individuals and their perceived intergroup relations. Moreover, the various contexts in which acculturation may take place, like family, peer groups, and school, are theorized to be acculturation conditions influencing the acculturation process. For example, nation-states are important macro contexts and institutions are important micro contexts for adolescents' acculturation (Motti-Stefanidi et al., 2012).

4.2.2 Acculturation Attitudes

Acculturation attitudes (or orientations, expectations, modes, and strategies) commonly refer to attitudes toward someone's acculturation, whether someone else's acculturation (which are usually named expectations) or one's own acculturation (which are commonly named orientations and strategies). Moreover, acculturation attitudes have been operationalized in terms of directionality (acculturation attitudes by someone and toward someone) and dimensionality. Thus, depending on which perspectives are being considered, either how an individual intends to acculturate or how someone is expected to acculturate is assessed. Attitudes involve beliefs and behavioral tendencies (Vaughan & Hogg, 2005). This means that whereas clearly attitudes are not behaviors, the latter are influenced by attitudes and beliefs.

As will be shown in the next two subchapters, acculturation attitudes have so far been assessed toward the acculturation of minority group members and the acculturation of majority group members. Before turning to majority acculturation, the acculturating subject of interest belonged for a long time to a minority group. The link between acculturation attitudes and psychological as well as socio-cultural adjustments has been commonly studied.

4.2.2.1 Attitudes Toward Minority Group Members' Acculturation

Most studies have assessed acculturation attitudes through a bidimensional measurement focusing on the acculturation of minority group members or migrants. In contrast to unidimensional models that follow an either-or logic, bidimensional models account for more complexity. Specifically, Berry et al. (1989) proposed the combination of two dimensions, namely whether it is of value to maintain the heritage culture while maintaining relationships with other groups. A unidimensional approach would follow the logic of someone maintaining either their heritage culture or relationships with other groups. A bidimensional approach, however, would combine the two dimensions so that four acculturation strategies emerge: *integration/multiculturalism* (maintaining one's heritage culture while maintaining relationships with other groups), *separation/segregation* (maintaining one's heritage culture and not maintaining relationships with other groups), *assimilation/melting pot* (not maintaining one's heritage culture and maintaining relationships with other groups), and *marginalization/exclusion* (neither maintaining one's heritage culture nor maintaining relationships with other groups).

This model was further developed by Bourhis et al. (1997) by combining heritage culture maintenance and dominant culture adoption through an interactive acculturation model. Again, the four acculturation strategies emerged; however, Bourhis et al. proposed the assessment of attitudes toward minority acculturation from both minority and majority group members' perspectives. Thus, majority group members' acculturation expectations toward minority group members and minority group members' acculturation orientations concerning their own acculturation were measured. For some time, what majority group members think that minority group members should do has been conceptualized as majority acculturation.

4.2.2.2 Attitudes Toward Majority Group Members' Acculturation

It is only very recently that acculturation research has turned to majority acculturation and therefore to studying majority group members as the acculturating subject (Lefringhausen & Marshall, 2016; Haugen & Kunst, 2017). Diverse approaches have been taken toward assessing majority acculturation, mainly distinguishing whether majority members acculturate toward a globalized world, toward cultural diversity, and/or toward minority cultures. Some have assessed how majority group members acculturate remotely through modern globalization mechanisms, meaning that international mobility and migration are not necessary pre-conditions for acculturation to take place (Ferguson, 2013).

Then, majority group members' attitudes toward cultural diversity and their attitudes toward minority acculturation have been combined to account for power structures that define the acculturation context for minority group members (Lefringhausen, 2022). This will be important to consider for mutual acculturation attitudes as well (see chapter 4.4). Additionally, majority members' perceptions of cultural change and their association with symbolic threat and prejudice have been assessed (Lefringhausen et al., 2022). They found that perceived mainstream culture change due to minority cultures was positively associated with symbolic threat and through that with greater prejudice toward minority groups. Then, majority members' perceptions that minority cultures are changing due to the influence of the mainstream culture related to less symbolic threat, and through this to less prejudice toward minority groups.

Moreover, psychological processes responding to globalization (Chen et al., 2016) and how majority group members relate to cultural globalization (Ozer, 2019) have been studied. The concept global orientation relates to how individuals from minority as well as majority groups acculturate to the globalizing world (Chen et al., 2016). Global orientation encompasses

multicultural acquisition as a proactive reaction and ethnic protection as a defensive reaction to globalization (Chen et al., 2016). Similarly, two general reactions toward cultural globalization were found: namely either accepting or rejecting new cultural influences leading to exclusionary and integrative ways of dealing with intercultural contact and cultural diversity (Ozer, 2019).

Furthermore, majority members' culture maintenance and minority cultures adoption has been introduced. As with attitudes toward minority acculturation, a bidimensional assessment was found useful to measure majority group members' mainstream culture maintenance and minority culture adoption (Lefringhausen & Marshall, 2016; Lefringhausen et al., 2021).

Majority acculturation therefore does not measure the recognition of minority group culture by the majority group but rather whether the majority group maintains their mainstream culture and incorporates aspects of minority cultures, leading to changes in the dominant culture. A recent review on attitudes toward majority acculturation summarized five acculturation orientations of majority group members: integration, separation, assimilation, marginalization, and diffuse strategies (Kunst, Lefringhausen, Sam, et al., 2021). Like attitudes toward minority acculturation, minority as well as majority group members might have preferences whether and how majority culture changes (Zagefka et al., 2022). This means that attitudes toward majority acculturation can be assessed from both, minority as well as majority group members' perspectives leading to acculturation expectations from the minority group toward the majority group and acculturation orientations of the majority group.

Finally, majority acculturation has been analyzed in relation to majority group members' psychological and socio-cultural adjustment (Lefringhausen & Marshall, 2016). They found that mainstream culture maintenance was positively associated with majority members' life satisfaction. Moreover, a multicultural adaptation was related to less acculturative stress and

greater intercultural sensitivity. Then, how majority group members relate to immigrants' culture has been studied in relation to perceived cultural threat and cultural enrichment (Lefringhausen et al., 2021). A separation strategy was related to less cultural enrichment yet more cultural threat. Moreover, cultural enrichment was found to link to positive outgroup attitudes for majority members via both acculturation orientations.

4.2.3 Acculturation Outcomes

Acculturation outcomes relate to psychological adjustment, such as well-being, mental health, and self-esteem, as well as socio-cultural adjustment, such as how individuals deal with their daily lives in a new environment or in an environment where cultural diversity is increasing (Ward, 2001; Arends-Tóth & van de Vijver, 2006). Following the integration hypothesis, an integration or bicultural orientation is expected to lead to the most favorable adjustment. However, there are two points to be addressed. First, the integration hypothesis has been mainly studied in relation to minority group members' acculturation and adjustment, yet with inconsistent results. Concerning majority acculturation and adjustment, one study found that openness of majority members indicated higher acceptance of minority cultures, whereas conscientiousness predicted lesser adoption of minority cultures (Kunst, Lefringhausen, Skaar, et al., 2021). However, the connection between majority acculturation and adjustment needs further examination. Moreover, as will be described in the chapter on mutual acculturation, it is unclear how mutual acculturation attitudes (instead of attitudes toward only one's own acculturation) are related to one's own adjustment.

Second, as most research examining the relationship between acculturation and adjustment has been cross-sectional, the direction of this relationship has been questioned (Kunst, 2021). Furthermore, those who examined the relationship longitudinally found minimal

support for the integration hypothesis (Bierwiazzonek & Kunst, 2021). However, the lack of longitudinal relationships does not diminish the prevalence or impact of cross-sectional associations. Nevertheless, in examining the relationship between acculturation attitudes and outcomes cross-sectionally, this dissertation does not suggest causation (Grigoryev & Berry, 2021), as the relationship between acculturation attitudes and outcomes might operate both ways.

4.3 Acculturation Attitudes and Outcomes at School

Schools are facing the challenge of accommodating adolescents with heterogeneous cultural backgrounds. Acculturation outcomes within the school context have been assessed along three main dimensions: first, in terms of students' psychological adjustment to the school context, for example, their self-esteem and well-being; second, in terms of students' sociocultural adjustment, which includes the quality of social relationships at school and acquiring school-relevant skills and behaviors; and third, in terms of achievement outcomes and educational aspirations of students (Makarova & Birman, 2015, 2016).

Most commonly, acculturation orientations of minority group members have been analyzed in relation to their adjustment. However, findings concerning which acculturation orientation would be most conducive to adjustment and educational outcomes are again inconsistent, neither confirming nor rejecting the above-mentioned integration hypothesis (Makarova & Birman, 2015). An integration strategy is commonly related to successful adjustment at school for students with a migration background (Nguyen & Benet-Martínez, 2012), yet it also frequently brings challenges (Brown et al., 2013). Furthermore, an assimilation strategy has been found to contribute to beneficial adjustment in contexts where assimilation is expected (Makarova & Birman, 2015). Baysu and Phalet (2019) proposed that migrant students' school performance may be improved or hindered depending on their encounter with stereotype

threats at schools. This suggests that, while an integration strategy might be useful in low-threat circumstances, it can be costly in high-threat contexts. Previous research has found that the characteristics of school contexts decisively shape the adjustment of students with a migration background, as they must adjust not only to a new mainstream culture but also to a new academic and school culture, understanding and complying with new academic requirements and assessment practices, and a multicultural school composition (Makarova & Birman, 2016). Thus, when it comes to the relationship between acculturation and psychological adjustment for adolescents with a migration background, the specific school setting plays a crucial role.

Consequently, as intergroup contact experiences and cross-group friendships have been demonstrated to be advantageous for everyone (Killen et al., 2007) and cultural diversity in schools is rising, I expect majority students' acculturation to be connected to their school and psychological adjustment. The link between majority students' acculturation orientations (by means of mainstream culture maintenance and ethnic minority culture adoption) and adjustment has been studied in Norway (Haugen & Kunst, 2017). Separated majority members reported greater levels of identity threat, ethnic discrimination, and self-esteem than integrated and undifferentiated majority members. However, further research across context as well as across time is needed.

4.4 Mutual Acculturation

Acculturation has been conceptualized as a mutual process. The first definition of acculturation by social anthropologists already stressed the inherent mutuality of acculturation: "Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups" (Redfield et al., 1936, p. 149). Acculturation

has been defined as a mutual process within cross-cultural psychology as well (Berry, 2009; Chirkov, 2009): Intercultural contact leads to acculturation, which is a process of ongoing cultural and psychological change of all individuals and groups involved (Berry, 2019). Mutual acculturation therefore means that all groups and individuals interact and therefore adjust when they come into continuous intercultural contact.

Acknowledging the mutuality of the acculturation process and therefore assessing minority and majority acculturation simultaneously means combining acculturation orientations and acculturation expectations of diverse groups. Both, acculturation orientations and acculturation expectations entail some sort of uncertainty: just because I believe I want to maintain specific characteristics of my heritage culture, does not mean that I will (and that I can). Also, just because I expect members of another group to acculturate in a specific way, does not mean that they will (and that they can). What a person wants to do and what they can do is limited not only by individual but also by contextual factors.

Thus, acculturation is influenced by power relations and imbalances. This is demonstrated in acculturation research as well as in national integration policies, which focus on the acculturation and integration of minority group members. It has been pointed out that such a focus places responsibility for acculturation outcomes among those who are relatively powerless in terms of shaping the acculturation process and therefore have limited agency (Bowskill et al., 2007). The recent shift to studying majority acculturation, however, does not yet live up to a mutual acculturation framework, because measuring attitudes toward minority or majority acculturation (from the standpoint of minority and/or majority group members) involves examining only one aspect of the mutual acculturation process. Thus, assessing attitudes toward mutual acculturation while acknowledging power imbalances and the link between agency and

responsibility presented a research gap that this dissertation aimed to tackle.

4.4.1 Mutual Acculturation, Power Imbalances, and Agency

Even though acculturation is considered a mutual process, power imbalances between the groups and individuals involved in acculturation are so distinct, that the fundamental nature of minority and majority acculturation are incomparable. Members of minority groups face different acculturation challenges than majority group members in the same mainstream society. Whereas immigrants start learning new languages and ways of living, majority group members are faced with a growing cultural diversity (Lefringhausen, 2022). Additionally, different minority groups like refugees or migrant descendants will have diverse acculturation experiences. However, most importantly, whereas minority group members face integration policies, majority group members get to choose whether they want to learn about minority group members' cultures or not (Dandy & Pe-Pua, 2013; Rauchelle & Dandy, 2015). Thus, the political reality shows clear power imbalances in that acculturation expectations toward migrant groups are set in law (e.g., migration law and integration policies; Favell, 2003) whereas no such legal basis exists in relation to majority group members. Moreover, the legal right to have a democratic say in a matter is often limited to majority group members (Sidler, 2021b), allowing them to shape the political realities in which citizen as well as non-citizen residents build their lives.

Yet, the majority group does not only consist of citizens: next to natural persons there are juristic persons, so-called legal entities. Legal entities like national institutions, their structures and legal framework are shaped by the dominant majority group and often based on their own needs. However, institutional structures impact citizens' as well as non-citizen residents' lives. Whereas institutions are defined in their purpose and their duties by their legal basis, they also

get a scope of action. For example, it may be specified that schools must address cultural diversity so that all children can access their basic right to education. The specific way how schools fulfill this task may be left to the individual schools to figure out. This allows for context-specific policies and interventions. However, this also means that institutions like schools are not only shaped by the majority group, a nation-state, and a legal framework but rather have agency themselves in how they deal with cultural diversity through diversity policies and programs.

Following the Stanford Encyclopedia of Philosophy (2019), having agency relates to being an agent and having the capacity to act as well as to refrain from acting. Agency is linked to responsibility in that an agent is responsible for what they do as well as what they refrain from doing. Moreover, being in the more powerful position leads to having more capacity to act, and it could be debated whether this also leads to more responsibility. According to Berry (2005), the majority group must be ready to adjust national institutions like schools, the health system, and labor so to better meet the needs of all groups that live together in a culturally diverse society. Thus, changing national institutions due to the facticity of intercultural contact and cultural diversity becomes a part of majority acculturation to account for power imbalances.

Majority acculturation therefore encompasses the acculturation of majority group members, of majority groups, and of national institutions. This relates to the three different yet interconnected levels of integration: personal integration on an individual level, social integration on a community level, and structural integration on an institutional level (Spencer-Oatey & Dauber, 2019). The institutional level is key because whereas activities encouraging intercultural contact are important, they are not enough in themselves. Rather, they must be embedded in an institutional culture valuing cultural diversity and having specific institutional policies (Spencer-

Oatey et al., 2014). Thus, mutual acculturation relates not only to how groups and individuals adjust due to intercultural contact but also to the adjustment of national institutions. As majority group members define laws and institutions, how institutions adjust to a change in intercultural context through, for example, integration, migration, and diversity policies is conceptualized as one part of majority acculturation. Thus, measuring mutual acculturation means assessing the shared effort between minority and majority group members as well as national institutions concerning mutual social and cultural inclusion.

4.4.2 Mutual Acculturation at School

Like societies, schools are becoming increasingly more culturally diverse. Following cross-cultural psychology, schools are the main acculturation context for ongoing acculturation among children and youth (Horenczyk & Tatar, 2012; Makarova, 2019). Moreover, the acculturation conditions in the school context affect youths' psychological and socio-cultural adjustments and achievement-related outcomes. Thus, schools are not only an important social context for adolescents' development (Eccles & Roeser, 2012) but also an acculturation environment. Given that schools are a context of cultural diversity and peer interactions often lead to contact with various cultural backgrounds (Miklikowska, 2017), mutual acculturation is expected to take place at school. This means that students both with and without migration backgrounds experience intercultural contact at school and therefore get to know, adopt, and live diverse cultural orientations.

The link between acculturation orientations and adjustment in the school context is not straightforward, even though there is a vast body of research in relation to minority group members (Makarova & Birman, 2015). Moreover, contextual factors were found to influence how acculturation orientations and adjustment are related for minority group members (Baysu &

Phalet, 2019). Acculturation expectations toward schools therefore might be related to adjustment. However, further research is needed to study whether and how acculturation expectations (toward other groups as well as toward national institutions) and mutual acculturation attitudes (which combine acculturation orientations and expectations) relate to psychological and socio-cultural adjustment.

The institutional aspect of acculturation is exemplified at school: Schools shape through their structures and curriculums whether and how intercultural contact and exchange take place. The way schools handle cultural diversity plays a key role in accommodating students with and without a migration background, as the acculturation process affects both (Celeste et al., 2019). Specifically, school policies favoring multiculturalism and thus valuing cultural diversity and differences were predictive of smaller belonging and achievement gaps between students with and without a migration background over time. However, if school policies were found to ignore cultural diversity and differences or favor an assimilationist strategy and thus reject cultural diversity and differences, greater achievement and belonging gaps were found (Celeste et al., 2019). Additionally, schools that encourage intercultural contact and exchange may encourage the creation of intergroup friendships (Schachner et al., 2015). Moreover, schools that encourage intercultural communication may improve learning about others and oneself, resulting in the development of crucial intercultural abilities (Schwarzenthal et al., 2017). Thus, whether and how schools handle cultural diversity impacts the educational outcomes and feelings of belonging (Baysu et al., 2021) and the intercultural competence development (Schwarzenthal et al., 2019) of students both with and without a migration background. Most significantly, by encouraging good intercultural interaction and providing space for conversations about cultural diversity, schools may educate students to be members of a culturally diverse society by

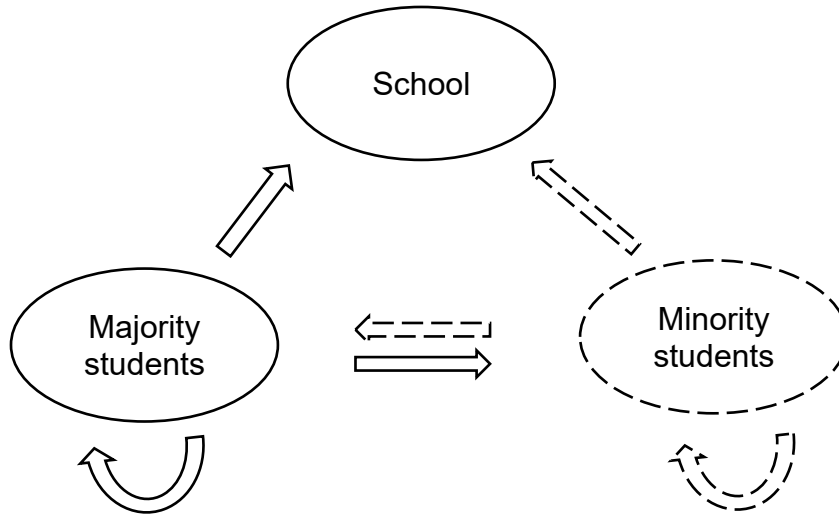
increasing intercultural awareness (Schachner et al., 2021). Thus, schools may involve teachers as well as minority and majority students in building culturally inclusive spaces and activities (Vietze et al., 2019).

Schools create the acculturation context for students with and without migration backgrounds and are therefore acculturation context and agent in one. Schools are cultural actors with specific codes, rules, and hierarchies (Warikoo & Carter, 2009) and have agency in the sense that they actively shape the environment for intercultural contact and learning by implementing school diversity policies (Celeste et al., 2019), raising awareness about implicit bias, stereotypes, and systemic racism (Warikoo et al., 2016), or ignoring the reality of intercultural contact. Diversity initiatives in schools have been shown to influence students both with and without a migration background (Baysu et al., 2021). Ensuring equal educational opportunities thus means that schools enable students with and without a migration background to be successful at school.

To summarize, mutual acculturation takes place in the school context and minority students, majority students, and schools are acculturating subject and agents. Consequently, mutual acculturation attitudes can be held toward majority and minority students and schools in the educational setting (see Figure 1). Members of minority and majority groups may have acculturation attitudes toward their personal acculturation as well as acculturation expectations toward members of the other group(s) and toward schools.

Figure 1

Attitudes Toward Mutual Acculturation in the School Context



Note. Acculturation agents are presented in the circles, and the arrows represent perspectives toward the various agents of acculturation: majority students may have an attitude toward their own acculturation and toward the acculturation of the minority students. Both minority and majority students may have an attitude toward schools' acculturation (Figure from Sidler, 2022a).

4.4.3 Measuring Mutual Acculturation at School

Acculturation attitudes have been operationalized in terms of directionality and dimensionality. Directionality relates to whether acculturation attitudes are directed toward minority or majority groups and whose perspectives are being considered. This leads to majority group members' acculturation orientations concerning their own acculturation and acculturation expectations toward their own as well as other groups. Additionally, minority group members' acculturation orientations concerning their own acculturation as well as acculturation expectations toward their own as well as other groups can be assessed.

Dimensionality relates to taking either a unidimensional approach in an either-or logic, or a bidimensional approach that allows for more complexity. A bidimensional model combining

heritage and mainstream culture orientations and leading to four acculturation strategies has been most typically used to assess attitudes toward minority acculturation (Berry et al., 1989; Bourhis et al., 1997). Similarly, the combination of mainstream culture and multicultural or minority cultures orientations has been used to assess attitudes toward majority acculturation (Lefringhausen & Marshall, 2016). Through combining directionality and dimensionality, attitudes toward minority as well as majority acculturation can be assessed from both perspectives, thus differentiating between acculturation expectations (e.g., majority group members expecting minority group members to integrate) and acculturation orientations (e.g., minority group members choosing an integration or assimilation strategy).

Measuring attitudes toward minority and majority acculturation at the same time is aimed at understanding the mutuality of the acculturation process (Sidler et al., 2021). Attitudes toward mutual acculturation could be assessed through combining both bidimensional models: namely, attitudes toward minority group members' (1) heritage culture maintenance and (2) dominant culture adoption as well as toward majority group members' (3) mainstream culture maintenance and (4) minority cultures adoption. Moreover, these four dimensions could be assessed from both, minority group members as well as majority group members' perspectives, allowing insights into mutual acculturation orientations, preferences, and expectations of minority as well as majority group members. However, such a model would presume no power imbalance between the two groups and that acculturation processes within the majority and the minority group are taking place on the same level and are thus comparable. Moreover, such a model would dismiss institutional acculturation and therefore how schools shape intercultural contact through diversity policies. Thus, measuring mutual acculturation poses the challenge of assessing minority, majority, and institutional acculturation while accounting for social power relations.

The measurement used in this dissertation combines two minority acculturation and two majority acculturation dimensions. Whereas the two minority acculturation dimensions relate to Bourhis et al.'s (1997) model combining heritage culture maintenance and dominant culture adoption of minority group members, the two majority acculturation dimensions are novel conceptualizations accounting for social power imbalances and the notion of agency within acculturation. Following Berry (2009), majority acculturation is understood as both citizens and institutions adjusting to minority groups. Thus, the first majority acculturation dimension relates to majority individuals, whereas the second relates to schools as national institutions.

Majority adolescents experience cultural diversity and intercultural contact through peers (Miklikowska, 2017) and/or through the internet (Ferguson, 2013). Therefore, how majority adolescents acculturate, what form of cultural engagement they choose, how majority adolescents intend to acculturate, and how minority adolescents expect majority adolescents to acculturate are issues to be studied. However, majority acculturation, the nature of majority members' cultural engagement, and therefore how they acculturate to minority members involves a notion of optionality (Dandy & Pe-Pua, 2013; Rauchelle & Dandy, 2015). Whereas minority members face integration policies, whether and how majority members deal with intercultural contact is often up to them, which is why accounting for social power imbalances is key.

Therefore, majority students' acculturation has not been assessed in the same way as minority acculturation in this thesis. Specifically, majority students' intercultural knowledge acquisition has been measured instead of the combination of their minority cultures adoption and mainstream culture maintenance. Intercultural knowledge acquisition is like cultural adoption a form of intercultural engagement. However, intercultural knowledge acquisition avoids

potentially problematic cultural offence and misrepresentation through minority cultures adoption without reflecting power imbalances. Moreover, the two forms are inherently different: adopting a new language means learning how to speak it, whereas knowing about other languages relates to being aware of diverse languages, dialects, and accents as well as of translation and communication issues. Intercultural knowledge acquisition does neither implicitly relate to intercultural sensitivity (Bennett & Hammer, 2017) nor to intercultural competence, which means having the knowledge and skills for appropriate and effective intercultural interaction (Yang, 2017). However, intercultural learning and the acquisition of intercultural knowledge can be first steps toward intercultural competence (Landis & Bhawuk, 2020). Still, not assessing majority group members' mainstream culture maintenance might also enforce power imbalances, which I discuss in the limitation section of this dissertation below.

Institutional acculturation has been included in the model to account for institutional agency when dealing with cultural diversity and intercultural contact and therefore with integration on the institutional level (Spencer-Oatey & Dauber, 2019). Schools are therefore conceptualized not only as an acculturation context but also as cultural actors that actively shape the context of intercultural contact and exchange. The notion of agency and thus of having the capacity to act as well as to refrain from acting is crucial. Specifically, the way schools define and implement diversity policies and whether intercultural issues like diversity and systemic racism are part of the curriculum set the acculturation environment for students with and without migration backgrounds. Being an acculturation context and having agency in shaping this context leads therefore to becoming an acculturation subject and agent. Thus, mutual acculturation attitudes have been assessed through four dimensions in this dissertation: namely, attitudes toward (a) maintenance of heritage culture by students with a migration background, (b)

their adoption of the dominant local culture, (c) majority students' acquisition of intercultural knowledge and (d) schools' endorsement of intercultural contact and exchange (Sidler et al., 2021, 2022).

4.5 Migration Background

To differentiate between minority and majority group members' perspectives on minority and majority group members' acculturation, individuals are categorized as either belonging to a minority or the majority group. The category *migration background* is often used to this end in quantitative research and includes individuals' nationality and country of birth as well as their parents' country of birth. Migration and mobility are conceptualized as someone's changing their usual place of residence, which is where they spend most daily periods of rest (Poulain, 2008). Migration and mobility can be differentiated along (a) a time dimension, meaning that after a certain length of stay, a mobile person becomes a migrant; (b) nation-state borders, in the sense that internal movements are defined as mobility whereas cross-border movements are considered to be migration; and (c) individual characteristics, in the sense that there are privileged mobile persons and unwanted migrants (Hoffmeyer-Zlotnik, 2020).

In this dissertation, migration relates to cross-border movements as well as individual characteristics, because migration "highlights the capacity of a nation to define who belongs to the state and who does not" (D'Amato et al., 2019, p. 2). This became visible in the introduction of migration background as an official statistical category in Germany in 2005 (Horvath, 2019), when naturalizations have blurred the boundary between those belonging to the state and those who do not. However, the focus on state borders and nationality is a consequence of methodological nationalism, which criticizes the "assumption that the nation/state/society is the natural social and political form of the modern world" (Wimmer & Glick Schiller, 2002, p. 302)

and thus makes an argument for studying individuals outside the nation-state logic. Nevertheless, to disregard state borders and belongings based on nationality would be to ignore the impact one's country of birth and nationality have on one's educational, employment, and personal trajectory (compare, e.g., the Quality of Nationality Index²). Having a passport of the right color can open doors that stay closed for others. To understand such differences better, it is crucial to study individuals and their life course according to their migration background because ignoring this category would mean not making the differences visible (Criado-Perez, 2019). Thus, without data, inequalities and discrimination cannot be made visible.

Yet ethnicity, race, and migration background are constructed labels that implicitly constitute the groups they appear to represent (Brubaker, 2009). Thus, to distinguish between the perspectives of students with and without a migration background on mutual acculturation, these two groups must first be constructed before they can be described. Refusing to form these groups would mean being unable to describe their perspectives and experiences afterwards and therefore would lead to a loss of information. For example, refusing to see race and following a "we are all the same" approach would mean failing to see how life realities and possibilities fluctuate greatly depending on, for example, your skin color (Elias & Feagin, 2020). However, using these categories and thus constructing migrant and ethnic minority groups might also lead to various outcomes: The way these groups are defined affects research findings and may reflect negatively on research participants, for example, by stigmatizing or stereotyping, which in turn can lead to discrimination (Horvath, 2019).

But categories might also affect research subjects positively, by showing not only their specific experiences but also inequities and systemic discrimination against specific groups, for

² Quality of Nationality Index <https://www.nationalityindex.com/#> (visited July 11, 2022)

example, systemic racism (Elias & Feagin, 2020). Thus, even if migration background is a constructed category, implicitly constituting the group it seems to describe (Brubaker, 2009), it still influences individuals: According to the OECD (2021), educational inequalities and achievement gaps between students with and without a migration background are an important problem to solve. Therefore, assessing both groups is crucial to detect and fight discrimination.

In this dissertation, I assessed migration background in two ways: first, by looking at the place of birth and nationality of students and their parents' place of birth to assess the dominant categorization. This categorization might be problematic because respondents may be classed as having a migration background even if they claim otherwise (Horvath, 2019). Therefore, the second assessment involves two measurements of national self-identification in Switzerland, namely in terms of being Swiss and in terms of having a migration background. Self-identification measures allow individuals to decide for themselves how they are described, regardless of how much their self-perceptions rely on societal power structures. The authority of interpretation is therefore handed from researchers to study participants. Preferred group labels may change over time and across social contexts, particularly for adolescents, who develop their own labels and try out various identities (Portes & Rivas, 2011). Thus, self-identification measures present a crucial addition as well as an alternative to more common categorizations like nationality, country of birth, and migration background.

Conceptualizing migration background dichotomously, however, entails losses of information, as migrants can be diverse regarding migrant generation, status, and countries of origin (Nauck & Genoni, 2019). Moreover, categorizations risk misrepresenting immigrants and their descendants by depicting them as a uniform group compared to an essentialized, non-immigrant national group (Moffitt & Juang, 2019). Nevertheless, as acculturation involves a

negotiation of dominance (Zick, 2010), speaking of majority and minority group members and therefore using a binary categorization helps reflecting power relations and negotiations. Similarly, following Connell's (1998) theory on hegemonic masculinity, a dichotomous categorization accounts for power relations and practices that aim to legitimize the majority's dominant position in society and, in turn, justify the subordination of minority group members. Thus, whereas the majority may not be a numerical majority, they have more social and political power, which is exemplified in asymmetrical acculturation expectations toward minority group members.

5 Research Gap

Although acculturation is considered to be a mutual process (Berry, 2009; Chirkov, 2009), no quantitative assessment of attitudes toward mutual acculturation existed. This dissertation addressed this research gap by conceptualizing and validating a novel mutual acculturation attitudes scale within the school context (see Sidler et al., 2021; Sidler, 2022a). Furthermore, to assess latent mutual acculturation patterns within the school context, mutual acculturation attitudes of students with and without a migration background were analyzed through latent profile analyses across Germany, Greece, and Switzerland. Additionally, these profiles were analyzed regarding their relations with psychological adjustments like self-esteem and self-determination (Sidler et al., 2022). Finally, mutual acculturation profiles were studied in terms of students' national self-identification to reflect on the power dynamics of category-building within quantitative research (Sidler, 2023). Thus, I tackle the following aims in this dissertation:

- Migration and education: why the acculturation framework matters in the school

- context (Makarova & Sidler, 2023)
- Conceptualization and validation of a four-dimensional mutual acculturation attitudes scale within the Swiss school context (Sidler et al., 2021)
 - Testing concurrent validity and migration-related group differences of the four-dimensional mutual acculturation attitudes scale within the Swiss school context (Sidler, 2022a)
 - Identifying mutual acculturation profiles through latent profile analyses across three European countries (Germany, Greece, Switzerland) and their relationships with psychological adjustment for students with and without a migration background (Sidler et al., 2022) and communicating it to a wider audience through a podcast (Psychologiestudenter Uten Grenser, 2022) and a blog post (Sidler, 2022b).
 - Analyzing mutual acculturation profiles in Switzerland in relation to students' national self-identification (Sidler, 2023) and communicating how self-identification matters for adolescents to a wider audience (Sidler, 2020).

Thus, the main goal of this dissertation is to assess minority and majority adolescents' attitudes toward mutual acculturation and their association with psychological adjustment across public school contexts in Germany, Greece, and Switzerland.

6 Methods

6.1 Participants

Study participants were part of a random convenient sample from lower secondary education classes in Baden-Württemberg (Germany), in the German-speaking cantons Aargau, Basel-Stadt, and Solothurn (Switzerland), and in Athens, Larisa, and Crete (Greece). The

German sample comprised 346 students in 14 schools (46.0% female, 53.7% male, 0.3% other, $M_{\text{age}} = 12.78$ years, $SD = 0.78$, range 11–16). The Greek sample comprised 439 students in 14 schools (55.7% female, 44.1% male, 0.2% other, $M_{\text{age}} = 12.29$ years, $SD = 0.88$, range 11–20), and the Swiss sample comprised 375 students in 20 schools (46.8% female, 53.2% male, 0% other, $M_{\text{age}} = 12.67$ years, $SD = 0.69$, range 11–15).

6.2 Procedure and Sampling

The data used for this dissertation was collected through an online questionnaire via tablets in 2019 and 2020 within the longitudinal and international project *Overcoming Inequalities with Education: School and Resilience* of the NCCR – on the move, funded by the Swiss National Science Foundation in secondary schools, in Germany, Greece, and Switzerland. The data underlying the articles that are covered in this dissertation were collected in Germany and Greece during the first and in Switzerland during the first and the second data collection waves. The first wave was collected pre-COVID-19 from September 2019 (Switzerland) until February 2020 (Greece). Each data collection took about 1–2 months in the respective country. The second wave was collected in the first year of the pandemic, which was characterized by various pandemic-related challenges such as school closures.

Before the sampling began in each country, a local ethical committee was contacted for approval. In Germany, upper-level school offices and school districts were contacted through email and/or phone. With their permission, teachers of the seventh grade were contacted by email or phone. Teachers notified the students and their parents about the study and requested written approval. In total, 14 schools with 28 classes were recruited in the two northern upper-level school offices of Baden-Württemberg, namely Karlsruhe and Stuttgart. In Greece, schools were contacted in three regions: Athens, Larisa, and Crete. Local school counsellors provided

guidance and assistance in class recruitment. The focus was on schools in Athens, where 34.6% of the Greek student population lives (Hellenic Statistical Authority, 2020). Whereas schools in Athens have a multicultural composition, immigrants and refugees in Larisa and on the island of Crete are considered to be more integrated into the local society (Kotoyannos et al., 2019). In sum, 14 schools with 48 classes were recruited. In Switzerland, cantonal educational offices were contacted initially. Following that, school directors and then class teachers were contacted via email and phone calls. Parents and students were informed and asked for consent through the teachers. Twenty schools with a total of 32 classes were recruited in the Aargau, Basel-Stadt, and Solothurn cantons. In all three countries, the participating students and their parents signed consent forms and were informed that students could refrain from answering any question they did not want to answer and that they could withdraw from the study at any time.

An a priori power analysis was not used to determine the sample size: the three national samples are convenient random samples, which means that as many schools as feasible were contacted to recruit complete classes. The Swiss sample (46% female, $n = 167$; 53% Swiss, $n = 193$) was compared to official student data within the relevant school tracks and cantons. The Swiss sample's gender and immigrant composition was comparable to cantonal statistics, as the lowest school level has a smaller percentage of females and Swiss nationals (Federal Statistical Office, 2020b, 2020c), but such demographic data were not available in the other countries.

Before the first data collection, a pilot study was done with one school class of 25 students in Switzerland, which did not participate in the main study. All students finished the online questionnaire within one hour and understood all the questions. Data collections were coordinated with local school schedules and therefore the starting dates differed between the countries. Research assistants and researchers went to schools during class hours in all three

countries to instruct the students, answer possible questions, manage the data collection, and ensure a similar data collection environment. Students filled the questionnaire in through tablets in 35–60 minutes. A protocol was written for each school class.

There were first-generation immigrant students present in each national sample (Germany: 28% first-generation; Greece: 12% first-generation; Switzerland: 19% first generation). Therefore, questionnaires were not only prepared in the two national languages (German and Greek) but also translated into five additional languages (Arabic, English, Farsi, French, and Turkish) following the four-eyes principle, a content translation, and a culturally sensitive approach (Peña, 2007). Most students answered the questions in their country's official language (93% and 96% of the students in German in Germany and Switzerland, respectively; 91% in Greek in Greece).

6.3 Measures

Mutual acculturation attitudes were assessed through a four-dimensional measurement with seven items each (Sidler et al., 2021; see chapter 7.1 including Table 1 for the items verbatim and Table 2 for mean values of each item across the three countries). The 4-point Likert answer scale ranged from *disagree* (1) to *agree* (4), higher scores thus indicating higher agreement with the relevant dimension. Attitudes toward (1) *heritage culture maintenance by students with a migration background* (e.g., “I find that it is important for teenagers from another country who live in [country] to be allowed to preserve their traditions and customs”; Germany, Greece, Switzerland Cronbach's $\alpha^3 = .85, .85, .84$, respectively); (2) *dominant culture adoption by students with a migration background* (e.g., “I find that it is important for teenagers from

³ McDonald's omegas (ω) were also calculated as reliability coefficients and were equal to the Cronbach's alphas (or differed by .01 in one case).

other countries who live in [country] to adopt the dominant way of life in [country]”; Germany, Greece, Switzerland Cronbach’s α s = .88, .88, .91, respectively); (3) *majority students’ acquisition of cultural knowledge* (e.g., “I find it is important that [country] teenagers who live in [country] get to know the religions of teenagers from other countries who live in [country]”; Germany, Greece, Switzerland Cronbach’s α s = .91, .91, .92, respectively); and (4) *schools’ endorsement of intercultural contact* (e.g., “I find it is important for the [country] schooling system to allow teenagers from other countries and [country] teenagers to exchange information about languages”; Germany, Greece, Switzerland Cronbach’s α s = .90, .90, .92, respectively). Cronbach’s alpha and McDonald’s omega both demonstrate high reliability across all countries and dimensions, ranging from .84 (migrant students’ maintenance of heritage culture in Switzerland) to .92 (majority students’ acquisition of cultural knowledge and schools’ endorsement of intercultural contact in Switzerland).

Migration background was assessed in four ways. First, it was operationalized dichotomously by combining three single-item indicators: students’ nationalities and country of birth of students and their parents. If students and their parents were all born locally, and students had only the local nationality, they were characterized as not having a migration background—that is, as belonging to the majority. Otherwise, if any of these conditions were not met, the student was characterized as having a migration background (79% in Germany, $n = 272$; 47% in Greece, $n = 207$; and 76% in Switzerland, $n = 283$). This categorization was used in the articles described in the chapters 7.3.1, 7.3.2, and 7.3.3.

Second, it was assessed through students’ nationalities in the Swiss sample. Students were grouped as follows: having the Swiss nationality no matter whether they have any further nationalities ($n = 201$, 56%), as having a nationality or nationalities of a geographically European

country no matter whether they have any further nationality from a country outside geographical Europe ($n = 120$, 33%), or as having a nationality from a country outside geographical Europe ($n = 41$, 11%). This categorization was used in the article described in the chapter 7.3.2.

Third, migration background was assessed through students' generation status in the Swiss sample. Generation status was measured with students reporting their and their parents' places of birth. The students who were born outside of Switzerland ($n = 65$, 18%) were considered first generation. Students whose parents were both born abroad ($n = 103$, 28%) were considered second generation. "Generation 2.5" referred to students with one parent who was born abroad ($n = 64$, 18%). The third generation referred to students who including both their parents have been born in Switzerland ($n = 132$, 36%) and was defined as the majority population. This categorization was used in the article described in the chapter 7.3.2.

Fourth, it was operationalized through national self-identification by two single-item indicators and their combinations in the Swiss sample: self-identification as (a) being Swiss and as (b) having a migration background. Students answered these questions on a 4-point Likert scale ranging from 1 (*yes*) to 4 (*no*). The first dimension was reverse coded, so that higher values indicated higher national self-identification (either through being Swiss or not having a migration background). In Switzerland, 67% of students ($n = 213$) self-identified as being (somewhat) Swiss, and 32% of students ($n = 102$) self-identified as (somewhat) having a migration background. This categorization was used in the article described in the chapter 7.3.4.

6.4 Analyzing Mutual Acculturation Attitudes

The mutual acculturation framework used in this dissertation assessed seven items (way of life, traditions and customs, languages, religions, clothing styles, family cultures, and gendered views on careers) across four dimensions: namely, attitudes toward (a) maintenance of

heritage culture by students with a migration background, (b) their adoption of the dominant local culture, (c) majority students' acquisition of intercultural knowledge and (d) schools' endorsement of intercultural contact and exchange (Sidler et al., 2021). Whereas the two minority acculturation dimensions relate to Bourhis et al.'s (1997) model combining heritage culture maintenance and dominant culture adoption of minority group members, the two majority acculturation dimensions are novel conceptualizations. Following Berry (2009), majority acculturation is understood as both citizens and institutions adjusting to minority groups. Thus, the first majority acculturation dimension relates to majority individuals, whereas the second relates to schools as national institutions. The two novel conceptualizations account for social power imbalances. Whereas majority group members experience cultural diversity and therefore acculturation, the nature of their cultural engagement and therefore how they acculturate to minority members is optional (Dandy & Pe-Pua, 2013; Rauchelle & Dandy, 2015) and might be problematic (Lenard & Balint, 2019).

There are two distinct approaches when analyzing quantitative data—the variable-oriented and the person-oriented approaches (Block & Haan, 1971). The variable-oriented method describes relationships between multiple variables, and it generates broad patterns between variables from many people within a group. The expectation is that findings are somewhat comparable in all members of the group. Examples for a variable-oriented approach are factor analyses (confirmatory and exploratory), regression analyses, analyses of variance, or structural equation modeling (SEM). The person-oriented method, however, considers that the population is a diverse group and therefore that samples may contain numerous subpopulations showing heterogeneous patterns. Thus, person-oriented methods group individuals into qualitatively and quantitatively distinct subgroups that share specific characteristics. Thus, the

subgroups vary in terms of size (how many individuals) and characteristics (specific patterns). Examples for a person-oriented approach are latent class, profile and transition analyses or cluster analyses.

Given the vast body of acculturation research and the interdisciplinary interest in the topic, various methodological approaches have been taken (Rudmin, 2009). Particularly as specific statistical methods developed over time, the possibilities for data analyses became more diverse. Specifically, researchers shifted from using variable-oriented to person-oriented approaches (Rudmin, 2009; Ward & Geeraert, 2016). This is important to consider when comparing findings across studies. Variable-oriented approaches in acculturation research assessed each strategy (i.e., integration, assimilation, separation, marginalization) individually or combined two underlying dimensions (i.e., cultural maintenance and cultural adoption) through a mean/median/scale midpoint (Ward & Geeraert, 2016). Person-oriented approaches in acculturation research used cluster analysis or latent profile as well as latent class analyses (Schwartz & Zamboanga, 2008), which allow to identify qualitatively as well as quantitatively distinct latent subgroups.

In this dissertation, both approaches have been taken—a variable-oriented approach to validate the novel mutual acculturation attitudes assessment (through exploratory structural equation modeling, confirmatory factor analyses, regression analyses, and analyses of variance) as well as a person-oriented approach to study how mutual acculturation attitudes differed across diverse subgroups (through latent profile analyses). Combining both approaches allowed to test the validity and reliability of the measurement and to study mutual acculturation attitudes across not only countries and majority and minority groups, but also across latent subgroups having qualitatively and quantitatively distinct attitudes toward mutual acculturation.

7 Outputs

The main component of this dissertation is a novel measurement assessing attitudes toward mutual acculturation in the school context. The measurement including all items verbatim, mean levels of all items, intraclass correlations, confirmatory factor analyses, and measurement invariance across the three countries are presented in the first subchapter, namely 7.1. Then, abstracts of the book chapter (Makarova & Sidler, 2023) as well as of each manuscript are presented. Four scientific articles have been published, two concerning the measurement and validation (Sidler et al., 2021; Sidler, 2022a), one making international comparisons (Sidler et al., 2022), and one including national self-identification (Sidler, 2023). The book chapter and the four main articles can be found in full length in the annex. Finally, descriptions of activities in relation to science communications like blog posts, an award-winning short film, and a podcast collaboration are presented.

7.1 Novel Measurement Assessing Mutual Acculturation Attitudes

The first output of this thesis is a novel conceptualization of mutual acculturation attitudes and therefore a novel four-dimensional measurement to assess mutual acculturation attitudes within the school context. All items verbatim are presented in Table 1. The means and standard deviations of each item across the three countries are presented in Table 2.

Table 1*Assessing Mutual Acculturation Attitudes: Items Verbatim*

	Heritage culture maintenance by migration background students	Dominant culture adoption by migration background students	Majority students' acquisition of cultural knowledge	Schools' endorsement of intercultural contact
Introduction	I find that it is important for teenagers from another country who live in [country] ...		I find it is important that [country] teenagers who live in [country] get to know...	I find it is important for the [country] schooling system to allow teenagers from other countries and [country] teenagers...
Item 1	...to be allowed to preserve their traditions and customs.	...to adopt the dominant traditions and customs in [country].	... the traditions and customs of teenagers from other countries who live in [country].	... to exchange information about their traditions and customs.
Item 2	...to be allowed to preserve their religion.	...to adopt the dominant religion in [country].	... the religions of teenagers from other countries who live in [country].	... to exchange information about their religions.
Item 3	...to be allowed to preserve their way of life.	...to adopt the dominant way of life in [country].	... the ways of life of teenagers from other countries who live in [country].	... to exchange information about their ways of life.
Item 4	...to be allowed to preserve their language.	...to adopt (one of) the official language(s) in [country].	... the languages of teenagers from other countries who live in [country].	... to exchange information about their languages.
Item 5	...to be allowed to preserve their way of dressing.	...to adopt the dominant way of dressing in [country].	... the ways of dressing of teenagers from other countries who live in [country].	... to exchange information about their ways of dressing.
Item 6	...to be allowed to preserve their family culture.	...to adopt the dominant family culture in [country].	... the family cultures of teenagers from other countries who live in [country].	... to exchange information about their family cultures.
Item 7	...to be allowed to preserve their views on professional careers of women and men.	...to adopt the dominant views on professional careers of women and men in [country].	... the views on professional careers of women and men of teenagers from other countries who live in [country].	... to exchange information about their views on professional careers of women and men.

Table 2*Mean and standard deviation of each item across Germany, Greece, and Switzerland*

Item	Country	Heritage culture maintenance by migration background students	Dominant culture adoption by migration background students	Majority students' acquisition of cultural knowledge	Schools' endorsement of intercultural contact
Traditions	Germany	3.21 (.99) <i>n</i> = 310	2.42 (1.12) <i>n</i> = 287	2.95 (1.00) <i>n</i> = 293	3.09 (.97) <i>n</i> = 305
	Greece	3.39 (.89) <i>n</i> = 401	2.90 (1.02) <i>n</i> = 377	3.13 (.95) <i>n</i> = 362	3.35 (.84) <i>n</i> = 359
	Switzerland	3.26 (.93) <i>n</i> = 345	2.41 (1.04) <i>n</i> = 327	2.94 (.95) <i>n</i> = 337	3.10 (.93) <i>n</i> = 339
Religion	Germany	3.59 (.80) <i>n</i> = 322	2.11 (1.13) <i>n</i> = 289	2.94 (1.02) <i>n</i> = 299	3.04 (.99) <i>n</i> = 315
	Greece	3.53 (.84) <i>n</i> = 395	2.48 (1.13) <i>n</i> = 376	3.07 (.99) <i>n</i> = 367	3.16 (.89) <i>n</i> = 361
	Switzerland	3.59 (.75) <i>n</i> = 353	2.14 (1.07) <i>n</i> = 325	2.86 (.98) <i>n</i> = 337	3.04 (.95) <i>n</i> = 342
Way of life	Germany	3.42 (.86) <i>n</i> = 314	2.57 (1.08) <i>n</i> = 290	3.01 (.94) <i>n</i> = 294	3.26 (.87) <i>n</i> = 312
	Greece	3.59 (.75) <i>n</i> = 386	3.07 (.99) <i>n</i> = 379	3.13 (.91) <i>n</i> = 368	3.35 (.83) <i>n</i> = 361
	Switzerland	3.42 (.79) <i>n</i> = 349	2.48 (1.02) <i>n</i> = 326	3.00 (.90) <i>n</i> = 337	3.20 (.89) <i>n</i> = 340
Language	Germany	3.59 (.80) <i>n</i> = 318	2.88 (1.06) <i>n</i> = 294	3.07 (.98) <i>n</i> = 316	3.27 (.85) <i>n</i> = 314
	Greece	3.56 (.83) <i>n</i> = 389	3.08 (1.04) <i>n</i> = 380	3.04 (.97) <i>n</i> = 383	3.39 (.80) <i>n</i> = 365
	Switzerland	3.56 (.77) <i>n</i> = 347	2.77 (1.11) <i>n</i> = 324	3.16 (.95) <i>n</i> = 345	3.26 (.86) <i>n</i> = 343
Clothing style	Germany	3.56 (.80) <i>n</i> = 318	2.32 (1.13) <i>n</i> = 293	2.91 (1.06) <i>n</i> = 298	3.05 (.95) <i>n</i> = 316
	Greece	3.40 (.90) <i>n</i> = 386	2.74 (1.10) <i>n</i> = 379	3.00 (1.02) <i>n</i> = 367	3.20 (.92) <i>n</i> = 364
	Switzerland	3.44 (.86) <i>n</i> = 348	2.36 (1.06) <i>n</i> = 324	2.80 (1.05) <i>n</i> = 335	3.06 (.96) <i>n</i> = 343
Family culture	Germany	3.51 (.81) <i>n</i> = 316	2.48 (1.16) <i>n</i> = 289	2.99 (.97) <i>n</i> = 304	3.17 (.97) <i>n</i> = 315
	Greece	3.54 (.83) <i>n</i> = 388	2.78 (1.06) <i>n</i> = 375	3.09 (.92) <i>n</i> = 369	3.30 (.83) <i>n</i> = 368
	Switzerland	3.52 (.74) <i>n</i> = 350	2.35 (1.05) <i>n</i> = 324	2.97 (.97) <i>n</i> = 341	3.14 (.90) <i>n</i> = 344
	Germany	3.17 (1.05) <i>n</i> = 313	2.77 (1.10) <i>n</i> = 296	2.94 (.96) <i>n</i> = 301	3.07 (.97) <i>n</i> = 310

Gendered views on careers	Greece	3.09 (1.06) <i>n</i> = 384	2.96 (1.03) <i>n</i> = 382	3.03 (.92) <i>n</i> = 361	3.16 (.90) <i>n</i> = 358
	Switzerland	3.16 (.99) <i>n</i> = 345	2.67 (1.01) <i>n</i> = 333	2.96 (.97) <i>n</i> = 341	3.21 (.86) <i>n</i> = 340

Note. The answer scales range from *disagree* (1) to *agree* (4) for the four mutual acculturation dimensions and from *not important* (1) to *important* (4) for the question on each area of life's importance.

Given the data's multi-level structure, intraclass correlations were examined at two (students – school classes) and three levels (students – school classes – schools). Intraclass correlations were all less than .100 in all three samples, showing small variance at the school and class level (see Sidler et al., 2022). Given the data's cross-national design, confirmatory factor analyses (CFA) were performed in each country (see Table 3 for factor loadings), and cross-national measurement invariance (see Table 4 for multigroup CFA values) was evaluated in JASP (0.16.0.0; see Sidler et al., 2022). A CFA was used to evaluate and corroborate the 28-item and four-factor model of assessing mutual acculturation attitudes across three different populations. The findings revealed good factor loadings and an adequate fit across countries (Xia & Yang, 2019).

Table 3

Confirmatory Factor Analyses of the Four Acculturation Dimensions in Germany, Greece, and Switzerland

Dimension	Item	Germany				Greece				Switzerland			
		1	2	3	4	1	2	3	4	1	2	3	4
Adolescents from other countries should be allowed to maintain their...	Traditions	.60				.67				.63			
	Religion	.66				.79				.72			
	Way of life	.73				.66				.68			
	Language	.68				.69				.68			
	Clothing style	.67				.80				.74			
	Family culture	.74				.63				.60			
	Gendered views on careers	.60				.55				.56			
Adolescents from other countries should adopt the dominant ... in [country].	Traditions		.83				.80				.87		
	Religion		.76				.76				.80		
	Way of life		.77				.77				.81		
	Language		.62				.65				.62		
	Clothing style		.81				.81				.89		
	Family culture		.79				.78				.87		
	Gendered views on careers		.59				.59				.66		
[Country] adolescents should get to know ... of adolescents from other countries living in [country].	Traditions			.82			.80				.87		
	Religions			.71			.74				.81		
	Ways of life			.83			.87				.86		
	Languages			.61			.70				.70		
	Clothing style			.76			.78				.76		
	Family cultures			.79			.81				.79		

Dimension	Item	Germany				Greece				Switzerland			
		Factor 1	2	3	4	1	2	3	4	1	2	3	4
	Gendered views on careers			.77			.77					.81	
[Country] schools should make it possible for all adolescents to exchange information about ...	Traditions			.77			.76					.83	
	Religions			.73			.80					.78	
	Ways of life			.80			.79					.82	
	Languages			.74			.75					.78	
	Clothing style			.77			.71					.71	
	Family cultures			.69			.75					.79	
	Gendered views of careers			.75			.74					.78	

Note. The original 28-item and four-factor model was tested through confirmatory factor analyses (CFA) in JASP (0.16.0.0) for each country. Results showed sufficient fit (Xia & Yang, 2019) in the German sample ($\chi^2_{(344)} = 647.557, p < 0.001$; RMSEA = .062 [90% CI = .055–.070]; SRMR = .058; CFI = .910; TLI = .901), the Greek sample ($\chi^2_{(344)} = 799.608, p < 0.001$; RMSEA = .067 [90% CI = .061–.073]; SRMR = .050; CFI = .905; TLI = .896), and the Swiss sample ($\chi^2_{(344)} = 755.626, p < 0.001$; RMSEA = .067 [90% CI = .061–.074]; SRMR = .049; CFI = .916; TLI = .907).

Then, measurement invariance was assessed across countries through a multigroup confirmatory factor analysis with “country” as the grouping variable: first, the configural invariance was validated by examining the invariance of the component structure across countries (the baseline model, M2; Table 4). The metric invariance was supported by comparing the baseline model to the model with limited factor loadings (M3). Finally, restricting the intercepts to be equal (M4) helped to maintain the scalar invariance (Xia & Yang, 2019). These findings demonstrate that comparisons between the German, Greek, and Swiss samples are relevant and valid.

Table 4*Multigroup Confirmatory Factor Analysis to Assess Measurement Invariance Across Countries (MG-CFA MI)*

Model	Type of test	Compared with	χ^2	<i>df</i>	<i>RMSEA</i>	<i>CFI</i>	<i>TLI</i>	<i>SRMR</i>	Δdf	ΔCFI	$\Delta RMSEA$	$\Delta SRMR$	Decision
M1a	Germany		647.557 $p < .001$	344	.062 [.055, .070]	.910	.901	.058					
M1b	Greece		799.608 $p < .001$	344	.067 [.061, .073]	.905	.896	.050					
M1c	Switzerland		755.626 $p < .001$	344	.067 [.061, .074]	.916	.907	.049					
M2	Configural invariance		2258.490 $p < .001$	1088	.064 [.060, .068]	.910	.907	.060					
M3	Metric invariance	M2	2251.443 $p < .001$	1080	.064 [.060, .068]	.910	.906	.056	-8	0	0	-.004	Accept
M4	Scalar invariance	M3	2361.079 $p < .001$	1128	.064 [.061, .068]	.906	.905	.055	148	-.004	0	-.001	Accept
M5	Strict invariance	M4	2512.122 $p < .001$	1184	.065 [.062, .069]	.898	.903	.057	56	-.008	.001	.002	Accept

Note. χ^2 , chi-square statistics; *df*, degrees of freedom; *RMSEA*, root mean square error of approximation; *CFI*, comparative fit index; *TLI*, Tucker Lewis index; *SRMR*, standardized root mean square error of approximation; Δ , change in statistical values.

7.2 Book chapter

7.2.1 Migration and Acculturation: Supporting Migrant Students' School Adjustment in Multicultural Schools (Makarova & Sidler, 2023)

In multicultural societies, it is important to assess how school adjustment can be promoted for students with a migration background. It is a challenging process for immigrant students to adjust to the environment in their country of residence, and acculturation plays a key role in this process. Acculturation relates to individual or ethnocultural group changes in behaviour and attitudes stemming from intercultural contact. Acculturation research describes changes that individuals and/or ethnocultural groups undergo during acculturation and the effects of acculturation on their adjustment to the new environment (Berry, 2006). Acculturation is a multifaceted construct that distinguishes between acculturation outcomes, acculturation orientations, and conditions of acculturation (Arends-Toth & van de Vijver, 2006).

We follow the eco-developmental framework of human development (Bronfenbrenner, 2005) and the notion that the relationship between acculturation and adjustment is shaped by the surrounding context (Birman & Simon, 2014). Schools have been a specific focus of acculturation research, as they constitute a key context in the process of psychological and sociocultural adjustment of students with a migration background (Makarova & Birman, 2015, 2016; Makarova et al., 2019).

In this chapter, we provide an overview of the acculturation framework and its conceptualization in the school context. Based on acculturation research in the educational sciences, we demonstrate how characteristics of the educational system, school culture (e.g., teaching practices, discipline styles, educational goals), and teaching and learning environment can support or inhibit the adjustment of students with a migration background in multicultural

schools. Finally, we conclude with suggestions for pedagogical practice to support the acculturation process of students with a migration background and facilitate their school adjustment.

7.3 Articles

7.3.1 **Assessing attitudes towards mutual acculturation in multicultural schools: Conceptualization and validation of a four-dimensional mutual acculturation attitudes scale (Sidler et al., 2021)**

Assessment of acculturation attitudes usually has focused on the importance of two dimensions: first, immigrants' maintenance of cultural heritage and, second, immigrants' adoption of the majority culture. Because acculturation is a reciprocal interaction, we extended a bidimensional scale to four dimensions to assess mutual acculturation. Given the importance of the social context for acculturation and schools as a crucial context for immigrant pupils' acculturation, the scale extension was validated within the context of school. We hypothesised that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and towards schools' responsibility to support intercultural contact. The study sample comprised 364 secondary school pupils in Swiss multicultural schools. Using exploratory structural equation modelling, we validated four distinct dimensions of acculturation attitudes: attitudes towards *immigrant pupils'* (a) *heritage culture maintenance* and (b) *adoption of the dominant culture* and attitudes towards (c) *native pupils acquiring cultural knowledge* and (d) *schools enabling intercultural contact*. We conclude that the proposed four-dimensional scale is a valid tool for assessing attitudes towards mutual acculturation within the school context and that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and schools.

7.3.2 Testing Concurrent Validity and Group-Differences of a Four-dimensional Assessment of Attitudes toward Mutual Acculturation (Sidler, 2022a)

Acculturation attitudes commonly focus on minority and majority attitudes toward minority acculturation. However, because acculturation is a mutual process, not only are members of minority or migrant groups expected to experience acculturation, but members of the majority also are. In this study, I assessed the attitudes of 375 minority and majority students ($M_{\text{age}} = 12.67$ years, $SD = 0.69$, range 11–15, 46% female) in Swiss secondary schools toward (a) migration background students' heritage culture maintenance and (b) dominant culture adoption, (c) majority students' acquisition of cultural knowledge, and (d) schools' endorsement of intercultural contact. This study extends the validation of the four-dimensional measurement of attitudes toward mutual acculturation (Sidler et al., 2021) through assessing group-specific differences of each dimension and through exploring the relationship of each dimension with school adjustment.

The results indicated group-specific differences only within the heritage culture maintenance dimension, which is more important for second generation students. As no further group differences in relation to the four dimensions were found, these findings indicate their equal importance for minority as well as majority students and thus demonstrate the importance of a mutual acculturation framework for students independently of their migration background and nationalities. Additionally, significant positive relationships with teacher support, self-efficacy, self-esteem, and self-determination were found for each dimension except dominant culture adoption. These results strengthen the concurrent validity of this four-dimensional assessment of mutual acculturation within the school context, as 3 out of 4 dimensions were significantly linked to psychological adjustment and teacher support.

7.3.3 Minority and Majority Adolescents' Attitudes toward Mutual Acculturation and its Association with Psychological Adjustment (Sidler et al., 2022)

Although acculturation is considered a mutual process, no measure assesses attitudes toward mutual acculturation. Through a novel four-dimensional measurement, this study addresses this research gap by assessing attitudes toward minority and majority acculturation and its relation to psychological adjustment for immigrant-background minority and non-immigrant majority adolescents in public secondary schools in three European countries: in Germany ($n = 346$, 46% female, $M_{\text{age}} = 12.78$ years, range 11–16), Greece ($n = 439$, 56% female, $M_{\text{age}} = 12.29$ years, range 11–20), and Switzerland ($n = 375$, 47% female, $M_{\text{age}} = 12.67$ years, range 11–15). Latent profile analyses led to three distinct acculturation profiles in all three countries: strong and mild mutual integration profiles, where both migrant and majority students are expected to integrate, and a third profile assuming lower responsibility upon the majority. Additionally, those in the strong- and mild-integration profiles reported stronger psychological adjustment than those assuming lower responsibility upon the majority, which held for all students in Switzerland and mostly for those without a migration background in Germany. The findings demonstrate the importance of a mutual acculturation framework for future research. Moreover, as most adolescents fit in with one of the mutual integration patterns, findings stress that no matter their migration background, adolescents favor mutual integration including the expectation on schools to enhance intercultural contact.

7.3.4 Adolescents' Mutual Acculturation Attitudes and Their Association with National Self-Identification in three Swiss cantons (Sidler, 2023)

Acculturation is a mutual process, meaning that minority group members as well as majority group members acculturate and thus experience cultural and psychological changes when having intercultural contact. This study assessed attitudes toward mutual acculturation

through a four-dimensional measurement examining attitudes toward migration background students' (1) heritage culture maintenance and (2) dominant culture adoption, (3) majority students' intercultural knowledge acquisition, and (4) schools' intercultural contact endorsement.

Acculturation attitudes are commonly analyzed through minority and majority perspectives; however, the ways in which researchers differentiate between minority and majority group members can be challenging. How researchers categorize group members can differ significantly from how those members self-identify. This matters particularly for adolescents because they explore group identities and belongings. So far, adolescents' attitudes toward mutual acculturation in relation to self-identification measures have not been studied. The current study addresses this research gap by analyzing attitudes toward mutual acculturation in relation to whether adolescents self-identify as (1) being Swiss, (2) not having a migration background, and (3) the interaction of the two. The sample consisted of 319 adolescents in public secondary schools in three German-speaking cantons in Switzerland (45% female, $M_{age} = 13.60$ years, range 12–16).

Latent profile analyses resulted in three distinct acculturation profiles. The first is a mutual integration profile ($n = 147$, 46%), where minority and majority adolescents and schools are expected to integrate. The second is a multiculturalism profile ($n = 137$, 43%), with slightly lower expectations on majority and minority adolescents and schools. The third is a cultural distancing profile ($n = 33$, 10%), which places particularly low expectations on majority adolescents and schools. Through an analysis of variance and a multiple logistic regression, those in the cultural distancing profile were found to identify significantly stronger as not having a migration background compared to those in the mutual integration profile.

Thus, students having separation expectations toward students with a migration background and non-involvement expectations toward schools and majority students have a higher probability to self-identify as not having a migration background and therefore as belonging to the majority group than students having mutual integration expectations toward minority and majority students and schools.

7.3.5 Additional Publications

Further output encompasses collaborative publications within the NCCR – on the move project *Overcoming Inequalities with Education: School and Resilience* (Kassis et al., 2021; Janousch et al., 2022); and collaborative research for the NCCR – on the move dataset on mobility and border control, as a response to the COVID-19 pandemic (Piccoli et al., 2020).

Within the project *Overcoming Inequalities with Education: School and Resilience*, we identified and compared patterns of the well-being of migrant and native students in secondary schools in Greece and Switzerland through latent profile analyses (Kassis et al., 2021). We found similar patterns of well-being for students with and without migration backgrounds in both countries, indicating strong similarities across groups and contexts. Teacher support and students' resilience were identified to play an important role in mediating students' levels of well-being at school, indicating that students' well-being can be fostered at school (Kassis et al., 2021).

Additionally, we assessed adolescents' resilience profiles through latent profile analyses across Germany, Greece, and Switzerland (Janousch et al., 2022). Four resilience patterns emerged in Germany and Greece (non-resilient, moderately resilient, untroubled, and resilient) and three patterns emerged in Switzerland (non-resilient, moderately resilient, untroubled). However, measurement invariance testing and class membership predictions indicated that

resilience profiles are highly contextually sensitive and therefore should not be generalized across contexts (Janousch et al., 2022).

Within the NCCR – on the move, we collected systematic information on mobility restrictions implemented within and across national borders in response to the COVID-19 pandemic between March 1 and May 31, 2020. The two data waves cover the same period, but the second wave covers a larger geographical area. The first wave covered 26 countries, whereas the second covered a total of 32 countries (Piccoli et al., 2020).

7.4 Science Communication

7.4.1 Short film: Who is (not) Swiss?

Through the University of Zurich’s 4th Science Filmmaking Marathon in 2020, the short film [*Who is \(not\) Swiss?*](#) was produced (Sidler, 2020). Based on the self-identification data of adolescents in Swiss schools, I analyzed the data, wrote the script, and directed the short film with the help of other participants in the Science Filmmaking Marathon. The film’s story addresses appearances, curiosity, and belonging. It structures a short narrative around the question “Where are you from?” and develops connections between commonalities and differences in migration and mobility movements. Appearances can lead to curiosity about where someone is from; however, the question “Where are you from?” may be asked obliviously of how such a question could label its recipient as different and thereby impinge on one’s sense of personal belonging. The film ends with descriptive data on how adolescents who would traditionally be categorized as having a migration background self-identify and was given the best “Scientists-as-Filmmakers” 2020 award.

7.4.2 Podcast on Mutual Acculturation at School

During my research stay at the Department of Psychology at the University of Oslo, I have collaborated with the student association [psykologistudenter uten grenser](#) [Psychology students without borders] to produce a podcast titled “[Mutual Acculturation](#)” concerning the definition of mutual acculturation, the relation of mutual acculturation and integration, and adolescents’ mutual acculturation attitudes in schools in Germany, Greece, and Switzerland (Psykologistudenter Uten Grenser, 2022). The podcast has been published on Spotify in September 2022.

7.4.3 Blog post on Mutual Acculturation at School

To the NCCR – on the move blog, I contributed a blog post addressing adolescents’ mutual acculturation attitudes at school. The blog post titled “[Jugendliche mit und ohne Migrationshintergrund erwarten gegenseitige Integration in der Schule](#)” [Adolescents with and without migration background expect mutual integration at school] was published in September 2022 (Sidler, 2022b).

7.4.4 Additional Science Communication

To the NCCR – on the move blog, I contributed a blog post addressing [migration and mobility in 2050](#) and what a world organized into cities instead of nation-states might look like in the future (Sidler, 2021a). Another blogpost discussed [the effect of the COVID-19 pandemic on early-career academics](#), specifically, how the pandemic affected unknown unknowns and uncertainties for early-career researchers (Sidler & Gandenberger, 2021). Then, I wrote a [blogpost on the autumn 2021 women’s session](#) in which I collaborated with the Commission on Political Rights for Residents in Switzerland (Sidler, 2021b). Finally, another blogpost discussed

how [adolescents overcome inequalities in the labor market](#) through resilience (Sidler & Van Belle, 2022).

8 Key Findings

Though acculturation is theorized to be a mutual process (Berry, 2009; Chirkov, 2009), until the present study, the literature lacked any empirical assessment of mutual acculturation attitudes. This dissertation took on this research gap and contributed to acculturation research as follows: First, by highlighting how the acculturation framework is a useful tool to assess the acculturation and adjustment of adolescents with migration backgrounds in the school context (Makarova & Sidler, 2023). Moreover, by conceptualizing and validating a novel scale to assess not only attitudes toward minority or majority acculturation but their combination (i.e., attitudes toward mutual acculturation), this dissertation empirically tested and validated the mutual acculturation framework within the school context across three European countries.

The four-dimensional assessment of mutual acculturation attitudes conceptualized here is a demonstrably valid and reliable tool to assess adolescents' attitudes toward mutual acculturation in schools across three national contexts (Sidler et al., 2021; Sidler, 2022a; Sidler et al., 2022). Then, through latent profile analyses, mutual acculturation profiles were analyzed for students with and without migration backgrounds in Germany, Greece, and Switzerland (Sidler et al., 2022). Across the three countries, three distinct profiles for students with and without migration backgrounds emerged: two mutual integration profiles (strong vs mild) in which both migration background and majority-culture students are expected to integrate, and a third assuming lower responsibility for the majority-culture students.

From a developmental standpoint, it was surprising how comparable the mutual

acculturation patterns were across not only Germany, Greece, and Switzerland, but also across the migration background and non-migration background groups, implying the evolution of similar processes for diverse groups in different environments. Furthermore, 86% to 94% of adolescents with or without migration backgrounds across the three countries were in one of the mutual integration profiles and thus have the expectation on schools to endorse intercultural contact and exchange. Among the three profiles, students' attitudes varied the most on the majority dimensions, that is, whether majority-culture adolescents acquire intercultural knowledge and whether schools support intercultural contact. The most striking disparities emerged among the low-responsibility-on-majority profiles, which expressed separation, individualism, and one-sided integration patterns across countries and groups.

Then, acculturation profiles were associated with adolescents' psychological adjustment in terms of self-esteem and self-determination; however, this differed among groups and countries. Thus, whereas very similar mutual acculturation patterns emerged across countries, the relationship between mutual acculturation attitudes and psychological adjustment differed across contexts and groups: In Germany and Switzerland, those in the strong integration groups reported the highest degrees of psychological adjustment, while those in the low-responsibility-on-majority group reported the lowest, and those in the mild-integration group were somewhere in between. However, in Greece, integration profiles had no meaningful effect on adolescents' levels of psychological adjustment. This indicates that the connection between mutual acculturation and psychological adjustment is shaped by the specific context and group-membership.

National self-identification, in terms of being Swiss and having a migration background, was found to differ substantially across attributed migration backgrounds (based on respondents'

nationality and the places of birth of respondents and their parents). More than half of adolescents considered to have a migration background (as determined by their nationality, their place of birth, and their parents' place of birth) do not self-identify as having a migration background (Sidler, 2020).

Furthermore, I used data from the second data collection in Swiss schools in 2021 to analyze mutual acculturation attitudes through latent profile analyses and their relation to students' self-identification: (a) being Swiss, (b) having a migration background, (c) the interaction of the two. As in the preceding year, three mutual acculturation profiles emerged: (1) a mutual integration profile—in which students with migration backgrounds and Swiss adolescents and schools are expected to integrate, (2) a multiculturalism profile—which considers diverse cultural groups and intercultural knowledge and contact to be important, and (3) a cultural distancing or separation profile with particularly low expectations of majority-culture adolescents and schools. Compared to those of the mutual integration profile, those of the cultural distancing profile self-identified significantly stronger as not having a migration background and as being Swiss while not having a migration background.

Therefore, expecting neither majority group members nor institutions to integrate and to adjust to intercultural contact related to whether one self-identified as belonging to this majority. On the other hand, those of the mutual integration profile self-identified significantly stronger as having a migration background while not being Swiss compared to those of the cultural distancing profile. Therefore, the mutual integration expectations of minority and majority group members and of schools, as national institutions, were related to whether one self-identified as not belonging to the Swiss majority. Thus, mutual acculturation was found to matter more for those students who self-identified as not belonging to the Swiss majority.

9 Limitations and Future Directions

There are two main limitations to be addressed. First, the findings of empirical analyses comprising part of this dissertation resulted from cross-sectional data analysis. Therefore, only correlational and no causal relationships have been assessed. To determine directionality and causality of mutual acculturation and how it relates to adjustment for diverse individuals and groups, longitudinal data analysis is necessary (Bierwiazzonek & Kunst, 2021). Therefore, future studies are needed to assess acculturation and adjustment in a mutual acculturation framework over time.

Second, the insights gained through this dissertation arose from the specific conceptualization, operationalization, and therefore the specific assessment of mutual acculturation attitudes. First, this dissertation assessed attitudes toward mutual acculturation, meaning that future studies are needed to research mutual acculturation behaviors and policies. Then, concerning the mutual acculturation attitudes assessment, the two dimensions of minority acculturation within the mutual acculturation framework have been assessed following the model of Bourhis et al. (1997) combining heritage culture maintenance and dominant culture adoption of minority group members. Whereas the aim of this dissertation was to expand the original acculturation framework, potential future studies could explore ways of enhancing the two original dimensions. Specifically, across and within the three countries, the most variety between and within dimensions was found concerning attitudes toward minority students adopting the dominant culture. Thus, future studies could assess which form of cultural engagement (adoption, knowledge acquisition, appropriation) is most meaningful for minority group members.

Moreover, the two novel dimensions of majority acculturation were not assessed through

majority group members' minority culture adoption and mainstream culture maintenance, as they were in other studies on majority acculturation (Kunst, Lefringhausen, Sam, et al., 2021).

Identifying intercultural knowledge acquisition as a first acculturation step and conceptualizing institutions (and, therefore, schools) as acculturation agents and not only acculturation contexts present a nuanced approach to majority acculturation. It is a strength of this dissertation because it acknowledges societal power relations and potentially problematic cultural engagement in the sense that acculturation does not mean the same thing for minority and majority groups and institutions.

Nonetheless, future studies could explore how these two novel majority acculturation dimensions relate to majority members' mainstream culture maintenance and minority culture adoption, particularly the intercultural knowledge acquisition and minority culture adoption dimensions. Moreover, when and how minority culture adoption and potentially problematic cultural engagement are related could be further assessed. Furthermore, the notion of majority members' mainstream culture maintenance is a missing piece in the scale used in this dissertation. Not including it may make it seem like majority members' mainstream culture maintenance is not negotiable and therefore could even enforce power imbalances. Thus, future studies should include it in the mutual acculturation framework and therefore explore how the mutual acculturation framework could be developed further.

Additionally, future studies could explore further ways of acknowledging societal power relations and power imbalances and how findings from the mutual acculturation framework can be implemented into practice. Whereas I found that most adolescents across three national contexts wish for institutionally guided intercultural contact and learning, whether such contact and learning lead to better intercultural understanding, better quality of intercultural

relationships, better intercultural competence (Deardorff, 2006), and less intercultural conflicts would need further investigation.

Then, the mutual acculturation assessment used in this dissertation refers to minority students as adolescents coming from other countries. This description was chosen to make the question understandable for 11-year-old adolescents. The aim was to describe adolescents with a migration background and thus to encompass first, second, 2.5, and third generation individuals as well as adolescents with binational families. Further studies could be more specific and focus on binational adolescents (Karssen et al., 2017) or internal migrants (Py et al., 1994) and their specific mutual acculturation attitudes and experiences.

The analyses run in this dissertation were further limited by the sample sizes. No meaningful insights could have been gained into binational youth or differences based on migrant students' length of stay in the country of residence. Finally, the findings of this dissertation are based on quantitative data analyses. Future studies could take a mixed method approach to gain insights not only in adolescents' mutual acculturation attitudes but also to understand better what the four mutual acculturation dimensions mean to adolescents and how well these dimensions represent real acculturation issues of adolescents. This could be done by taking a participatory approach through focus groups and giving study participants the possibility to reflect and discuss the relevance and specificities of all dimensions and items (pre and post survey) and the study findings (post survey).

10 Conclusion

This dissertation contributes to the vast field of acculturation research through its innovative conceptualization and quantitative assessment of mutual acculturation attitudes within

the school context. Though acculturation has already been theorized to be a mutual process, this is the first assessment that measures attitudes toward minority as well as majority acculturation—therefore, mutual acculturation attitudes—simultaneously.

This novel mutual acculturation attitudes scale has been validated in the school context in Switzerland (see Sidler et al., 2021; Sidler, 2022a) as a valid and reliable measurement. Moreover, factor analyses supported the validation, as did measurement invariance assessed cross-nationally with data collected in schools in Germany, Greece, and Switzerland (see Sidler et al., 2022). For all three countries, latent mutual acculturation profiles were assessed for students with and without migration backgrounds and analyzed in relation to markers of students' psychological adjustment like self-esteem and self-determination, showing that the more students endorsed mutual integration attitudes, the better was their psychological adjustment (see Sidler et al., 2022). Finally, latent mutual acculturation profiles in Switzerland were explored in relation to students' national self-identification, showing that the less students endorsed mutual integration attitudes, the more likely it was that they self-identified as not having a migration background (see Sidler, 2023).

This dissertation demonstrates the value of a mutual acculturation framework which includes not only majority and minority perspectives but also institutional, minority, majority and, thus, mutual acculturation. Future research is needed to test and develop this mutual acculturation framework further and to gain insights into mutual acculturation in diverse contexts and communities, such as school, work, neighborhoods, friends, family, towns and cities. From this research, practical implications arise for the school context. Most adolescents are in favor of mutual integration, that is, the expectations of adolescents with and without migration backgrounds and of schools to integrate.

Moreover, a strong relationship emerged between positive psychological adjustment and mutual integration. Furthermore, across groups and countries, most adolescents found schools to be an agent in the acculturation process and expected schools to facilitate intercultural contact and exchange at school. My findings thus emphasize schools' and teachers' responsibility to facilitate intercultural contact and interactions while encouraging minority and majority students to learn about each other's cultural backgrounds.

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Annex

Migration and Acculturation: Supporting Migrant Students' School Adjustment in Multicultural Schools (Makarova & Sidler, 2023)

**Migration and Acculturation: Supporting Migrant Students' School Adjustment in Multicultural
Schools**

Elena Makarova¹ and Petra Sidler²

¹ Institute for Educational Sciences, University of Basel, MuttENZ, Switzerland

² Institute for Research and Development, School of Education, University of Applied
Sciences and Arts Northwestern Switzerland, Brugg-Windisch, Switzerland

Author Note

Elena Makarova  <https://orcid.org/0000-0002-7033-9144>

Petra Sidler  <https://orcid.org/0000-0003-0243-6337>

Abstract

In multicultural societies, it is important to assess how school adjustment can be promoted for students with a migration background. It is a challenging process for immigrant students to adjust to the environment in their country of residence, and acculturation plays a key role in this process. Acculturation relates to individual or ethnocultural group changes in behaviour and attitudes stemming from intercultural contact. Acculturation research describes changes that individuals and/or ethnocultural groups undergo during acculturation and the effects of acculturation on their adjustment to the new environment (Berry, 2006). Acculturation is a multifaceted construct that distinguishes between acculturation outcomes, acculturation orientations, and conditions of acculturation (Arends-Toth & van de Vijver, 2006). We follow the eco-developmental framework of human development (Bronfenbrenner, 2005) and the notion that the relationship between acculturation and adjustment is shaped by the surrounding context (Birman & Simon, 2014). Schools have been a specific focus of acculturation research, as they constitute a key context in the process of psychological and sociocultural adjustment of students with a migration background (Makarova & Birman, 2015, 2016; Makarova et al., 2019). In this chapter, we provide an overview of the acculturation framework and its conceptualization in the school context. Based on acculturation research in the educational sciences, in this chapter, we demonstrate how characteristics of the educational system, school culture (e.g., teaching practices, discipline styles, educational goals), and teaching and learning environment can support or inhibit the adjustment of students with a migration background in multicultural schools. Finally, we conclude with suggestions for pedagogical practice to support the acculturation process of students with a migration background and facilitate their school adjustment.

Migration and Acculturation: Supporting Migrant Students' School Adjustment in Multicultural Schools

The 2020 World Migration Report documents almost 272 million international migrants, amounting to 3.5% of the world's population (International Organization for Migration [IOM], 2020). A sizable proportion of the migrant population are children and youth (IOM, 2018, 2020). Although approximately 37 million child migrants and 13.5 million child refugees live outside of their place of birth (IOM, 2020), some children of immigrants were born in the place to which their parents migrated. Therefore, societies and schools in receiving countries are challenged to accommodate newly arrived migrant students and descendants of migrants with increasingly diverse cultural backgrounds (Celeste et al., 2019). As one of the most crucial contexts of child and youth development (Eccles & Roeser, 2012), schools in multicultural societies need to employ diversity approaches while simultaneously addressing developmental and achievement issues (Baysu et al., 2020). According to educational reports from the Organization for Economic Cooperation and Development (2010), students with a migration background are generally at risk of underachieving in school in Europe. Migrant students' school experience is often complex, multifaceted, and connected to issues of language, culture, identity, and social integration (Haim, 2019). Compared to their native peers, they often experience achievement gaps, higher levels of burnout and stress, and lower school engagement, which often lead to poor educational outcomes (Özdemir & Özdemir, 2020). Such achievement gaps are often consequential for their psychological development and future life opportunities. The considerable (hidden and actual) dropout rate among migrant students is a challenge for educational systems, not only relating to the first but also to the second migrant generation (Teuscher & Makarova, 2018). The latter relates to the immigrant paradox, the finding that developmental and achievement outcomes among immigrant students worsen as the time of

their residence in the host country proceeds (Motti-Stefanidi et al., 2012). Therefore, length of stay in the country of residence and migrant generation are important factors to consider when supporting the school adjustment of students with a migration background. As migrant students' development and academic achievement is embedded in their acculturation process, the experience of acculturation becomes crucial in understanding and supporting favourable school outcomes for migrant students (Makarova & Birman, 2015). Given that school outcomes have long-lasting implications for future life opportunities, the question of how school adjustment can be promoted for students with a migration background is of great importance in multicultural societies.

Acculturation Framework

Acculturation describes individual or ethnocultural group changes in behaviour and attitudes under the condition of intercultural contact or a change in cultural context.

Acculturation research describes changes that individuals and/or ethnocultural groups undergo during acculturation and the effects of acculturation on their adjustment to the new environment (Berry, 2006).

Acculturation was first defined in a "Memorandum for the Study of Acculturation" in the journal *American Anthropologist* by social anthropologists: "Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups" (Redfield et al., 1936, p. 149). Since then, research on acculturation has been expanding rapidly in the 21st century and has become prominent in the social sciences in general. While social anthropologists have focused on changes at the group level, psychologists have become interested in how individuals adjust when facing a change in cultural context. Given that migrant students' individual development and academic

achievement is embedded in the process of their acculturation, research on acculturation has won a permanent place in the educational sciences.

In psychology, two traditions of acculturation research in plural societies can generally be differentiated: (a) the social psychological tradition and (b) the tradition of cross-cultural psychology (Ward & Leong, 2006). Social psychological theories aim at analysing relationships between dominant and nondominant ethnocultural and/or migrant groups. Studies originating within this theoretical and empirical framework focus on phenomena such as ethnocentrism, ethnic prejudice, ethnic stereotypes, ethnic attitudes, and discrimination. The central concept in this area is ethnic prejudice, which is usually divided into three components: (a) a cognitive component, which involves ethnic stereotypes about common characteristics of ethnocultural groups; (b) an affective component, which includes attitudes towards ethnocultural groups and their evaluation; and (c) a behavioural component, which is expressed in discriminative actions against ethnocultural group members (Berry et al., 2011). Generally, in examinations of ethnic relations, researchers often look at the dominant group's views of and behaviours towards nondominant ethnocultural groups and fail to examine reciprocal views.

In the tradition of cross-cultural psychology, acculturation research is of great interest. The locus of the acculturation framework distinguishes two levels of contextualization: (a) the cultural level, which includes a broader view of cultural change as a result of intercultural relations with a focus on ethnocultural groups, and (b) the psychological level, which emphasizes changes that groups or individuals of a specific ethnocultural group experience during their acculturation and the effects of their adaptation to the new environment (Berry, 2005). From a theoretical point of view, there are three approaches to the study of acculturation (Makarova, 2008). First, the stress and coping framework is based on known psychological stress models. It assumes that acculturation involves psychological adjustment

after migration and may influence an individual's psychological well-being, life satisfaction, health vulnerability, and psychosomatic complaints. Then, the social learning approach is used to analyse aspects of behaviour under conditions of culture contact. According to the acceptance of cross-cultural differences in behaviour patterns and value systems, the nature of individual or group interaction differs based on culture type. Culture contact can appear as a major and stressful life event that may lead to acculturative stress. Therefore, to manage interaction and communication successfully in a new cultural context, acquiring new skills is essential. Finally, the social identification perspective is based on a social psychological conception of identity and has an individual's self-identification with a cultural group as its focus. It is linked to individual or group-specific acculturation.

Acculturation Construct

Acculturation as a construct subsumes acculturation outcomes, acculturation orientations, and conditions of acculturation. Acculturation outcomes include psychological well-being and sociocultural competencies. Acculturation orientations (also called acculturation attitudes, expectations, or strategies) describe individual or group preferences in relation to the acculturation of migrants and/or ethnic minorities. Acculturation conditions relate to personal characteristics, perceived intergroup relations, and (objective and perceived) characteristics of the receiving society (such as characteristics of the context of school) of the society of origin and of the immigrant group (Arends-Toth & van de Vijver, 2006).

Acculturation Orientations

The operationalization of acculturation orientations relates to directionality and dimensionality. Most commonly, a bidimensional model is used. On a bidimensional scale, it is possible to maintain contact with or avoid the culture of the society of residence and at the same time retain or lose one's involvement in the heritage culture. Through these two

dimensions (cultural maintenance and relationships sought among groups), four acculturation strategies have been identified for migrants and for the national majority (integration/multiculturalism, assimilation/melting pot, separation/segregation, and marginalization/exclusion; Berry, 2005). Bourhis et al. (1997) developed this model into an interactive acculturation model, replacing the contact dimension relationships sought among groups with cultural adoption, and an additional differentiation of individualism as an alternative strategy to marginalization. Other acculturation models have focussed on the concordance of acculturation attitudes among dominant vs. nondominant groups or domain-specific (e.g., social, family, religion) acculturation preferences.

Recently, a multidimensional operationalization of acculturation orientations has been developed and applied in educational research, addressing the issue that in culturally diverse societies not only do migrants adjust to changes in the sociocultural context but the members of the ethnic/national majority also need to adjust to the multicultural school environment (Haenni Hoti et al., 2019; Sidler et al., 2021).

Conditions and Outcomes of Acculturation

Characteristics of the receiving society and the society of origin (e.g., institutions), characteristics of cultural groups and individuals, perceived intergroup relations, and the various contexts in which acculturation takes place (e.g., family, school) are commonly conceptualized as acculturation conditions. Acculturation outcomes relate to psychological and sociocultural adjustment (Arends-Toth & van de Vijver, 2006). For immigrants, psychological adjustment involves individuals' psychological well-being, mental health, and self-esteem. Sociocultural adaptation relates to how immigrants deal with their daily lives in the new environment of their receiving country (e.g., truancy, problematic behaviour, disciplinary infractions). Psychological adjustment can be improved through variables such as personality, life-changing events, and social support. Sociocultural adaptation is enhanced

through cultural knowledge, degree of contact, and positive intergroup attitudes. The integration strategy (i.e., maintenance of heritage culture while adopting specific cultural characteristics of the majority culture) and minimal cultural distance (e.g., in terms of language or religion) between immigrants and the society of residence are conducive to both psychological and sociocultural adaptation (Searle & Ward, 1990).

Contextual Approach in Research on Acculturation

The contextual approach in research on acculturation emphasises that considering the surrounding context is important, as the relationship between acculturation and adjustment is modelled by it (Birman & Simon, 2014). The contextual approach is embedded in the eco-developmental outline of human development (Bronfenbrenner, 2005), stating that the development of adolescents is embedded in their immediate environment. This environment consists of various interacting microsystems, including family, peer group, and school class. These microsystems are again embedded in the wider societal environment, consisting of the macrosystem. Consequently, acculturation of immigrant youth takes place in various microsystems; some of them are more oriented towards the mainstream culture (e.g., school), whereas others preserve the heritage culture (e.g., family context of immigrants). Therefore, not only an immediate context of acculturation but also the interaction between different contexts where acculturation unfolds can influence adjustment outcomes. As shown in a research synthesis, family-related factors can facilitate or hinder school adjustment of immigrant and ethnic minority youth (Makarova et al., 2021). Migrant youths' successful adjustment therefore depends on the conditions in various acculturation contexts and their interplay (Birman, 2011; Makarova et al., 2021).

Acculturation in Educational Research

In the school context, the acculturation process affects not only migrant and native students and teachers but also the whole school, as all actors and the institution itself face

adjustment challenges in a culturally diverse environment (Sidler et al., 2021). The way in which cultural diversity is handled at school plays a crucial role in accommodating migrant and native students, as the acculturation process affects both groups (Celeste et al., 2019; Haim, 2019).

Research focusing on the acculturation process among migrants and ethnic minority youth has shown that those youth face various adjustment challenges that may be multidimensional, dilemmatic, and stressful (Makarova & Birman, 2016). The outcomes of acculturation in the school context can be assessed along three dimensions: a) in terms of students' psychological adjustment to the school environment, such as their well-being and self-esteem; b) in terms of students' sociocultural adjustment, including quality of social relationships with peers and teachers, gain of school-relevant skills and behaviours; as well as c) in terms of students' achievement outcomes and educational aspirations (Makarova & Birman, 2015).

Furthermore, research on acculturation and school adjustment has revealed that the characteristics of school contexts decisively shape migrant students' adjustment, as migrant students need to adjust to a new academic culture, complying with new academic requirements and assessment practices, as well as to a new school culture, including "canteen services, religious rituals, extracurricular activities, dress codes, rule transparency and liability, norms regarding school behaviour," or a multicultural school composition (Makarova & Birman, 2016, p. 6). Migrant students' academic achievement is intertwined with the acculturation process and its outcomes, such as cultural identity development as well as psychological and sociocultural adjustment. It is therefore crucial to understand the complexity of the relationship between migrant students' acculturation and school adjustment. Similarly, Berry et al. (2011) stated,

Schools and other educational settings constitute the main acculturation context for immigrant children and youth. They can be viewed as a miniature society of settlement; schools represent and introduce the new culture to immigrant children. School adjustment can be seen as a primary task, and as a highly important outcome, of the cultural transition process. (p. 326)

Considering this statement, the school context is one of the most important acculturation settings for children and youth (Horenczyk & Tatar, 2012; Makarova et al., 2019; Makarova & Herzog, 2013; Vedder & Horenczyk, 2006).

Conditions of Acculturation in Multicultural Schools

Warikoo and Carter (2009) emphasised the role of school as a cultural actor “with pervasive ideologies, rules, and codes that bolster status hierarchies among social groups” (p. 376), as it transmits and reproduces societal inequalities and hierarchies. Ideally, all students’ needs are identified and addressed at school. However, given migrant students’ achievement gaps, addressing their needs is crucial, as it can facilitate their equal participation in society (Manzoni & Rolfe, 2019).

First, school policies favouring multiculturalism (i.e., valuing cultural diversity and differences) were predictive of smaller belonging and achievement gaps between native and migrant students over time. Colour blindness (i.e., ignoring cultural diversity and differences) and assimilationism (i.e., rejecting cultural diversity and differences) were associated with larger achievement and belonging gaps (Celeste et al., 2019). Implementing equality approaches in schools where students perceive that everyone is being treated equally and fairly were found to improve migrants’ academic outcomes and prevent students from disengaging in the face of discrimination (Baysu et al., 2016).

Second, some school systems are beneficial to school careers as more open systems, as opposed to rigid systems with a high level of differentiation and early tracking, allowing

for more opportunities for migrant students (Baysu et al., 2018). Likewise, a review study on acculturation in the school context showed that not only characteristics of the school system, such as academic tracking, school-based programs to accommodate diversity, and resources to support the adjustment of migrant students, but also educational culture, including specifics of curriculum and pedagogy as well as teaching and learning methods, can support or hinder migrant students' transitional school experience and their adjustment (Makarova & Birman, 2016).

Third, depending on diversity management, organizations and institutions can diminish or strengthen inequalities (Banks, 2016). Moreover, diversity management and the high quality of relationships in schools are crucial to a positive school climate (Wang & Degol, 2016). Additionally, Haenni Hoti et al. (2017) found that students' and teachers' perceptions of diversity approaches were associated with migrant students' school adjustment.

Finally, perceived support from peers and teachers plays an important role in migrant students' school engagement, which has been associated with better psychological and sociocultural adjustment and, as a result, with less truancy and greater academic success (Teuscher & Makarova, 2018). Migrant students experiencing little support from their teachers and peers therefore are at risk of disengaging from school (Göbel & Preusche, 2019). Schools, as societal institutions, and teachers, as diversity managers, can foster more inclusive and more enabling intergroup interactions, policies, and norms (Phalet & Baysu, 2020). In addition, peers are potential socialisation agents, who may help promote cultural belonging and migrant students' positive adjustment at school. Therefore, in the educational context, schools may involve teachers as well as migrant and native students in creating culturally inclusive spaces and practices (Vietze et al., 2019).

Acculturation Orientations and School Adjustment

With respect to the impact of migrant students' various acculturation orientations on school adjustment, findings regarding which acculturation orientation would be most conducive to school adjustment are inconsistent (Makarova & Birman, 2015). Based on an extensive review of the research literature on the acculturation process and its outcomes in the school context, Makarova and Birman (2015) suggested that although a bicultural orientation is generally associated with successful school adjustment among minority students, their assimilation attitudes can also positively impact their academic achievement and psychological well-being. Alternatively, Baysu and Phalet (2019) suggested that a bicultural orientation may either improve or obstruct migrant students' school performance, depending on their experience of stereotypical threats in the school. This means that in low-threat contexts, a bicultural identity can be beneficial; however, it can be costly in high-threat contexts. Therefore, for a bicultural orientation to be beneficial at school, the school context must support it and the variety of migrant cultures.

Makarova and Birman (2016) reported that schools often favour an assimilationist strategy in accommodating cultural diversity, aiming at transforming migrant students into mainstream students, thereby providing little support for a bicultural orientation of migrant youth. This strategy may hinder migrant students' psychological adjustment and their connectedness with their heritage ethnic community. This, in turn, leads to an acculturation dilemma, a situation in which "it is easier to fit into the national educational system if they favour assimilative orientations, but loss of connection with their heritage country may cause psychological distress" (Makarova & Birman, p. 11). In other words, to successfully adjust to a new school environment, migrant students need to overcome not only the experience of cultural dissonance based on discrepancies in school systems and cultures but also the acculturation gap between parental and their own acculturation preferences, ultimately

meaning “that acculturation in the school context of the host country implies adaptation to the mainstream culture at large as well as to the school culture in particular” (Makarova & Birman, p. 12).

Teachers’ Role in Supporting Migrant Students’ Adjustment

Teachers play a pivotal role in migrant students’ acculturation in school, as they can create a school environment in which migrant students’ needs are recognised and addressed. By widening or narrowing the acculturation gap migrant students have to bridge, teachers can positively or negatively affect migrant students’ acculturative stress and hence their psychological adjustment (Makarova et al., 2019). Often, however, teachers do not have the professional knowledge and skills to teach diverse classes (Wubbels, 2010). Teachers’ management of culturally diverse classes can encourage or hinder students’ learning (Weinstein et al., 2003), and their support or lack of it can positively or negatively influence the rate of hidden dropouts, such as truancy and passive behaviour at school.

Additionally, teachers’ acculturation attitudes are related to their diagnostic expertise in social areas and their classroom management. Teachers who encourage migrant students to adapt certain aspects of the mainstream culture while maintaining their heritage culture (i.e., integrative attitudes) are successful in their classroom management and can help migrant students feel integrated in school (Makarova & Herzog, 2013). Moreover, the match and mismatch of acculturation attitudes between teachers and migrant students impact school adjustment. Matching acculturation orientations between teacher and student influences migrant students’ school satisfaction and academic self-concept. Similar attitudes to cultural assimilation and cultural diversity between teacher and migrant student resulted in students being more satisfied at school. However, the matching combination of teachers valuing cultural diversity and the students having a minority orientation also showed that students had a lower academic self-concept and worse adjustment. Therefore, when teachers create

culturally sensitive attitudes and behaviours, the risk of creating a stereotype threat should be addressed (Haenni Hoti et al., 2019). Finally, Van den Bergh et al. (2010) showed that achievement gap sizes across classrooms in relation to migrant students can be explained by teachers' achievement expectations of migrant students and that teachers' prejudices against migrant students have been associated with lower achievement expectations of them.

Summarized findings from empirical research on teachers' effects on ethnic minority students' school adjustment show that teachers can positively or negatively affect migrant students' school adjustment in multiple ways (Makarova et al., 2019). Among teacher-related resources that positively impact ethnic minority students' adjustment in the school context, Makarova et al. (2019) identified the following aspects:

- Teaching practices that were considered a resource for migrant students' school adjustment were culturally sensitive teaching; open, cooperative, interactive learning activities; student-centred teaching, a personal and trusting teacher–student relationship; fewer language barriers; and the creation of opportunities for students to share their experiences. Resource factors were the flexibility to adapt lessons based on the students' needs, taking their needs and experiences into account, and perspective-taking. Additionally, an accommodating learning climate, teachers' continuous learning and self-development, the use of formative assessment in combination with other types of assessment, and teachers valuing as well as allowing all languages to be present in the classroom and even be used for instruction.
- Regarding teachers' attitudes and behaviours, a caring, empathic attitude towards migrant students, valuing difference, seeing diversity as an enrichment, and promoting understanding are considered protective factors. Creating a nurturing learning environment as well as helping students acquire life skills and achieve and celebrate their milestones are also protective factors.

- Concerning teachers' expectations, high expectations for migrant students' achievements and abilities to overcome difficulties as well as teachers' belief that they can make a difference in their students' success are protective factors (p. 17).

Whereas Makarova et al. (2019) found that teachers' attitudes, behaviours, and expectations were just as often a protective factor as they were a risk factor, unfavourable teaching practices have more often been considered a risk factor.

Discussion

The acculturation framework, which emphasises acculturation orientations, conditions, and outcomes, has been applied in educational research on acculturation and adjustment in the school context (Makarova & Birman, 2015, 2016; Makarova et al., 2019) and has been further developed through acculturation research in schools (Haenni Hoti et al., 2019; Sidler et al., 2021). Particularly, acculturation conditions relating to characteristics of the school as a proximal context of migrant students' acculturation and characteristics of teachers as main actors within the school context have an immediate impact on migrant students' school adjustment. In the following paragraphs, we discuss the results of research on migrant youths' acculturation and adjustment in the school context.

Schools are social places and institutional contexts with distinct diversity patterns and norms. Schools where diversity is valued and discussed tend to have students with high well-being, motivation to learn, and self-esteem (Vedder & van Geel, 2012). The characteristics of multicultural schools' educational systems, cultures, teaching and learning environments, curricula, and pedagogy can support or inhibit the adjustment of students with migration backgrounds (Makarova & Birman, 2015, 2016; Makarova et al., 2019). Migrant students often face mainly monocultural curriculum content and assimilative pressures (Makarova & Birman, 2016). Schools' implementation of a "comprehensive, inclusive education policy" (Council of Europe, 2016, p. 7) and effective responses to the needs of both migrant and

native students are crucial for not only migrant students' psychological adjustment but also their educational achievement (Makarova et al., 2019). To address migrant students' needs, schools must evaluate measures to accommodate culturally diverse student populations at various levels: first, educational policies and curricula at the macro level of the educational system; second, means of inclusion at the intermediate level of educational institutions; and third, attitudes, practices, and cultures at the school level (Verhoeven, 2011). Of utmost importance is preventing discrimination and racism within the educational system and institutional practices (Warikoo & Carter, 2009) while promoting positive intercultural relationships. Reducing and preventing racism, social inequalities and injustices is crucial because directly and/or indirectly experiencing these threats has negative effects on migrant students' psychological well-being, academic outcomes, and social integration. Thus, the establishment of social equality and justice in education is central to support migrant students' academic, social, and psychological adjustment (Baysu et al., 2016; Makarova & Birman, 2016).

Teachers can positively or negatively affect migrant students' acculturation by enhancing or reducing acculturative stress and by widening or narrowing the acculturation gap. The way teachers think about and behave towards cultural diversity, migrant students, and their heritage culture has an impact on these students' psychological well-being and academic achievement. Anticipation of assimilative pressure can cause acculturative stress among migrant students and therefore has a negative effect on their psychological adjustment, especially if the students themselves do not have an assimilationist attitude (Makarova et al., 2019). Students suffering from acculturative stress are in danger of receiving low ratings on school-related competencies from teachers. Because teachers' judgements and expectations predict students' future achievements (Jussim et al., 1996), they are crucial when accommodating culturally diverse students in the school context. In contrast,

teaching practices, attitudes, and expectations that embrace cultural diversity and inclusion can improve migrant students' school adjustment (Gagné et al., 2012). However, this effect is context-dependent and relative to students' needs (Makarova et al., 2019). Nurturing and supportive relationships are significant for the school-adjustment process, particularly when not only the students' needs but also their experiences are considered. Certainly, it is a challenge for teachers to meet every student's needs. Therefore, teachers should be appropriately trained in cultural proficiency because cultural consideration has an impact on educational quality. In training, teachers should have opportunities to reflect on, examine, and discuss personal beliefs and attitudes as well as learn about the impacts of their beliefs and attitudes on migrant students' academic achievement. Additionally, they should acquire diversity management skills and learn to create constructive and productive learning environments in culturally diverse classrooms (Makarova et al., 2019).

For migrant students, supportive and appreciative relationships with peers and teachers as well as a sense of belonging to school are conducive to successful school adjustment. There are, however, inconsistent results regarding the most favourable acculturation orientation among migrant youth in relation to positive acculturation outcomes (i.e., their psychological and behavioural adjustment as well as their academic achievement). These inconsistencies can be explained by contextual factors, such as the country of residence's social and economic context, the educational environment, or the socioeconomic backgrounds of students' parents (Makarova & Birman, 2015). Additionally, because individual acculturative outcomes are embedded in the context of intergroup relations, adjustment outcomes may be less dependent on specific acculturation attitudes and more strongly associated with matching students' acculturation attitudes with teachers' (Haenni Hoti et al., 2019). Moreover, different adjustment trajectories of different migrant groups may cause inconsistent results or different operationalisations of acculturation orientations, ethnic

identity, and academic achievement (Makarova & Birman, 2015).

Future Research Directions

In educational research, a life domains perspective proves valuable when studying acculturation; this perspective acknowledges the importance of context in that a given acculturation approach may be beneficial in one context but maladaptive in another (Birman, 2011). Therefore, diverse school contexts should be studied, either nationally or in terms of group-specific diversities (Makarova & Birman, 2016). Further research should focus on how acculturation attitudes and behaviours differ in influencing migrant students' school adjustment (Makarova & Birman, 2015). Most studies in this field focus on the minority or migrant youth's school adjustment. However, particularly in relation to school diversity measures, it is important to consider their effects on native students as well (Celeste et al., 2019). How native students' role could be conducive to migrant students' school adjustment as well as how native students acculturate should also be investigated (Sidler et al., 2021). However, practices that can make native students feel excluded and alienated at school should also be studied (Baysu et al., 2020). Given that teachers are pivotal actors in relation to migrant students' school adjustment, their practices, attitudes towards diversity, and expectations of migrant students should be further studied (Makarova et al., 2019). Further analysis is needed regarding implicit ethnic and racial associations to understand "why and when teachers and other school personnel engage in behaviours that reproduce racial inequality, often in spite of best intentions and commitments to racial equity" (Warikoo et al., 2016, p. 508). More research is also needed to understand the possibilities and limitations of teachers' support in relation to migrant students' school adjustment.

Suggestions for Pedagogical Practice

Based on empirical evidence from research on acculturation in the school context, the following suggestions can be made to support migrant students' school adjustment:

- Improving inclusivity of school culture: Characteristics of the school context, particularly those relating to cultural diversity policies and institutional practices of segregation and discrimination, are pivotal for migrant students' school adjustment (Makarova et al., 2019). Baysu et al. (2020) found that emphasising and communicating fairness and the value of diversity have long-term benefits. Establishing and maintaining a nondiscriminatory and inclusive school culture and healthy intercultural relationships are crucial for migrant students' adjustment (Makarova & Birman, 2015). Also, Makarova and Birman (2016) found that creating a caring, sharing, and trusting community along with facilitating resourceful institutionalised programs support migrant students' psychological adjustment. Institutional rules and routines should therefore be reviewed to vet for marginalising practices (Makarova & Birman, 2015). However, creating antidiscrimination policies at the institutional level does not guarantee their implementation. Therefore, each school must monitor its own practices in addressing cultural diversity and establish means of preventing discrimination and supporting inclusion to nurture a sense of school belonging among all students.
- Implementing inclusive pedagogical practices: Teachers play a pivotal role because they can implement inclusive education policies into their everyday pedagogical practices. Their attitudes, expectations, and teaching approaches can be both risks and resources for migrant students' adjustment, particularly in relation to unfavourable attitudes and actions towards accommodating cultural diversity (Makarova et al., 2019). Teachers should establish supportive classroom climates and appreciative relationships to strengthen students' school engagement and self-concept. Moreover, teachers should be educated about power, privilege, and hegemony to reflect on their own biases and values. Additionally, they should learn about cultural diversity

(Banks, 2016) and migrant students' cultures and communities (Weinstein et al., 2003) and allow for the provision of cultural resources to migrant students at school (Makarova & Birman, 2016). Teachers should employ inclusive instructional design and classroom routines (Makarova & Birman, 2015). Therefore, teacher education institutions should implement competencies in teaching culturally diverse classrooms as transversal and subject-specific competencies.

- **Creating a constructive learning environment:** The literature discussed here highlights two main issues: curriculum content and learning environments for the acquisition of the instructional language. Accordingly, curriculum content should be free from critical, stereotypical, or even negative representations of minorities and migrants. The social power and constructions of race and ethnicity should be critically reflected on because experiencing negative notions of one's ethnic group at school leads students to internalise negative self-perceptions, low self-esteem, and negative perceptions of one's group (Urrieta, 2004). Curriculum content should embrace migrant students' cultural backgrounds and relate to their experiences (Makarova & Birman, 2016).

As insufficient mastery of the instructional language is associated with marginalisation, frustration, stress, depression, and anxiety, acquisition of the instructional language is indispensable for migrant students' successful school adjustment. Although empirical literature provides inconsistent findings regarding the optimal arrangement to acquire the instructional language in the school context, there is empirical evidence that nonsegregated, welcoming, and child-friendly environments with opportunities for intercultural communication and collaboration could enhance learning. Thus, bilingual teachers can support second language learning. It has been suggested that arrangements for language acquisition should be adapted to the

changing needs of students of various ethnocultural groups. For example, segregated classes might prove successful with freshly arrived students; however, the longer students are in school, the more ineffective segregation becomes, and it may even have negative effects on well-being and social integration (Bunar & Juvonen, 2021).

Conclusion

We find the acculturation framework is a useful tool when assessing migrant students' school adjustment. Studying acculturation orientations (i.e., attitudes, expectations, and strategies), conditions, and outcomes in relation to migrant students, their peers, and their teachers aids the identification of risk and protective factors for migrant students' school adjustment. Improving understanding of the latter is crucial, not only as a result of the acculturation process but also in the long term; protective factors serve as the basis of migrant students' inclusion into society. We emphasise the need for a reciprocal view of acculturation and simultaneous consideration of the power relations within a given society and a particular school context. Additionally, it is important to study structural inequalities and the multidimensional understanding of individual development (affective, cognitive, and behavioural) in culturally diverse environments. The impact of intercultural relations and acculturation on individual development should be analysed not only at the macro level of society at large but also at the micro level, that is, in the school and classroom contexts. Schools, in turn, are called on to address the wide range of needs of migrant students, who are a highly diverse group. There is considerable room not only for schools but also for teachers to foster more inclusive and more enabling intergroup interactions, policies, and norms. The regular inconsistency in results concerning the relationships among acculturation, migrant students' school adjustment, and academic achievement suggests that the successful implementation of diversity programs depends on the context and the specific groups these programs address.

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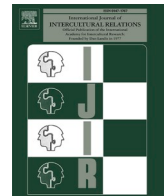
**Assessing attitudes towards mutual acculturation in multicultural schools:
Conceptualization and validation of a four-dimensional mutual acculturation attitudes
scale (Sidler et al., 2021)**



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International Journal of Intercultural Relations

journal homepage: www.elsevier.com/locate/ijintrel

Assessing attitudes towards mutual acculturation in multicultural schools: Conceptualisation and validation of a four-dimensional mutual acculturation attitudes scale

Petra Sidler^{a,*}, Wassilis Kassis^a, Elena Makarova^b, Clarissa Janousch^a

^a Institute for Research and Development, School of Education, University of Applied Sciences and Arts Northwestern Switzerland, Brugg-Windisch, Switzerland

^b Institute for Educational Sciences, University of Basel, Muttensz, Switzerland

ARTICLE INFO

Keywords:

Mutual acculturation
Acculturation attitudes
Mutual intercultural relations
Multicultural schools
Scale validation
Exploratory structural equation modelling

ABSTRACT

Assessment of acculturation attitudes usually has focused on the importance of two dimensions: first, immigrants' maintenance of cultural heritage and, second, immigrants' adoption of the majority culture. Because acculturation is a reciprocal interaction, we extended a bidimensional scale to four dimensions to assess mutual acculturation. Given the importance of the social context for acculturation and schools as a crucial context for immigrant pupils' acculturation, the scale extension was validated within the context of school. We hypothesised that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and towards schools' responsibility to support intercultural contact. The study sample comprised 364 secondary school pupils in Swiss multicultural schools. Using exploratory structural equation modelling, we validated four distinct dimensions of acculturation attitudes: attitudes towards *immigrant pupils'* (a) *heritage culture maintenance* and (b) *adoption of the dominant culture* and attitudes towards (c) *native pupils acquiring cultural knowledge* and (d) *schools enabling intercultural contact*. We conclude that the proposed four-dimensional scale is a valid tool for assessing attitudes towards mutual acculturation within the school context and that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and schools.

Introduction

In 2019, almost 272,000,000 people lived outside of their countries of birth, representing 3.5 % of the world's population ([International Organization for Migration, 2019, p. 2](#)). In turn, this means 96.5 % of the world's population still lived in the countries in which they were born. However, this relation differs from country to country. In Switzerland, where this study took place, 30 % of the 8,606,000 permanent inhabitants (as of December 2019) were born abroad ([Federal Statistical Office \[FSO\], n.d.-a](#)). Crossing borders does not always mean crossing cultures, and crossing cultures does not necessarily involve crossing borders. Nevertheless, most international migrants find themselves facing new cultural contexts, which is usually studied as the process of acculturation. The term "acculturation" traditionally has referred to immigrants' adaptation in a host country where firsthand contact ([Redfield et al., 1936](#)) might lead to behavioural and attitudinal changes. Historically, acculturation has been a diverse field of study, with anthropologists

* Corresponding author at: Bahnhofstrasse 6, 5210, Windisch, Switzerland.
E-mail address: petra.sidler@fhwn.ch (P. Sidler).

<https://doi.org/10.1016/j.ijintrel.2021.08.009>

Received 21 October 2020; Received in revised form 28 June 2021; Accepted 17 August 2021

Available online 28 August 2021

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and sociologists focusing on the group level, that is, on the dynamics involved when people with diverse cultural backgrounds come into continuous contact (Boas, 1948; Burgess & Park, 1933; Redfield et al., 1936). Social psychologists, on the other hand, were focusing on how individuals adapt to a change in cultural context (Rudmin, 2009). In the tradition of cross-cultural psychology, acculturation refers to both individual and/or ethnocultural group changes in behaviour and attitudes under the condition of intercultural contact (Berry, 2003, 2005; Berry et al., 2006).

In the last decade, researchers have addressed criticisms by examining ways to improve acculturation psychology (Berry, 2009; Bhatia & Ram, 2009; Chirkov, 2009a; Cresswell, 2009; Ngo, 2008; Rudmin, 2003; Waldram, 2009; Ward, 2008; Ward & Geeraert, 2016). Traditionally, the adaptation of immigrants to their host societies was the focus of the study of acculturation. However, the interactive nature of the process of acculturation has been implicated as one of the epistemological problems of acculturation research. The responsibility for whether acculturation was successful has been typically predicated on the minority groups' acculturation strategies (Rudmin, 2009; Weinreich, 2009). Nevertheless, if everyone is affected and the process of acculturation is a two-way street, as Berry (2009) noted, then the plausible conclusion would be that successful acculturation is everybody's responsibility.

For acculturation to be everybody's responsibility and for the assessment of mutual acculturation, research is needed in relation to not only newcomers' acculturation but also natives' acculturation. However, to our knowledge, no acculturation (attitudes) scale has considered this two-way interaction by looking at immigrants and natives as agents of acculturation. The aim of this study was to address this gap by proposing a novel method of assessing attitudes towards mutual acculturation: measuring acculturation attitudes towards newcomers and natives from the perspectives of natives and of newcomers, thus focusing on how not only newcomers but also natives and institutions acculturate.

Conceptualisation of acculturation

Given the variety of disciplines from which researchers have worked or are working on acculturation and the inconsistent terminology they have used (Rudmin, 2003), clarifying the terms used in the framework of acculturation is important. Labelling different processes with the same term and not clarifying what each term relates to and how it is defined leads not only to confusing conceptualisations but also to diverse and thus incomparable results. In this article, to conceptualise acculturation, we consider five steps: First, we explore the notion of culture within acculturation by deconstructing the term "acculturation" into the Latin words *ad* and *cultura* (Zick, 2010), meaning "leading to a culture." Second, we conceptualise and differentiate the term "acculturation attitudes" from the four acculturation patterns (Berry et al., 1989). Third, given the importance of the social context in acculturation (Birman & Simon, 2014), in this article, we take a contextual approach to acculturation. Fourth, we introduce mutual acculturation. Fifth, because acculturation attitudes can be measured from both a native's and an immigrant's perspective (Bourhis et al., 1997), we describe the conceptualisation and operationalisation of the category *migration background*. The FSO (n.d.-b) officially uses this category to describe individuals who belong to the first or the second generation of immigrants to account for indirect connections to migration through parents. Following FSO, in 2019, close to 40 % of the permanent resident population had a migration background, of which more than a third had Swiss nationality (n.d.-b).

Acculturation and culture

The question of what is changing, why such change matters to people (Cresswell, 2009), and how people adapt to and/or handle change are the central points in acculturation research. Trying to capture what is changing during acculturation is based on the conceptualisation of culture, which is a difficult concept to define (Kroeber & Kluckhohn, 1952; Olmedo, 1979). Many studies on acculturation have been criticised for ignoring the concept of culture (Bhatia & Ram, 2009; Chirkov, 2009a; Tardif-Williams & Fisher, 2009) although culture is obviously found in the word "acculturation" (Zick, 2010). We conceptualise culture as follows: Culture includes visible artefacts; visible behaviours based on inferred rules or code systems; and fundamental attitudes, beliefs, and values (Rudmin, 2009, p. 109). Additionally, these artefacts, behaviours, and values are not fixed items in time, as cultures are dynamic and always changing (Maclachlan et al., 2004). This conceptualisation of culture as something visible but also fundamental while still being dynamic and always changing helps with the understanding of contextual and historical differences not only in the definition of culture but also in the way this concept is incorporated in acculturation research. It also guided us in adjusting cultural domains in relation to which acculturation takes place. In comparison to *enculturation*, which refers to an individual incorporating cultural elements during socialisation (Weinreich, 2009), here, *acculturation* is conceptualised as the acquisition of another culture, also called "second culture acquisition" when it happens for the first time (Rudmin, 2009).

Acculturation attitudes

In this article, the term "acculturation attitudes" is defined as attitudes in relation to acculturation: Whereas *attitudes* consist of beliefs, feelings, and behavioural tendencies (Vaughan & Hogg, 2005) towards important matters in an individual's, group's, or society's life, *acculturation* relates to how natives and newcomers adapt to a change in cultural context (Rudmin, 2009). This definition allows for the reciprocal assessment of acculturation attitudes, that is, for newcomers to have attitudes about newcomers' acculturation and about natives' acculturation and for natives to have attitudes about natives' acculturation and about newcomers' acculturation. This is in contrast to how acculturation attitudes have been commonly assessed by measuring newcomers' maintenance and adoption of cultural characteristics (e.g., Bourhis et al., 1997) and the subsequent calculation of the four-fold model established by Berry et al. (1989), which leads to four newcomer acculturation patterns (i.e., integration, assimilation, separation/segregation, and

marginalisation). These patterns were variously labelled (Rudmin, 2003), and although some label separation, for example, as “an acculturation orientation” (Schwartz & Zamboanga, 2008), others label it as an “attitude” (Berry et al., 1989). However, in this study, separation is labelled as an “acculturation pattern” that results from the assessment of acculturation attitudes.

The significance of assessing acculturation attitudes (instead of assessing acculturation behaviour) lies in exactly this relation between attitudes and behaviours: Attitudes involve behavioural tendencies (Vaughan & Hogg, 2005), which means that whereas attitudes are not behaviours, attitudes influence behaviours. Thus, in assessing acculturation attitudes, rather than acculturating behaviour being assessed, an aspect of it is assessed.

Acculturation context

Because the relationship between acculturation and adjustment is shaped by the surrounding context (Birman & Simon, 2014), we used a contextual approach to acculturation in this study. For youth with a migration background, the process of acculturation unfolds in different contexts while some of them are “oriented to the host culture, such as the school or workplace, and others to the heritage culture, such as the home” (Salo & Birman, 2015, p. 395). In light of this, the school context is considered one of the most important settings for ongoing and continuous acculturation among children and youth (Berry et al., 2011; Horenczyk & Tatar, 2012; Lebedeva et al., 2013; Makarova, 2019; Suárez-Orozco et al., 2010; Vedder & Horenczyk, 2006). Research on acculturation in the school context has shown that the characteristics of school contexts decisively shape minority pupils’ adjustment because they need to adjust not only to a new academic culture (i.e., academic requirements, assessment practices) but also to a new school culture (Makarova & Birman, 2016). Consequently, the conditions of acculturation in the school context affect youths’ psychological adjustment and achievement-related outcomes (Makarova & Birman, 2015).

Mutual acculturation

The concept of mutual acculturation relates to the mutuality of the process of acculturation. Although immigrants’ adaptation to their host societies has traditionally been the focus of the study of acculturation, research has found that newcomers might acculturate to groups other than the dominant majority and that individuals in the dominant group may learn from newcomers, that is, acculturate to newcomers (Abraído-Lanza et al., 2006). Furthermore, according to Berry (2009),

Mutual accommodation is required for integration to be attained, involving the acceptance by both groups of the right of all groups to live as culturally different peoples. This strategy requires non-dominant groups to adopt the basic values of the larger society, while at the same time the dominant group must be prepared to adapt national institutions (e.g. education, health, and labour) to better meet the needs of all groups now living together in the plural society. (p. 367)

Thus, in addition to immigrants adapting to their host society, the host society has to adapt regarding both its institutions and its citizens, because acculturation is a two-way street (Berry, 2009) and concerns the whole society, not just newcomers (Chirkov, 2009a).

In the school context, the concept of mutual acculturation can be understood in the way that pupils with migration backgrounds, native pupils, and schools adjust to changes in cultural contexts. Both pupils with and without migration backgrounds have to acquire new skills to manage intercultural interaction and communication successfully (Landis et al., 2004; Landis & Bhawuk, 2020). The first new dimension focuses on native pupils and their intercultural learning. Through intercultural learning, individuals acquire intercultural competence, which includes the knowledge and skills needed for appropriate and effective intercultural interaction (Yang, 2017). Intercultural learning is also what migrant pupils or pupils with migration backgrounds experience before they decide whether to adopt specific behaviours, attitudes, or values. Whereas peer interactions often lead to contact with various cultural backgrounds (Miklikowska, 2017), the second new dimension focuses on schools’ agency and responsibility in shaping and providing space for exchanges and contact between pupils who have different cultural backgrounds. Additionally, although schools are cultural contexts, they are also cultural actors with specific codes, rules, and hierarchies (Warikoo & Carter, 2009). To conceptualise schools as actors within the school context, a possible focus of mutual acculturation could be how schools change and adjust to the multiculturalism of their pupils. Another focus, however, could be how schools actively shape the setting of intercultural contact, which may lead to intercultural learning and the adoption of cultural characteristics of both pupils with and without migration backgrounds.

Migration background

Migration refers to an individual changing their usual place of residence, which is where they spend most daily periods of rest (Poulain, 2008). Migration background is used as a statistical category because naturalisations have blurred the boundary between migrants and natives (Horvath, 2019). We use the term “natives” to refer to the dominant majority, and the terms “newcomers” and “individuals with a migration background” to refer to individuals who do not belong to the dominant majority. Analogously to Connell’s (1983) theory on hegemonic masculinity, this perspective accounts for power relations and practices that aim to legitimise the majority’s dominant position in society and justify the subordination of newcomers. The category migration background was employed in this study to differentiate between individuals belonging to the dominant majority and those not belonging to the dominant majority. By doing this, we constructed a category that implicitly constituted a group (Brubaker, 2009).

Due to the rather small sample size, the category migration background was conceptualised dichotomously by combining three single-item indicators: pupil’s country of birth, parents’ countries of birth, and pupil’s nationality. If pupils and their parents were all born in Switzerland and pupils had only Swiss nationality and no other, then they were categorised as not having a migration background, that is, as being a native. Otherwise, if any of these conditions were not true, the pupil was categorised as having a

migration background. Such a classification involves losses of information, as migrants can be diverse regarding migration generation, migrant status, and countries of origin (Nauck & Genoni, 2019). Moreover, such a dichotomous category can be problematic, because respondents might be classified as having migration background though they would say otherwise (Horvath, 2019). Additionally, people who might have experienced acculturation through long-term traveling and stays abroad are not captured. Nevertheless, as this study's aim was not to examine attitudes in relation to mutual acculturation of all possible groups of migrants but to validate the newly constructed four-dimensional scale, a dichotomous category proved useful. Because the four-dimensional scale relates to these two general groups (i.e., adolescents from other countries and Swiss adolescents), testing it with a dichotomous variable for migration background was adequate.

This study

This study examined the psychometric properties of an adapted and extended acculturation attitudes scale used by Makarova (2008) in the Swiss school context, which was founded upon the assessment of acculturation attitudes by Bourhis et al. (1997). It expanded on previous research by extending the focus from measuring only newcomers' acculturation to assessing newcomers', natives', and institutions' acculturation. Thus, the purpose of this study was to test the extension from a bidimensional to a four-dimensional model assessing attitudes towards mutual acculturation. Our hypothesis was that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and towards schools' responsibility to support intercultural contact. The four factors were explored through exploratory structural equation modelling (ESEM). Reliability was assessed via Cronbach's α for all four dimensions in the general, native, and migration background samples. Construct validity was also explored by correlating the two new dimensions with the original assessment. By validating this four-dimensional approach, we showed that for secondary school pupils (whether or not they have migration backgrounds), the acculturation of migrants, natives, and schools is important.

Methods

Participants and procedure

The data used for this study were collected through an online questionnaire via tablets in Swiss multicultural schools in the three German-speaking cantons Aargau, Basel-Stadt, and Solothurn. A pilot study was done with one school class of 25 pupils, who did not participate in the main study. All pupils finished the online questionnaire within 1 h and understood all questions.

The study participants were 375 pupils who started secondary school in August 2019. Empty questionnaires ($n = 11$) were excluded, which left 364 pupils (46 % female, $n = 167$, $M_{\text{age}} = 11.68$ years, $SD = .69$) for data analysis. In each canton, we sampled in the two lowest school levels out of a possible three. Our sampling strategy was based on cantonal statistics, and we focused on schools in cities, towns, and villages with a high percentage of non-Swiss nationals. Of the participating pupils, 53 % ($n = 193$) had Swiss citizenship (56 % of whom had only Swiss citizenship and no other, $n = 109$), and both parents of 33 % ($n = 120$) of the pupils were born in Switzerland. Furthermore, 18 % ($n = 66$) of the pupils had been born abroad, both parents of 41 % ($n = 150$) of the pupils had been born abroad, and one parent of 21 % ($n = 76$) of the pupils had been born abroad.

After contacting the cantonal educational offices, we contacted school directors and then class teachers via email and phone calls. Through the teachers, the parents and pupils were informed and asked for consent. Data collection was instructed and executed by research assistants and took place in the classrooms during official school hours. Pupils' questions were answered by the research assistants, and a protocol was written for each data collection.

Convenience sampling affects the possibility of probabilistic inference (Hansen & Hurwitz, 1953). Thus, this study's sample (46 % female, $n = 167$; 53 % Swiss, $n = 193$), consisting of pupils of the lowest and middle school levels, was compared with official statistics of pupils in the three cantons concerned: canton Aargau (lowest level: 43 % female, $n = 1,988$, and 55 % Swiss, $n = 2,501$; middle and highest levels: 51 % female, $n = 7,772$, and 81 % Swiss, $n = 12,325$), canton Basel-Stadt (lowest level: 41 % female, $n = 422$, and 49 % Swiss, $n = 497$; middle and highest levels: 51 % female, $n = 1,710$, and 70 % Swiss, $n = 2,358$), and canton Solothurn (lowest level: 43 % female, $n = 1,010$, and 57 % Swiss, $n = 1,348$; middle and highest levels: 52 % female, $n = 2,416$, and 82 % Swiss, $n = 3,820$; FSO, 2020a, 2020b). The middle and highest school levels thus showed a higher percentage of females and of Swiss nationals. Concerning gender, the 46 % female pupils in this study's sample was comparable to the cantonal statistics, especially when considering that they combined the middle and highest school levels, whereas in this study, the highest school level was not included. Thus, we believe our study is representative in relation to gender. Concerning nationality, the 53 % of participants in this study having Swiss nationality was similar to the cantonal statistics of the lowest school level, yet this group was underrepresented in the middle and highest levels. However, because we included only the lowest and middle school levels in this study, the numbers resulting from adding the middle and highest school levels could not be fully compared. Nevertheless, this study's sample had a high percentage of pupils who did not have Swiss nationality. However, to test a scale measuring attitudes towards mutual acculturation, having a sample as close as possible to a 50–50 ratio between natives and newcomers is favourable, because the scale should be tested by both subgroups alike.

Given the sample's multicultural composition, questionnaires were prepared in five languages (Arabic, English, French, German, Turkish) following the four-eyes principle, a content translation and, as much as possible, a culturally sensitive approach (Peña, 2007). The vast majority ($n = 349$; 96 %) of the pupils completed the questionnaire in German, 2.7 % ($n = 10$) in English, 0.8 % ($n = 3$) in Turkish, and 0.3 % ($n = 1$) each in French and Arabic. This shows that although it was a multicultural sample (46 % having nationalities other than Swiss, $n = 169$), most pupils chose German to answer the questionnaire.

The Ethics Committee of the University of Zurich assessed the study positively, and the relevant Departments for Education of the

three cantons in north-western Switzerland, were informed. The participating pupils and their parents signed consent forms and were informed that they could refrain from answering any question they did not want to answer and that they could withdraw from the study at any time.

Development of a new scale assessing attitudes towards mutual acculturation

The most common conceptualisation of acculturation in contemporary research is bidimensional. It presumes that retaining or losing one's culture of origin and—simultaneously, but not necessarily in the same way or to the same degree—adopting or avoiding the host society's culture is possible (Berry, 1990). Makarova (2008) adapted such an acculturation attitudes/orientation scale to the context of schools in Switzerland. Given that this study also took place within the Swiss school context, Makarova's scale (2008) served as the basis for our adaptations and extensions. Following the common conceptualisation, Makarova's scale has two dimensions (*culture maintenance* and *culture adoption*), each including five areas of life reflecting the three cultural domains introduced in the previous definition of culture. The first dimension assesses whether it is considered important that foreign children living in Switzerland keep their home countries' (a) traditions and customs, (b) religion, (c) way of life, (d) language, and (e) way of dressing. The second dimension assesses whether it is considered important that foreign children living in Switzerland adopt its (a) traditions and customs, (b) religion, (c) way of life, (d) language, and (e) way of dressing.

General adaptations

Both original dimensions, culture maintenance and culture adoption, were adapted slightly (see Table 1). The culture maintenance dimension can be understood in two ways: first by enabling (one can maintain) and second by demanding (one must maintain). The question of interest is not whether adolescents from other countries have to keep their language, but rather whether native adolescents and adolescents with migration backgrounds believe that adolescents from other countries should be allowed to keep their language if they want to. Thus, we adapted the wording from "keep their language" to "are allowed to keep their language." Then, in the culture adoption dimension, references are not made to Swiss people (i.e., whether the way of life of Swiss people should be adopted), but rather to hegemonic cultures (i.e., whether the dominant way of life in Switzerland should be adopted). Acculturation involves a negotiation of dominance (Zick, 2010), and in referring to hegemonic cultures following the theory on hegemonic masculinity (Carrigan et al., 1985; Connell, 1983), the focus lies on power relations and practices that legitimise natives' dominant position in society (e.g., having a right to vote) and justify the subordination of newcomers (e.g., not having a right to vote). The focus of previous assessments of acculturation on how immigrants should acculturate supported the power relation imposed upon immigrants. However, whether this power relation was between natives and immigrants or between the dominant picture/idea of a native and of an immigrant was indeed questionable. Therefore, we adapted the culture adoption dimension from adopting the way of life of "Swiss people" to "adopting the dominant way of life in Switzerland."

Finally, the answer scale was changed from a five- to a four-point Likert scale to have no extreme answers and no neutral/middle point. The reason for this was that some participants tend to answer with extreme answers (i.e., extreme response style) or tick the neutral/middle point of a Likert scale, even if this response does not reflect their real attitude (Bogner & Landrock, 2015).

Table 1

Operationalisation of the Two Original Dimensions Culture Maintenance and Culture Adoption.

Dimension	Introduction	Dimension	Areas of life	Dominant Majority
Culture maintenance	I find it important for <i>teenagers</i> from other countries who live in Switzerland...	...to be allowed to keep their...	...religion; traditions and customs; language; way of dressing; way of living...	.
Culture adoption		...to adopt <i>a/the dominant</i>in Switzerland.

Note. Adapted from *Akkulturation und kulturelle Identität: eine empirische Studie unter Jugendlichen mit und ohne Migrationshintergrund in der Schweiz* [Acculturation and cultural identity: an empirical study on adolescents with and without a migration background in Switzerland], by Makarova (2008), Haupt. Adaptations in relation to the original scale from Makarova are italicized.

First extension: culturally affected areas of life

Following Berry (2009), in order to identify the areas of life that are important to the relevant groups in contact, initial research needs to be done. No universal acculturation attitudes scale exists, so scales should be adapted for each acculturation arena. On one hand, adaptations are needed in relation to language, for the scale to be understood; on the other hand, they also are needed concerning the important areas of life within the relevant context. Because Makarova's scale (2008) had already been used within the context of schools in Switzerland, the areas of life used there served as the basis for this study. Those areas of life could be categorised according to Rudmin's (2009) definition that culture includes visible artefacts; visible behaviours; and fundamental attitudes, beliefs, and values.

Makarova's (2008) original scale measures visible artefacts by means of way of dressing; visible behaviours by means of language, traditions and customs, and way of life; and fundamental attitudes, beliefs, and values by means of religion. These domains were extended with three visible behaviours/fundamental values: (a) *family culture*, (b) *views on professional careers of women and men*, and

(c) *views on the distribution of household tasks between women and men.* In general, gender roles and societally defined developmental tasks (e.g., career choice) are culturally defined within a given society and its institutions. In Switzerland, adolescents start the occupational decision process in secondary school, and because one's occupational choice is important for successful participation in society, the professional domain becomes more important during these years. However, during adolescence, one's family and home environment play an important role in the occupational choice (Makarova et al., 2016). Cultural meanings "about gender roles have changed in transnational diasporic spaces" (Bhatia & Ram, 2009, p. 143), and the process of immigration creates complex negotiations on gender and family roles (Hondagneu-Sotelo, 1992). To reflect those negotiations, we added the above-mentioned three items to each dimension.

Second extension: additional acculturation dimensions

We developed two additional acculturation dimensions to assess the acculturation of native adolescents and schools as institutions based on the theory of mutual acculturation (Berry, 2009; Chirkov, 2009a) and on the social learning approach (Landis et al., 2004; Landis & Bhawuk, 2020). Thus, the two new dimensions assessed attitudes towards the adaptation of the dominant group on two levels. First, on the individual level, they assessed the adaptation of natives (*acquiring cultural knowledge*; see Table 2) and, second, on the institutional level, they assessed the adaptation of schools (*enabling cultural contact*; see Table 2). Intercultural learning can be defined as obtaining a developed awareness of a subjective cultural context (of others and of one's own) and as increasing one's ability to interact competently across cultural contexts as both an immediate and long-term effect of exchanges (Bennett, 2009). However, because intercultural contact does not necessarily initiate a process of intercultural learning (Paige, 1993), the dimension enabling cultural contact related only to a general exchange, that is, a general intercultural contact, whether or not it led to intercultural learning. The dimension acquiring cultural knowledge, however, implied intercultural learning and thus involved a further step compared to intercultural exchange through enabling cultural contact.

The contextual approach to acculturation most affected the new dimension enabling cultural contact in relation to its wording. Because institutional acculturation needs to refer to either specific institutions or the general institutions of an acculturation arena, we adapted this dimension to the school context. Thus, in the latter context, institutional acculturation was assessed with school as a facilitator of intercultural contact between immigrant and native pupils.

We developed the items of the two new dimensions during the preparation phase of this study (spring and summer 2019). The items' formulation was discussed, and expert opinions were considered. We ascertained the items' comprehensibility through feedback from teachers and the pilot study.

It is important to note here that the four dimensions read the same to all participants, contrary to Makarova's (2008) original scale, where the wording was adapted in relation to whether the respondent belonged to the group in question. To differentiate answers concerning newcomers' acculturation and natives' acculturation in relation to whether the respondent belonged to that group, we used the migration background category.

Table 2

Operationalisation of the Two New Dimensions Acquiring Cultural Knowledge and Enabling Cultural Contact and the Three New Areas of Life.

Dimension	Introduction	Dimension	Areas of Life	Minority
Acquiring cultural knowledge	I find it important that Swiss teenagers living in Switzerland...	...have to get to know the...	...family culture; views on professional careers of women and men; views on the distribution of household tasks between women and men...	...of teenagers from other countries living in Switzerland.
Enabling cultural contact	I find it important that Swiss schools give the possibilities...	...for teenagers from other countries and Swiss teenagers to exchange about...		.

Note. The three new areas of life were added to the five areas of life of Makarova (2008), and thus all eight areas of life were applied to each of the four dimensions. The third area of life, gendered views on household tasks, has been excluded from further analysis due to high correlations to the other two newly added areas of life.

Measures

Attitudes towards mutual acculturation were assessed through four dimensions, each consisting of eight items: The two dimensions culture maintenance and culture adoption were used to assess attitudes towards newcomers' acculturation, and the two dimensions acquiring cultural knowledge and enabling cultural contact were used to assess attitudes towards natives' and institutions' acculturation. Each dimension consisted of eight items: Five items were adopted from the scale used by Makarova's (2008)—traditions and customs, religion, way of life, language, and way of dressing—and three items related to the extension of the culturally affected areas of life, namely family culture, gendered views on professional careers, and gendered views on the distribution of household tasks. Thus, the assessment of attitudes towards mutual acculturation consisted of 32 items.

To measure traditional acculturation attitudes assessing attitudes only towards immigrants, Makarova's (2008) original scale was operationalised by using only the five original areas of life (traditions and customs, religion, way of life, language, and way of dressing) of the two dimensions culture maintenance and culture adoption.

The category migration background was operationalised dichotomously by combining four single-item indicators: pupil's country of birth, parents' countries of birth, and pupil's nationality. If a pupil and their parents were all born in Switzerland and the pupil had

only Swiss nationality and no other, then this pupil was categorised as not having a migration background, that is, as being a native. Otherwise, if any of the aforementioned conditions were not true, the pupil was categorised as having a migration background.

Validation strategy and statistical analysis

The validation strategy consisted of a preanalysis followed by three statistical analyses. These stages were nested, and the results of each step shaped the analysis of the subsequent step. In the preanalysis, descriptive statistics were presented, and the correlations of the eight areas of life within each of the four dimensions were explored to make sure the extension of the original five areas of life to the eight new items actually benefitted the assessment.

First step: assessing factorial structure with exploratory structural equation modelling

The scale's dimensionality was assessed using ESEM in MPlus (Version 8.3; Muthén & Muthén, 2017). ESEM, in comparison to a confirmatory factor analysis (CFA), allows all observed variables to load freely on all latent variables, similarly to an exploratory factor analysis (EFA). However, unlike in EFA, residual correlations and regressions among factors are accessible in ESEM. Asparouhov and Muthén (2009) have shown that ESEM is a combination of CFA and EFA, enhancing a CFA with the exploration of an EFA. Additionally, the main advantage ESEM has over EFA is that ESEM integrates the benefits of structural equation modelling, such as goodness-of-fit indices, and has the ability to combine regression and structural equations within the same model (Marsh et al., 2014). A geomin solution, as recommended by Marsh et al. (2009), was used in all ESEM analyses. Through ESEM, standardised factor loadings were tested to analyse factorial validity, using robust maximum likelihood estimation with robust standard error procedures. Model-fit precision was examined using a combination of the comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardised root mean square residual (SRMR; Barrett, 2007). CFI and TLI values of .95 or greater indicate an excellent model fit, whereas values of .90–.94 suggest an adequate fit (Kline, 2015). RMSEA and SRMR values of .05 or less are considered indicative of an excellent fit, whereas values of .06 to .08 suggest an adequate model fit (Kline, 2015). The ESEM procedure was run for three-, four-, and five-factor solutions, as we expected a four-factor solution to fit the data best.

Second analysis: assessing internal consistency

To test for reliability, the internal consistency of each of the four extended dimensions (each consisting of seven items) was measured by means of Cronbach's α for three samples: general, native, and migration background samples. Eigenvalues were assessed only regarding the general sample due to the native group's low sample size. Then the internal consistency of Makarova's (2008) original scale consisting of five items each was assessed for the general sample to compare it to the extension. Additionally, item-total correlations were calculated to obtain information about the items' discrimination power.

Third analysis: assessing construct validity

Convergent validity "reflects the extent to which two measures capture a common construct" (Carlson & Herdman, 2012, p. 18), and recommendations for validity values differ within the literature. In order not to measure the same factor, the convergent validity should be neither too high nor too low when assessing a common construct (Campbell & Fiske, 1959). Thus, convergent validities between $r = .40$ and $r = .60$ are desired. We assessed convergent validity through concurrent validity. If acculturation is a mutual process consisting of immigrants' and of natives' acculturation, as we proposed, then the two new dimensions acquiring cultural knowledge and enabling cultural contact should be related to the original dimensions culture maintenance and culture adoption used by Makarova (2008). Thus, we used the latter two to show concurrent validity, comparing the new scale with the existing scale (of the same nature). The relation between the two original dimensions culture maintenance and culture adoption was assessed first to compare it to the association between the two new dimensions and the two original dimensions. All correlations were assessed for the three samples: general, only native, and only migration background. The interaction term showed whether being in the native or the migration background group influenced the relation between the two dimensions assessed.

Results

Preanalysis

As a preanalysis, we explored the descriptive statistics of and correlations between the eight areas of life within each of the four dimensions. The descriptive statistics are presented in Table 3.

Then we analysed the extension from five to eight areas of life in each dimension. In the new dimension acquiring cultural knowledge, high correlations between the three new areas of life ($r = .71, p \leq .01$ between family cultures and ways of distributing household tasks, and $r = .69, p \leq .01$ between the two gender role items) were found. This suggested that a remarkably similar construct was measured. The item gendered views on the distribution of household tasks was excluded from further analysis, because it showed the highest correlations to the other two items. This led to having only one item on gender roles (gendered views on professional careers) and one item on the situation at home (family culture). Given the previously described reduction of the extended areas of life from three to two, seven items were tested per dimension, for 28 items. For further analysis, only one missing item per dimension was allowed.

Table 3
Descriptive Statistics.

Variable	Culture maintenance	Culture adoption	Acquiring cultural knowledge	Enabling cultural contact
<i>n</i> =	345	319	338	340
Missing	19	45	26	24
<i>M</i>	3.42	2.45	2.96	3.15
<i>Mdn</i>	3.57	2.43	3.00	3.14
<i>SD</i>	.59	.84	.78	.74
Gender				
Female	161	151	155	160
Male	178	163	176	173
Country of birth				
Switzerland	284	260	275	279
Abroad	61	59	62	60
Pupil's nationality				
Swiss (+ other)	184	174	180	181
Other	160	145	156	157
Country of birth parents				
Both parents born in Switzerland	113	108	111	113
One parent born abroad	74	70	73	73
Both parents born abroad	142	127	137	137
Mother's nationality				
Only Swiss	110	106	108	109
Swiss + other	43	36	41	41
Other	184	172	181	183
Father's nationality				
Only Swiss	117	113	114	116
Swiss + other	41	36	40	39
Other	178	164	175	177

First analysis: testing for factorial validity with exploratory structural equation modelling

Factorial structure was assessed using ESEM in Mplus (Version 8.3; Muthén & Muthén, 2017). Model fit is shown in Table 4 and the resulting factorial loadings of the 28 items (*n* = 359) are displayed in Table 5. Cross-loadings are shown when greater than or equal to .30.

The three- and four-factor solutions did not exhibit cross-loading items, but the three-factor solution showed a remarkable variation in factor loading strength for the third factor (around .30–.40 for culture maintenance and around .70–.80 for enabling cultural contact). The four-factor solution, however, showed less variation within the factor loadings of each factor. Additionally, it displayed the exact four factors that theoretically were expected to appear (1 = culture maintenance, 2 = culture adoption, 3 = acquiring cultural knowledge, and 4 = enabling cultural contact). The five-factor solution showed the same four factors with similar factor loadings as the four-factor solution yet two low cross-loadings. The fifth factor thus consisted of only two cross-loadings and no main factor loading.

The improvement of the factor loadings on the four-factor solution in comparison to the three- and five-factor solutions was confirmed by the model fit indices (see Table 4). The model fit of the three-factor solution was lower in comparison to the four- and five-factor solutions. When comparing the four- and five-factor solution, a better fit for the four-factor solution by the lower RMSEA value and higher CFI and TLI values was identified. This indicates a fit enhancement to the four theoretically suggested factors: (a) culture maintenance, (b) culture adoption, (c) acquiring cultural knowledge, and (d) enabling cultural contact.

The correlations between these four extracted factors (*n*_{total items} = 28) were low to moderate (see Table 6). The highest correlation between the four factors was moderate, *r* = .59, *p* ≤ .01, and implied the expected connection between the four factors, but no high overlap was detected.

Table 4
Model Fit for the Tested Exploratory Structural Equation Models With a Three-, Four-, and Five-Factor Solution.

Factor	Items	χ^2	<i>p</i>	<i>N</i>	<i>df</i>	CFI	TLI	RMSEA	SRMR
3	28	813.042*	< .001	359	297	.875	.841	.070	.061
4	28	467.590*	< .001	359	272	.953	.934	.045	.030
5	28	451.035*	< .001	359	248	.951	.925	.048	.026

Note. CFI = comparative fit index; TLI = Tucker–Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardised root mean square residual.

Table 5
Factor Loadings of the Performed Exploratory Structural Equation Model Procedure With All 28 Items.

Factor solution	Three-factor solution			Four-factor solution				Five-factor solution				
	1	2	3	1	2	3	4	1	2	3	4	5
Factors												
KEEP1			.45	.56				.57				
KEEP2			.39	.72				.74				
KEEP3			.30	.67				.67				
KEEP4			.35	.59				.59				
KEEP5			.38	.66				.65				
KEEP6			.35	.64				.64				
KEEP7		.35		.54				.54				
ADOPT1	.83				.83				.84			
ADOPT2	.75				.74				.76			
ADOPT3	.81				.82				.82			
ADOPT4	.64				.65				.65			
ADOPT5	.85				.84				.85			
ADOPT6	.84				.83				.84			
ADOPT7	.64				.67				.66			
KNOW1		.81				.77					.78	
KNOW2		.75				.73					.74	
KNOW3		.82				.80					.82	
KNOW4		.63				.60					.64	
KNOW5		.82				.78					.71	.33
KNOW6		.74				.74					.76	
KNOW7		.83				.80					.81	
EXCH1			.90				.89					.87
EXCH2			.77				.74					.71
EXCH3			.81				.81					.77
EXCH4			.84				.80					.79
EXCH5			.70				.64					.77
EXCH6			.75				.71					.75
EXCH7			.77				.68					.67

Note. The four dimensions are referred to as follows: KEEP = culture maintenance; ADOPT = culture adoption; KNOW = acquiring cultural knowledge; and EXCH = enabling cultural contact. Numbers 1–7 refer to the seven areas of life: 1 = traditions and customs; 2 = religion; 3 = way of life; 4 = language; 5 = way of dressing; 6 = family culture; 7 = gendered views on professional careers.

Table 6
Intercorrelations Between the Four Extracted Factors of 28 Items (7 Items Per Dimension).

Factor	Culture maintenance	Culture adoption	Acquiring cultural knowledge	Enabling cultural contact
Culture maintenance	1			
Culture adoption	-.04	1		
Acquiring cultural knowledge	.46**	.20**	1	
Enabling cultural contact	.51**	.03	.59**	1

** $p \leq .01$.

Second analysis: testing for reliability

Internal consistency was tested with Cronbach’s α . Additionally, item-total correlations were calculated to obtain information about the items’ discrimination power (see Table 7).

Internal consistency for the extended dimension culture maintenance (see Table 7) was good, with $\alpha = .84$ for the general sample ($n = 325$), $\alpha = .82$ for natives ($n = 84$), and $\alpha = .85$ for pupils having migration backgrounds ($n = 239$). The item-total correlation test also displayed high coefficients of $r_{it} \geq .46$ in all samples (lowest item-total correlation was for careers in all three samples; highest was for religion in the general and migration background samples and for clothing in the native sample). Eigenvalues confirmed the dimensionality of this scale found by ESEM and displayed just one factor ($\lambda_{\text{general sample}} = 3.65$, explained variance = 52 %).

Internal consistency for the extended dimension culture adoption (see Table 7) was excellent, with $\alpha = .91$ for the general sample ($n = 306$), $\alpha = .89$ for natives ($n = 79$), and $\alpha = .92$ for pupils having migration backgrounds ($n = 224$). The item-total correlation test also displayed high coefficients of $r_{it} \geq .43$ in all samples (lowest item-total correlation was for language in all three samples; highest was for family culture in all three samples). Eigenvalues confirmed the dimensionality of this scale found by ESEM and displayed just one factor ($\lambda_{\text{general sample}} = 4.65$, explained variance = 66%).

Internal consistency for the new dimension acquiring cultural knowledge (see Table 7) was excellent, with $\alpha = .92$ for all three samples: for the general sample ($n = 320$), for natives ($n = 81$), and for pupils having migration backgrounds ($n = 235$). The item-total correlation test also displayed high coefficients of $r_{it} \geq .65$ in all samples (lowest item-total correlation was for language in the general and migration background samples and for religion in the native sample; highest was for traditions and customs in the general and migration background samples and for traditions and customs plus careers in the native sample). Eigenvalues confirmed the

Table 7
Internal Consistency of the Extended Four Dimensions, General Sample.

Dimension	α	Item	Item total correlation
Culture maintenance	.84 ($n = 325$)	Traditions and customs	.53
		Religion	.68
		Way of life	.64
		Language	.59
		Way of dressing	.66
		Family culture	.59
		Gendered views on careers	.51
Culture adoption	.91 ($n = 306$)	Traditions and customs	.79
		Religion	.73
		Way of life	.79
		Language	.60
		Way of dressing	.80
		Family culture	.81
		Gendered views on careers	.65
Acquiring cultural knowledge	.92 ($n = 320$)	Traditions and customs	.82
		Religion	.74
		Way of life	.80
		Language	.66
		Way of dressing	.69
		Family culture	.73
		Gendered views on careers	.78
Enabling cultural contact	.92 ($n = 335$)	Traditions and customs	.81
		Religion	.76
		Way of life	.76
		Language	.76
		Way of dressing	.70
		Family culture	.75
		Gendered views on careers	.74

dimensionality of this scale found by ESEM and displayed just one factor ($\lambda_{\text{general sample}} = 4.71$, explained variance = 67%).

Internal consistency of the new dimension enabling cultural contact (see Table 7) was excellent, with $\alpha = .92$ for the general sample ($n = 335$), $\alpha = .93$ for natives ($n = 87$), and $\alpha = .92$ for pupils having migration backgrounds ($n = 244$). The item-total correlation test also displayed high coefficients of $r_{it} \geq .67$ in all samples (lowest item-total correlation was for way of dressing in the general and migration background samples and for careers in the native sample; highest was for traditions and customs in the general and migration background samples and for family culture in the native sample). Eigenvalues confirmed the dimensionality of this scale found by ESEM and displayed just one factor ($\lambda_{\text{general sample}} = 4.75$, explained variance = 68%).

Internal consistency of Makarova's (2008) original culture maintenance dimension (see Table 8) was good, with $\alpha = .82$ for the general sample. The item-total correlation test also displayed a high coefficient of $r_{it} \geq .56$ (lowest item-total correlation was for traditions and customs; highest was for religion). The original culture adoption dimension (see Table 8) showed good internal consistency, $\alpha = .88$. The item-total correlation test also displayed a high coefficient of $r_{it} \geq .57$ (lowest item-total correlation was for language; highest was for way of dressing).

Table 8
Internal Consistency of the Original Two Dimensions by Makarova (2008), General Sample.

Dimension	α	Item	Item total correlation
Culture maintenance (Makarova, 2008)	.82 ($n = 330$)	Traditions and customs	.56
		Religion	.68
		Way of life	.62
		Language	.60
		Way of dressing	.63
		Traditions and customs	.77
Culture adoption (Makarova, 2008)	.88 ($n = 313$)	Religion	.70
		Way of life	.75
		Language	.57
		Way of dressing	.79

Note. Original version adapted from: *Akkulturation und kulturelle Identität: eine empirische Studie unter Jugendlichen mit und ohne Migrationshintergrund in der Schweiz* [Acculturation and cultural identity: an empirical study on adolescents with and without a migration background in Switzerland], by Makarova (2008), Haupt.

Third analysis: testing for construct validity

To test construct validity, the two new dimensions acquiring cultural knowledge and enabling cultural contact and the two extended dimensions culture maintenance and culture adoption were correlated to the two original dimensions from Makarova (2008) for concurrent validity (see Table 9).

The two original dimensions culture maintenance and culture adoption showed a highly significant, negative, and medium correlation only in the native sample and a highly significant yet rather low interaction term. For the general and migration background samples, the two dimensions were not related. For the native sample, though, the two original dimensions were negatively correlated, which means that for natives, the more they agreed with one dimension, the less they agreed with the other. The low interaction term meant that it did make a difference whether someone was in the native or migration background sample.

Correlations between the new dimension acquiring cultural knowledge and the original dimension culture maintenance were highly significant, positive, and medium in all three samples, yet the interaction term was not significant. This means that in all three samples, the more participants agreed with one dimension, the more they agreed with the other, too. Correlations between the new dimension acquiring cultural knowledge and the original dimension culture adoption were highly significant and positive yet not terribly strong for the general and the migration background sample, and the interaction term was not significant. This means that in the general and migration background samples, the more participants agreed with one dimension, the more they tended to agree with the other, too. Because the interaction term was not significant in either of these correlations, no differentiation between the native and migration background samples made sense.

Correlations between the new dimension enabling cultural contact and the original dimension culture maintenance were highly significant, positive, and medium in all three samples, yet the interaction term was not significant. This means that in all three samples, the more participants agreed with one dimension, the more they agreed with the other, too. Correlations between the new dimension enabling cultural contact and the original dimension culture adoption were deeply significant and negative yet not particularly strong for the native sample. For the migration background sample, the correlations were significant, positive, and decidedly low, yet the interaction term was highly significant, positive, and rather low. This means that in the native sample, the more participants agreed with one dimension, the less they agreed with the other. In the migration background sample, on the other hand, the more they agreed with one dimension, the more they tended to agree with the other, too. Because the interaction term was highly significant only in the correlation between enabling cultural contact and culture adoption, this meant that only there did it make a difference whether

Table 9

Concurrent Validity Assessed via Correlations Between the Original Two Dimensions Culture Maintenance and Culture Adoption by Makarova (2008) and the Two New Dimensions Acquiring Cultural Knowledge and Enabling Cultural Contact.

Correlated dimensions	Sample	<i>r</i>	<i>n</i>
Culture maintenance ↔ culture adoption	General	-.04	316
	Only natives	-.49**	83
	Only migration background	.09	230
	Interaction term	.24**	313
Acquiring cultural knowledge ↔ culture maintenance	General	.46**	330
	Only natives	.30**	85
	Only migration background	.52**	242
	Interaction term	.10	327
Acquiring cultural knowledge ↔ culture adoption	General	.20**	313
	Only natives	.09	82
	Only migration background	.22**	228
	Interaction term	.09	310
Enabling cultural contact ↔ culture maintenance	General	.51**	332
	Only natives	.62**	86
	Only migration background	.48**	243
	Interaction term	-.06	329
Enabling cultural contact ↔ culture adoption	General	.03	316
	Only natives	-.32**	83
	Only migration background	.14*	230
	Interaction term	.21**	313
acquiring cultural knowledge ↔ enabling cultural contact	General	.59**	332
	Only natives	.57**	86
	Only migration background	.61**	242
	Interaction term	-.01	328

Note. First, correlations between the two original dimensions culture maintenance and culture adoption are shown, each consisting of five items. Then, correlations between the new dimension acquiring cultural knowledge (consisting of seven items) and the two original dimensions are shown. Afterwards, the correlations between the original two dimensions and the new dimension enabling cultural contact are presented. Finally, the relation between the two new dimensions is shown. Assessment adapted from *Akkulturation und kulturelle Identität: eine empirische Studie unter Jugendlichen mit und ohne Migrationshintergrund in der Schweiz* [Acculturation and cultural identity: an empirical study on adolescents with and without a migration background in Switzerland], by Makarova (2008), Haupt.

* $p \leq .05$.

** $p \leq .01$.

someone belonged to the native or migration background sample.

The two new dimensions acquiring cultural knowledge and enabling cultural contact showed a highly significant, positive, and medium to strong correlation in all three samples and no significant interaction term. This meant that the two new dimensions were correlated, yet it did not matter whether someone belonged to the native or migration background sample.

Summary

The ESEM results suggested the four-factor solution (culture maintenance, culture adoption, acquiring cultural knowledge, and enabling cultural contact) fit the model best, as was theoretically expected. Reliability for all four dimensions showed good to excellent internal consistency. Intercorrelations between the four factors extracted by ESEM showed the expected relation between the four factors but detected no large overlap. Construct validity was assessed via concurrent validity by putting the two new dimensions (acquiring cultural knowledge and enabling cultural contact) in relation to the two previously existing dimensions (culture maintenance and culture adoption). Whereas acquiring cultural knowledge and enabling cultural contact showed concurrent and thus convergent validity with culture maintenance, they did not show a similar connection to culture adoption. This can be explained by the special role the dimension culture adoption seemed to play in relation to all three other dimensions through the interaction term, which meant that depending on whether someone belonged to the native or migration background group, the dimension culture adoption was rated differently.

Discussion

Traditionally, the adaptation of newcomers to their host society has been the focus of the study of acculturation. However, taking this view means assuming that the process of acculturation does not affect the host society and that “working out how to live with and between two [or more] cultures” (Berry, 2009, p. 368) happens only to newcomers and neither to the dominant majority nor to national institutions. This involves identifying society as a natural entity, somehow outside and unaffected by individuals and/or groups experiencing a change in cultural context. The notion of methodological nationalism—that is, the criticised “assumption that the nation/state/society is the natural social and political form of the modern world” (Wimmer & Glick Schiller, 2002, p. 302)—is a reminder that society is a social construct and not a naturally given system. Thus, a change in its composition (members, permanent inhabitants, and newcomers) is not without consequence. Indeed, it has been stated that acculturation concerns the whole society and not just newcomers (Chirkov, 2009a) and that “acculturation is a two-way interaction” (Berry, 2009, p. 365). Such theoretical insights points towards acculturation as a phenomenon concerning the whole society; thus, successful acculturation would be everybody’s responsibility. In order for acculturation to be everybody’s responsibility, differentiating between what natives and immigrants think about immigrants’ acculturation is insufficient (e.g., Bourhis et al., 1997). A mutual acculturation process would be less about whom we are asking and more about who is at stake. This means that not only immigrants but also natives change and go through a process of adaptation. If one wonders whether immigrants should keep or adopt specific cultural characteristics, then mutual acculturation means that one also wonders how natives should acculturate.

The aim of this study was to develop a scale to assess attitudes towards mutual acculturation, because, to our knowledge, no such scale exists. Makarova’s (2008) bidimensional scale, which was based on the framework of Bourhis et al. (1997) and was used to assess acculturation attitudes towards immigrant pupils within the school context in Switzerland, served as a starting point for this study. We extended the culturally relevant areas of life and added two new dimensions, such that attitudes were assessed towards not only immigrants’ but also natives’ and institutions’ acculturation. To validate this four-dimensional scale, we explored factor loadings, reliability, and construct validity. The empirical results suggest that, in this study, attitudes towards mutual acculturation were successfully assessed within the school context in relation to four dimensions: (a) culture maintenance of adolescents from other countries, (b) culture adoption of adolescents from other countries, (c) native adolescents acquiring cultural knowledge, and (d) schools enabling cultural contact.

The assessment of four dimensions instead of the original two dimensions not only makes sense in relation to the results presented, but also fills a conceptual gap within acculturation research (Berry, 2009; Rudmin, 2009; Weinreich, 2009). The more people are migrating and traveling the world, the more not only migrants but also permanent inhabitants and political entities all over the world are interacting with cultural diversity. To account for the variety of ways and contexts in which acculturation can be perceived and experienced and to account for all the different agents of acculturation (including not only real people and groups but also political and social institutions), a more holistic approach is needed (Abraído-Lanza et al., 2006). This implies that mutual acculturation should be taken into account to assess acculturation attitudes (Berry, 2009; Chirkov, 2009a). The two new dimensions acquiring cultural knowledge, which implies intercultural learning, and enabling cultural contact, which does not, may not be the only two ways of assessing natives’ and institutions’ acculturation. Nevertheless, the empirical results in this study suggest that these four dimensions are a valid model for assessing attitudes towards mutual acculturation in the school context.

The way acculturation previously was researched seemed unsatisfactory, because it did “not meet the complexity of this phenomenon and [did] not bring useful and practical results to immigrants’ communities” (Chirkov, 2009b, p. 177). Following theoretical insights, however, measuring acculturation attitudes towards newcomers alone tells only half of the story (Chirkov, 2009a). In extending the bidimensional assessment of acculturation attitudes, a more holistic approach was achieved that more precisely meets the complexity of the process of acculturation by assessing attitudes towards the acculturation of newcomers, natives, and institutions (Berry, 2009; Chirkov, 2009b). By adjusting the focus of acculturation research away from focusing mainly on the adaptation of newcomers towards the adaptation of newcomers, natives, and institutions, further research should be able to bring more useful and

practical results not only to immigrants' communities but also to natives and institutions dealing with cultural diversity.

Limitations

There are limitations to this study. The extended four-dimensional scale for assessing attitudes towards mutual acculturation was developed and empirically validated for adolescents within the school context in Switzerland. To apply it in another context (nationally, culturally, and/or institutionally), adaptations in relation to language, participants, and the culturally affected areas of life should be made (Berry, 2009). Whereas the contextual approach to acculturation limits the generalisation of results, it also is a strength because it takes seriously the proven impact of the context on acculturation.

Furthermore, the two original dimensions culture maintenance and culture adoption were included in this framework without questioning whether these two dimensions are still appropriate for assessing attitudes towards newcomers' acculturation (Chirkov, 2009a). Nevertheless, to assess attitudes towards mutual acculturation, the aim of this study was to add attitudes towards natives' and institutions' acculturation to the original framework by expanding the original framework, not by enhancing it.

Finally, although construct validity consists of concurrent and discriminant validity, only concurrent validity could be assessed, because no measure for discriminant validity was applied. Concurrent validity tests whether two constructs that should be related are actually so, that is, whether they converge at the same construct, and herein, we showed that the extension and the original scale correlate as expected (high enough to relate to the same construct but not too high, because they measure different dimensions). Nevertheless, we argue that in the future, we should assess discriminant validity, too, even though concurrent validity confirmed the proposed scale's construct validity. Similarly, we could not assess criteria validity, but another study should do so.

Conclusion

To meet the complexity of the phenomenon of acculturation better (Berry, 2009; Bhatia & Ram, 2009; Chirkov, 2009a; Cresswell, 2009; Ngo, 2008; Rudmin, 2003; Waldram, 2009; Ward, 2008; Ward & Geeraert, 2016), the aim of this study was to fill the gap on assessing acculturation attitudes held towards natives and institutions. We tested the validity and reliability of this novel assessment within the context of multicultural schools in Switzerland. Data from 364 pupils in Swiss secondary schools were analysed. Factorial validity was tested with ESEM, reliability was tested with internal consistency (Cronbach's α), and the dimensionality of the scales was tested with correlational analyses between the four extracted factors. Finally, concurrent validity was tested for construct validity. The analysis showed that we succeeded in extending the bidimensional approach focusing on attitudes towards adolescents from other countries (culture maintenance and culture adoption) to a four-dimensional approach including attitudes towards native adolescents acquiring cultural knowledge and schools enabling cultural contact. Thus, the four-dimensional scale is a valid tool for assessing attitudes towards mutual acculturation within the context of Swiss schools.

Future research could investigate the various patterns emerging when using a four-dimensional approach to assess attitudes towards mutual acculturation and their effects on acculturation outcomes in the school context (e.g., psychological adjustments and school outcomes). Such studies could offer insights for school directives on how to manage intercultural contact actively in the context of schools, acknowledging schools' field of action in enabling cultural contact. Additionally, further studies combining acculturation attitudes and acculturation outcomes could offer insights for school directives and teachers on how to best support pupils with and without migration backgrounds so they succeed in school.

Thus, the analysed data and the identification of patterns of attitudes towards mutual acculturation and their relationships towards school adjustment and school outcomes may be useful as an empirical basis on which teachers and school directives can particularly support both pupils with and without migration backgrounds in easing their school adjustments and promoting intercultural learning.

Funding

The Swiss National Science Foundation (SNSF) funded this study through the National Centre of Competence in Research (NCCR) - on the move via the project *Overcoming Inequalities with Education* awarded to Prof. Dr. Wassilis Kassis (Grant: 51NF40-182897). The University of Applied Sciences and Arts Northwestern Switzerland (FHNW) generously supported this study. Neither funders had roles in the study design, data collection, data analysis, or drafting the manuscript.

Informed consent

Participant's legal guardian or next of kin provided written informed consent to participate in the study. Additionally, informed consent was obtained from the adolescents themselves.

Declaration of Competing Interest

The authors report no conflict of interest.

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Testing Concurrent Validity and Group-Differences of a Four-dimensional Assessment of Attitudes toward Mutual Acculturation (Sidler, 2022a)

Testing Concurrent Validity and Group-Differences of a Four-dimensional Assessment of Attitudes Toward Mutual Acculturation

Petra Sidler¹²³

¹Institute for Research and Development, School of Education,
University of Applied Sciences and Arts Northwestern Switzerland,
Brugg-Windisch, Switzerland

²NCCR–On the move, University of Neuchâtel, Switzerland

³Culture, Society, and Behavior Lab, Department of Psychology,
University of Oslo, Norway

Author Note

The Swiss National Science Foundation (SNFS) funded this study through the National Centre of Competence in Research (NCCR) – on the move via the project *Overcoming Inequalities with Education – School Resilience* awarded to Prof. Dr. Wassilis Kassis (grant number 51NF40-182897). The University of Applied Sciences and Arts Northwestern Switzerland (FHNW) generously supported this study. Neither funder had roles in the study design, data collection, data analysis, or drafting the manuscript. I am grateful to all participating schools, teachers, students, and parents. Also, I thank all research assistants who supported the data collection. I declare no competing interests.

Correspondence concerning this article should be addressed to Petra Sidler, Bahnhofstrasse 6, 5210 Windisch, Switzerland. Email: petra.sidler@fhnw.ch; Phone: +41 56 202 84 06

Petra Sidler  <https://orcid.org/0000-0003-0243-6337>

Abstract

Acculturation attitudes commonly focus on minority and majority attitudes toward minority acculturation. However, because acculturation is a mutual process, not only are members of minority or migrant groups expected to experience acculturation, but members of the majority also are. In this study, I assessed the attitudes of 375 minority and majority students ($M_{age} = 12.67$ years, $SD = 0.69$, range 11–15, 46% female) in Swiss secondary schools toward (a) migration background students' heritage culture maintenance and (b) dominant culture adoption, (c) majority students' acquisition of cultural knowledge, and (d) schools' endorsement of intercultural contact. This study extends the validation of the four-dimensional measurement of attitudes toward mutual acculturation (Sidler et al., 2021) through assessing group-specific differences of each dimension and through exploring the relationship of each dimension with school adjustment. The results indicated group-specific differences only within the heritage culture maintenance dimension, which is more important for second generation students. As no further group differences in relation to the four dimensions were found, these findings indicate their equal importance for minority as well as majority students and thus demonstrate the importance of a mutual acculturation framework for students independently of their migration background and nationalities. Additionally, significant positive relationships with teacher support, self-efficacy, self-esteem, and self-determination were found for each dimension except dominant culture adoption. These results strengthen the concurrent validity of this four-dimensional assessment of mutual acculturation within the school context, as 3 out of 4 dimensions were significantly linked to psychological adjustment and teacher support.

Keywords: mutual acculturation, acculturation attitudes, concurrent validity, adolescents, school adjustment, Switzerland

Testing Concurrent Validity and Group-Differences of a Four-Dimensional Assessment of Attitudes toward Mutual Acculturation

Through global migration movements, societies are becoming increasingly culturally diverse. This is noticeable not only across societies but also within societies and their institutions. From an ecological perspective (Bronfenbrenner, 1979), schools interact with national contexts while being embedded in them. Adolescents thus not only acculturate within nation-states but also within schools, both being important contexts for adolescents' acculturation (Motti-Stefanidi et al., 2012). Through peer interaction, however, not only do migrant students or descendants of migrants experience acculturation at school, but majority students do, too. Acculturation relates to the cultural and psychological changes individuals and groups experience when they have intercultural contact (Berry, 2019). Because acculturation is a mutual process in which changes may take place in all individuals and groups who are in contact with each other (Berry, 2009, 2019), it concerns the whole society and not just migrants (Chirkov, 2009). A quantitative measurement assessing majority and minority students' attitudes toward mutual acculturation has recently been developed and validated in the German-speaking context of Switzerland (Sidler et al., 2021). This study explores group differences in relation to the four mutual acculturation dimensions based on having a migration background, nationalities (Swiss, Europe, world), and generation status (first, second, 2.5, third/majority). Moreover, this study extends the conceptualization and validation study of Sidler et al. (2021) by testing the concurrent validity of the four-dimensional measurement of attitudes toward mutual acculturation through assessing its cross-sectional relation with majority and minority students' psychological adjustment and teacher support ratings. Finding significant associations between attitudes toward mutual acculturation and school adjustment would confirm concurrent validity of the measure, as school adjustment has been found to be embedded in the acculturation process (Makarova & Birman, 2015, 2016). To use this measurement as a valid and reliable tool not only in the Swiss school context but also to adjust, apply and test it in other contexts, testing concurrent validity and understanding group-differences of each dimension are key.

Conceptual Framework

The Swiss Context

In 2019, the year the data for this study were collected, Switzerland counted 8,606,033 residents (Federal Statistical Office [FSO], 2021a). Of Switzerland's residents, 30% were born abroad and 25% did not have Swiss citizenship (FSO, 2021b). However, given the unfavorable access to nationality in Switzerland (Migrant Integration Policy Index [MIPEX], 2020), numbers on nationalities should be interpreted and compared with caution. Specifically, 20% of those who do not have Swiss citizenship were born in Switzerland and another 20% have already lived in Switzerland for 20 or more years (FSO, 2020a). Nevertheless, having a diverse population means that schools, school directors, and teachers face the challenge of accommodating students with diverse cultural backgrounds (Makarova, 2019).

In 2019, Switzerland scored 50 out of 100 points (slightly unfavorable for antidiscrimination and access to nationality; halfway favorable for family reunion, education,

political participation, and permanent residence; slightly favorable for labor market mobility; and favorable for health) on the MIPLEX scale (2020), which assesses policies on integrating migrants to create a multidimensional picture of equal rights and migrants' opportunities to participate in society. Via an expert survey, the MIPLEX assesses areas such as health, labor market mobility, access to nationality and political participation, family reunion, discrimination, and education. Concerning education, the MIPLEX captures how accessible education is for migrant students, how teachers are being trained to deal with cultural diversity in schools, and whether the special needs of migrant students are considered. Thus, a halfway favorable education context means that there still is a lot to do. Moreover, the extent of educational inequalities (e.g., OECD, 2012, 2021) support the insight that there are challenges to solve on both the policy and local school levels.

Mutual Acculturation

According to cross-cultural psychology, intercultural contact leads to acculturation, which is a process of ongoing cultural and psychological change (Berry, 2019). Acculturation has been conceptualized as a mutual process (Berry, 2009; Chirkov, 2009). However, when acculturation attitudes have been assessed, the focus commonly was on minority or majority attitudes concerning minority acculturation (e.g., following the model by Bourhis et al., 1997), even though it has been argued that only studying minority and majority group members' attitudes toward minority acculturation is one-sided and therefore both invalid and ethnocentric (Berry, 2006). Because acculturation involves a negotiation of dominance (Zick, 2010), I use the terms "minority" or "nondominant group" and "majority" or "dominant group" in this article. In Switzerland, for example, even though numerically all residents are represented through politicians on the national level, active and passive political rights on the national level are limited to Swiss nationals (The Swiss Parliament, n.d.), leading to Swiss nationals dominating the political discourse. Thus, Swiss nationals, the dominant majority, make decisions through their voting rights on behalf of all residents.

According to Zick (2010), acculturation is a process of change and of intercultural relationships. It is a social phenomenon influenced by micro-, meso-, and macrosocial factors. Most importantly, it is a contextual process (Birman & Simon, 2014); thus, acculturation within the family, at school, or in the workplace may look differently for the same individual. Hermeneutically, acculturation stems from *ad cultura*, Latin for "leading to a culture" (Zick, 2010). This leads inevitably to the question of what culture is. However, it is difficult to define culture as a concept along with all aspects of a specific culture (Kroeber & Kluckhohn, 1952; Olmedo, 1979; Rudmin, 2009). Moreover, culture is a vague and dynamic concept that continuously changes (MacLachlan et al., 2004). Given the variety of definitions of culture as a concept and the sheer impossibility of assessing the entirety of one culture, it is not surprising that conceptualizations and measurements of acculturation are diverse. The four-dimensional assessment of attitudes toward mutual acculturation used in this study relates to culture as it pertains to three major issues: first, visible artifacts such as clothing; second, visible behaviors that are based on code systems and rules such as languages, traditions, customs, and familial culture; and third, fundamental attitudes, values, beliefs such as religion, way of life, and gender roles (Rudmin, 2009). However, these three issues may overlap; for example, one's way of life may relate strongly to fundamental values and beliefs yet also be a visible behavior.

Mutual Acculturation Attitudes, Orientations, and Expectations

Within the acculturation framework, acculturation conditions, acculturation orientations or attitudes, and acculturation outcomes are distinguished (Arends-Tóth & van de Vijver, 2006). In this study, acculturation attitudes of both, minority and majority students have been assessed toward both minority and majority students' acculturation. Acculturation attitudes commonly refer to attitudes toward someone's acculturation, whether that of someone else or oneself. Acculturation orientations refer to how an individual intends to acculturate, whereas acculturation expectations refer to how someone is expected to acculturate. The latter two thus include taking perspectives into account. Yet, acculturation attitudes, orientations, and expectations are commonly assessed through a bidimensional measurement focusing on minority acculturation.

The bidimensional measurement of Berry et al. (1989) assessing attitudes toward minority acculturation combines two dimensions asking whether it is of value to maintain one's own cultural identity and characteristics while maintaining relationships with other groups. In combining the two dimensions, four acculturation strategies or orientations of minority-group members are defined: *integration* (maintaining one's heritage culture while maintaining relationships with other groups), *separation* (maintaining one's heritage culture and not maintaining relationships with other groups), *assimilation* (not maintaining one's heritage culture and maintaining relationships with other groups), and *marginalization* (neither maintaining one's heritage culture nor maintaining relationships with other groups). Bourhis et al. (1997) enhanced this assessment by exchanging the second dimension, maintaining relationships with other groups, with the question of whether it is considered important to adopt the dominant culture. Additionally, Bourhis et al. differentiated between the perspectives of minority and majority group members. The first relates to the acculturation orientations of minority group members, whereas the second relates to the acculturation expectations of the majority group members toward minority group members. However, the agent of acculturation, the individual who experiences acculturation, is always considered a minority group member, whether they are a migrant or someone belonging to an ethnic minority.

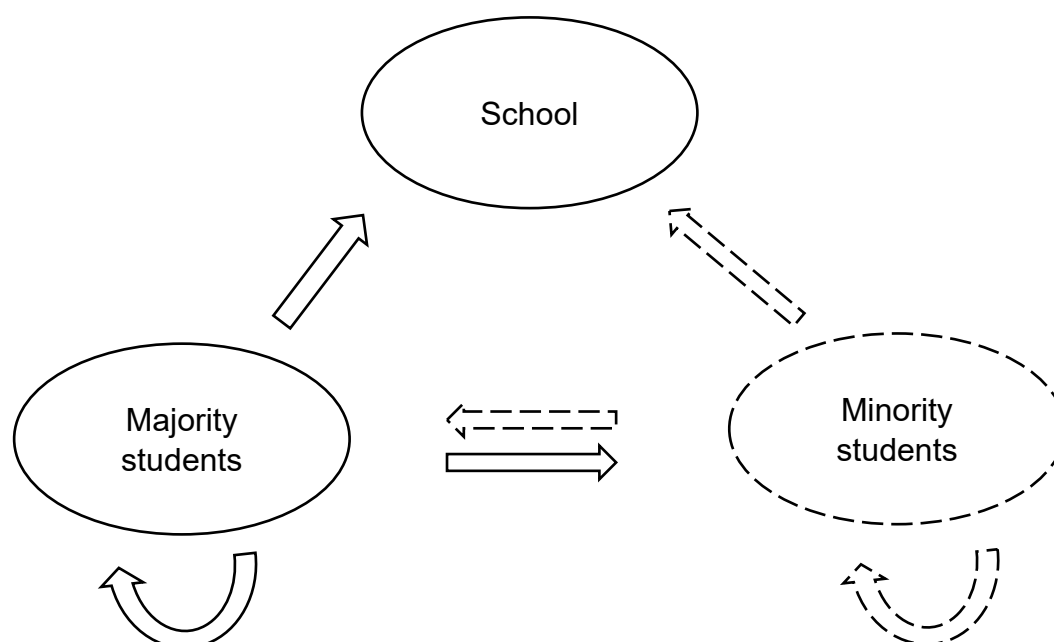
Furthermore, recent acculturation research has turned to majority acculturation (Haugen & Kunst, 2017; Kunst et al., 2021), which assesses not the recognition of minority-group culture by the majority group but rather the incorporation of aspects of minority cultures leading to changes in the dominant culture. In a review by Kunst et al. (2021), the acculturation orientations of majority group members involved integration, separation, assimilation, marginalization, and diffuse strategies. As with attitudes toward minority acculturation, a bidimensional assessment was used to measure the mainstream culture maintenance and minority culture adoption of majority-group members, thus assessing the acculturation orientations of majority-group members.

However, assessing attitudes toward minority or majority acculturation (from the perspective of minority- and/or majority-group members) means assessing one side of the mutual acculturation process. Measuring acculturation attitudes toward minority and majority acculturation simultaneously aims at grasping the mutuality of the acculturation process (Sidler et al., 2021). In the context of schools, there are three acculturating agents: minority students, majority students, and the schools themselves (see Figure 1). Schools are cultural actors with pervasive power structures (Warikoo & Carter, 2009) and are key social contexts for the development of adolescents (Eccles & Roeser, 2012). Thus, a school is not only an acculturation context but also an acculturation agent. To ensure equal educational

opportunities, schools should enable majority and minority students alike to be successful. Moreover, schools supporting intercultural contact may enhance learning about others and about yourself and therefore developing key intercultural skills (Schwarzenthal et al., 2017). Additionally, schools that endorse intercultural contact and exchange may also support the formation of intergroup friendships (Schachner et al., 2015). Most importantly, through providing support for positive intercultural contact and space for discussions about cultural diversity, schools can prepare students to become members of a culturally diverse society through promoting intercultural understanding (Schachner et al., 2021). This means that in the school context, acculturation attitudes can be held toward the majority and minority students and the schools. Concerning perspectives, members of minority and majority groups may have acculturation orientations concerning their own acculturation and acculturation expectations concerning the members of the other group as well as the schools.

Figure 1

Attitudes Toward Mutual Acculturation Within the School Context



Note. Acculturation agents are presented in the circles, and the arrows represent perspectives toward the various agents of acculturation: majority students may have an attitude toward their own acculturation and toward the acculturation of the minority students. Both minority and majority students may have an attitude toward schools' acculturation.

Mutual Acculturation and School Adjustment

Extensive review studies have found that minority students' school adjustment is embedded in their acculturation process (Makarova & Birman, 2015, 2016). However, even though most studies have found the integration strategy to be the most conducive to school adjustment, the results were diverse and inconsistent (Makarova & Birman, 2015, 2016). Moreover, recent meta-analyses showed a weak correlational link between acculturation and adjustment (Bierwiazek & Kunst, 2021). However, it has been emphasized that the context plays an important role: The integration strategy was found to have a positive effect on school adjustment when little stereotype threat was being experienced and a negative effect when a

lot of stereotype threat was being experienced (Baysu & Phalet, 2019). Moreover, if the context expected assimilation, then an assimilationist strategy proved to be best (Makarova & Birman, 2015; Schwartz et al., 2020). Thus, the specific school context shapes the acculturation attitudes that may be associated with positive school adjustment. However, schools' organizational context and climate are also promotive and protective factors for positive development of adolescents in culturally diverse school contexts (Juang & Schachner, 2020). Therefore, schools are not only an acculturation context but also acculturating agents, influencing adolescents' development through adjusting their acculturation expectations and diversity policies (Schachner et al., 2016). Within this context, intercultural contact concerns learning how to understand each other with one's own tools, representations, and internalized theories (Bossuroy, 2016). Thus, majority and minority students show cognitive efforts to adapt not only to new cultures they might experience at school but also to new ways of learning and new learning contexts. The cognitive system is connected to the psychological system, meaning that intercultural relations at school involve sociocultural and psychological adaptations. Thus, because school is a context of mutual acculturation (Sidler et al., 2021), majority students' acculturation is expected to also be connected to school adjustment.

School adjustment involves various aspects concerning students' adaptations to their role as students and to the school context, which involves teachers, rules, performance, and peers (Lakhani et al., 2017). Given that maladjustment at school may lead to performance issues and mental health problems (Lakhani et al., 2017), understanding the factors that influence it is important, particularly because performance issues and school outcomes influence adolescents' future life opportunities (OECD, 2021). In this study, I assessed school adjustment through teacher support (relating to how well students felt supported by their teachers), self-esteem, self-efficacy, and self-determination. Teacher support and positive relationships between teachers and students can promote positive school adjustment (Aldrup et al., 2018; Fernández Lasarte et al., 2020; Kiuru et al., 2015), particularly for migrant students (Guerra et al., 2019). Psychological factors such as self-esteem play important roles in school success (Moyano et al., 2020). Additionally, self-efficacy is commonly held as a predictor of performance and was recently found to be even more important than grit for achievement (Usher et al., 2019). Self-determination relates to three basic needs—autonomy, competence, and relatedness (Deci & Ryan, 2010)—and the satisfaction of these three needs is beneficial for intrinsic motivation, which, in turn, is conducive to school adjustment.

The Current Study

Most commonly, acculturation attitudes have been assessed regarding minority group members' acculturation. Recent research has started to study majority acculturation, however, establishing a mutual acculturation framework promises innovative insights into how minority and majority group members acculturate and relate to each other. To do so, I used a novel assessment of attitudes toward mutual acculturation that was comprised of four dimensions: (a) migration background students' heritage culture maintenance and (b) dominant culture adoption, (c) majority students' acquisition of cultural knowledge, and (d) schools' endorsement of intercultural contact. This four-dimensional assessment of attitudes toward mutual acculturation has been validated within the Swiss school context, and the factorial validity as well as its reliability was excellent for all four dimensions (Sidler et al., 2021). The

relationship of each dimension with school adjustment, however, has not been assessed, which would strengthen its concurrent validity. By analyzing the same data further in this study, I aimed to understand better (a) whether there are group differences concerning each of the four dimensions, meaning whether minority group members and majority group members have different attitudes toward mutual acculturation, and (b) how the four dimensions relate to the four measurements of school adjustment (teacher support, self-esteem, self-efficacy, and self-determination). Thus, I tackled the following two research questions:

1. Are there group differences in attitudes toward mutual acculturation within the school context? Based on the interactive acculturation model, certain dimensions were expected to be more important to one group than the other. Thus, minority-group members are expected to consider heritage culture maintenance as more important than majority-group members.
2. How do each of the four dimensions relate to school adjustment? To demonstrate concurrent validity, significant associations between the four dimensions and ratings on teacher support, self-esteem, self-efficacy, and self-determination were expected, because psychological and sociocultural school adjustment is embedded in the acculturation process. Because this was an exploratory study using cross-sectional panel data, no hypotheses concerning the directionality and strength of the associations were made.

Method

Participants

In total, 375 students in 20 schools participated in the study. The exclusion of 11 empty questionnaires left 364 students (46% female, $n = 167$; 54% male, $n = 190$; missing data sex $n = 7$; $M_{\text{age}} = 12.67$ years, $SD = 0.69$, range 11–15) for data analysis. In August 2019, a few weeks before the start of data collection, the participants had started lower secondary education (like middle school in the United States). Because 19% of the students were born abroad, the questionnaires were not only prepared in German but also translated into four additional languages (Arabic, English, French, and Turkish). Using a culturally sensitive approach, the content translation was done following the four-eyes principle (Peña, 2007). Still, 96% of the students completed the questionnaire in German.

Procedure

After receiving approval from the ethics committee of the University of Zurich and assessing pilot data, the research team contacted cantonal educational offices. Then we contacted school directors and class teachers from the vocational and technical school tracks through email and phone calls, and the teachers informed the parents and students. Each participant's legal guardian or next of kin provided written informed consent for the student's participation in the study. Additionally, we obtained informed consent from the adolescents themselves. In total, 32 classes from 20 schools were recruited in three German-speaking cantons of Switzerland: Aargau, Basel-Stadt, and Solothurn. Pilot data was collected and analyzed in spring 2019 with a school class that did not participate in the data collection in autumn 2019. Research assistants collected data using a web-based survey in visits to the classes during

school time. The research assistants instructed the students, answered their questions, and wrote a protocol on each data collection. It took the students 35–60 minutes to fill in the questionnaires on tablets, which the research assistants provided.

As this is a convenience sample, its composition (46% female, $n = 167$; 53% Swiss, $n = 193$) was compared with official statistics in the three cantons concerned. Given the lower percentage of females and Swiss nationals (FSO, 2020b, 2020c) at the lowest school level, the sample composition in terms of gender and Swiss nationality was comparable to cantonal statistics.

Measures

Attitudes toward mutual acculturation were assessed with a four-dimensional measurement consisting of seven items per dimension using a 4-point Likert scale ranging from 1 (*disagree*) to 4 (*agree*; for information on its development consider Sidler et al., 2021). Thus, higher scores indicated higher agreement with the relevant item and dimension. Attitudes toward migration background students' heritage culture maintenance (e.g., "I find that it is important for teenagers from another country who live in Switzerland to be allowed to preserve their way of life") and toward migration background students' dominant culture adoption (e.g., "I find that it is important for teenagers from other countries who live in Switzerland to adopt one of the four official languages in Switzerland") were the first two dimensions and assessed attitudes toward minority students' acculturation. Attitudes toward majority students' acquisition of cultural knowledge (e.g., "I find it is important that Swiss teenagers who live in Switzerland have to get to know the religions of teenagers from other countries who live in Switzerland") and attitudes toward schools' endorsement of intercultural contact (e.g., "I find it is important that the Swiss schooling system gives possibilities for teenagers from other countries and Swiss teenagers to exchange information about traditions and customs") were the third and fourth dimensions, assessing attitudes toward majority students and institutional acculturation, respectively. The Cronbach's alpha and McDonald's omega showed high reliability across the four dimensions in the main sample as well as the migration background and the non-migration background subsamples (see Table 1).

Table 1
Cronbach's Alphas and McDonald's Omegas

Measure	Sample	n	Cronbach's α	McDonald's ω
Minority students' heritage culture maintenance	Full	325	.84	.84
	Migration background	240	.85	.85
	Non-migration background	85	.81	.81
Minority students' dominant culture adoption	Full	306	.91	.91
	Migration background	226	.92	.92
	Non-migration background	80	.89	.89
Majority students' acquisition of cultural knowledge	Full	320	.92	.92
	Migration background	239	.92	.92
	Non-migration background	81	.92	.92

Schools' endorsement of intercultural contact	Full	335	.92	.92
	Migration background	247	.85	.85
	Non-migration background	88	.93	.93
Teacher Support	Full	341	.87	.87
	Migration background	255	.87	.87
	Non-migration background	86	.87	.87
Self-esteem	Full	308	.82	.80
	Migration background	225	.82	.80
	Non-migration background	83	.82	.83
Self-efficacy	Full	299	.88	.88
	Migration background	223	.88	.88
	Non-migration background	76	.87	.87
Self-determination	Full	303	.78	.73
	Migration background	228	.76	.71
	Non-migration background	75	.82	.79

Teacher support was assessed using a five-item scale with a 4-point Likert answer scale ranging from 1 (*do not agree at all*) to 4 (*strongly agree*; e.g., “When I need additional support, then I receive it from my teachers”; Hertel et al., 2014). The Cronbach’s alpha and McDonald’s omega showed good reliability (see Table 1).

Self-esteem was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This is a 10-item scale with a 4-point Likert answer scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*; e.g., “I feel that I have a number of good qualities”). The Cronbach’s alpha and McDonald’s omega showed good reliability (see Table 1).

Self-efficacy was assessed using the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). This is a 10-item scale, which was answered via a 4-point Likert answer scale ranging from 1 (*disagree*) to 4 (*agree*; e.g., “I can usually handle whatever comes my way”). The Cronbach’s alpha and McDonald’s omega showed good reliability (see Table 1).

Self-determination was assessed via Deci and Ryan’s (2010) self-determination theory. An 18-item scale with a 4-point Likert answer scale ranging from 1 (*disagree*) to 4 (*agree*) was used to assess the three basic needs dimensions: autonomy (e.g., “I did what truly interested me”), competence (e.g., “I took on big challenges, and I succeeded”), and relatedness (e.g., “Some classmates did not like me, or they excluded me”). The Cronbach’s alpha and McDonald’s omega showed acceptable reliability (see Table 1).

Gender was assessed with students reporting their gender as either girl ($n = 167$), boy ($n = 190$), or other ($n = 0$). For the data analysis, the dummy variables male = 1 and female/other = 0 were used, according to theories on dominant masculinities (Connell, 1998).

Nationality was assessed with students reporting whether they possess the Swiss nationality, and whether they possess further nationalities while asking them to declare which ones they possess. Following students’ answers, they were categorized as possessing the Swiss nationality no matter whether they possess any other nationality ($n = 201$), as possessing a nationality or nationalities of a geographically European country no matter

whether they possess any other nationality from outside geographical Europe ($n = 120$), or as possessing a nationality from a country outside geographical Europe ($n = 41$).

Generation was assessed with students reporting their and their parents' places of birth. The students who were born outside of Switzerland ($n = 65$) were considered first generation. "Second generation" referred to students whose parents were both born abroad ($n = 103$), "Generation 2.5" referred to students with one parent who was born abroad ($n = 64$), and the third generation are defined as the majority and relates to students who including both their parents have been born in Switzerland ($n = 132$).

Migration background was assessed with students reporting their nationalities and their and their parents' places of birth. If a student had one or various non-Swiss nationalities and/or they and/or one or both of their parents were born abroad, then they were considered to have a migration background ($n = 272$); otherwise, if a student had only the Swiss nationality and they as well as both of their parents were born in Switzerland, they were considered to not have a migration background ($n = 92$).

Analytical Strategy

The first research question, namely whether there are group differences in attitudes toward mutual acculturation, was assessed through univariate ANOVAs, which test whether the mean value of a specific variable differs between various independent groups. Based on the interactive acculturation model (Bourhis et al., 1997), the four acculturation dimensions were assessed from the majority and minority perspectives as they might vary in their importance across groups. To differentiate between the majority and minority groups while controlling for gender, three concepts were employed: nationality, generational status, and migration background.

The second research question, namely how each of the four acculturation dimensions relates to school adjustment, was assessed with hierarchical multiple regressions. Regressions assess the association of the values of the dependent variable and the predictor variable with a linear function. Multiple regressions allow the introduction of various predictors in the same model. Thus, through multiple regressions, the associations of the four acculturation dimensions and each school adjustment variable (teacher support, self-esteem, self-efficacy, and self-determination) were assessed. In addition to the four acculturation dimensions, sociodemographic variables such as gender, age, and first-generation status were introduced as controls. The stepwise (hierarchical) introduction of these predictors tested two models. In the first model, control variables such as gender, age, and first-generation status were introduced, and their predictive strengths toward each of the four school adjustment variables were assessed. In the second model, the control variables and the four acculturation dimensions were introduced, and their associations toward each of the four school adjustment variables was assessed. In comparing the models, missing data were excluded pairwise.

Results

Descriptive Statistics

Table 2 reports descriptive statistics (means and standard deviations) for the full sample as well as for subsamples based on three grouping variables: migration background, nationality, and generation.

Table 2
Descriptive Statistics (Means and Standard Deviations)

Variable	Sample	<i>n</i>	<i>M</i>	<i>SD</i>
Minority students' heritage culture maintenance	Full	356	3.42	.60
	Migration background	264	3.45	.60
	Non-migration background	92	3.33	.58
	Swiss nationality	189	3.38	.58
	Europe nationality	119	3.46	.60
	World nationality	41	3.52	.61
	1 st generation	63	3.33	.68
	2 nd generation	103	3.59	.50
	2.5 generation	63	3.44	.60
3 rd generation/majority	127	3.32	.60	
Minority students' dominant culture adoption	Full	343	2.48	.86
	Migration background	256	2.47	.90
	Non-migration background	87	2.49	.74
	Swiss nationality	189	2.44	.84
	Europe nationality	113	2.46	.87
	World nationality	40	2.68	.95
	1 st generation	62	2.59	.75
	2 nd generation	96	2.41	.96
	2.5 generation	63	2.43	.98
3 rd generation/majority	122	2.49	.77	
Majority students' acquisition of cultural knowledge	Full	346	2.96	.78
	Migration background	258	2.98	.79
	Non-migration background	88	2.92	.75
	Swiss nationality	192	2.93	.83
	Europe nationality	114	2.96	.71
	World nationality	38	3.19	.70
	1 st generation	61	3.00	.71
	2 nd generation	96	3.05	.73
	2.5 generation	63	2.87	.85
3 rd generation/majority	126	2.92	.81	
Schools' endorsement of intercultural contact	Full	345	3.14	.75
	Migration background	257	3.13	.74
	Non-migration background	88	3.17	.78
	Swiss nationality	190	3.18	.78
	Europe nationality	112	3.06	.72

	World nationality	41	3.17	.71
	1 st generation	61	3.12	.68
	2 nd generation	97	3.14	.72
	2.5 generation	62	3.13	.81
	3 rd generation/majority	125	3.15	.78
Teacher support	Full	353	3.30	.60
Self-esteem	Full	345	2.95	.54
Self-efficacy	Full	340	2.88	.53
Self-determination	Full	357	2.90	.45

Note. Each scale ranged from 1 (*disagree*) to 4 (*agree*), meaning that the higher the mean was, the more students agreed with the acculturation dimensions or the higher or better the students rated their school adjustment.

Table 3 presents correlations of the four acculturation dimensions, the four school adjustment measurements, and the sociodemographic variables for the full sample. No strong relationship ($r \geq .70$) was detected, thus avoiding any problems with multicollinearity. The four acculturation dimensions had various significant moderate and weak positive relationships: Migration background students' heritage culture maintenance, majority students' acquisition of cultural knowledge, and schools' endorsement of intercultural contact correlated positively and moderately with each other. Migration background students' dominant culture adoption, however, only correlated positively and weakly with cultural knowledge acquisition. Concerning the control variables, age correlated positively and weakly with dominant culture adoption and cultural knowledge acquisition. The four measurements of school adjustment correlated significantly and positively with each other: The strongest correlation was between self-esteem and self-determination ($r = .634$), whereas the weakest correlation was between teacher support and self-efficacy ($r = .203$).

Aim 1: Exploring Group Differences Within the Four Acculturation Dimensions

Group differences concerning the four acculturation dimensions were assessed through univariate analyses of variance (ANOVAs) in SPSS (Version 27; see Table 4). ANOVAs assess the mean differences of various independent subsamples and were used to analyze migration background (migration background vs. non-migration background), nationality (Swiss, Europe, world), and generation (first, second, Generation 2.5, and third/majority) while controlling for gender. Significant mean differences were found in one ANOVA concerning the generation grouping variable and the first dimension, migration background students' heritage culture maintenance, $F(3, 351) = 4.48, p = .004, \eta^2 = .037$. Through a Bonferroni post hoc test, second generation students were found to agree stronger ($M = 3.59$) with migration background students maintaining their heritage culture than first generation ($M = 3.33, p = .040$) and third generation / majority students ($M = 3.32, p = .004$).

No further mean differences were detected, either within the first dimension (migration background students' heritage culture maintenance) or concerning the other three dimensions (i.e., migration background students' dominant culture adoption, majority students' acquisition of cultural knowledge, and schools' endorsement of intercultural contact). Sensitivity analyses were run in G*Power (3.1.9.7) and found that ANOVAs with $n = 343 - 356$ participants across

Table 3
Correlations

Variable	A	B	C	D	E	F	G	H	I	K	L	M
A) Minority students' heritage culture maintenance	1 (356)											
B) Minority students' dominant culture adoption	.004 (343)	1 (343)										
C) Majority students' acquisition of cultural knowledge	.453*** (343)	.202*** (339)	1 (346)									
D) Schools' endorsement of intercultural contact	.518*** (343)	.052 (338)	.583*** (340)	1 (345)								
E) Teacher support	.198*** (349)	.051 (338)	.191*** (340)	.230*** (341)	1 (353)							
F) Self-esteem	.219*** (342)	-.035 (332)	.079 (336)	.172** (337)	.363*** (345)	1 (345)						
G) Self-efficacy	.238*** (338)	.062 (329)	.245*** (332)	.194*** (333)	.203*** (340)	.501*** (337)	1 (340)					
H) Self-determination	.269*** (352)	-.093 (342)	.119* (344)	.210*** (343)	.371*** (350)	.634*** (342)	.416*** (337)	1 (357)				
I) Male	-.013 (356)	.068 (343)	-.045 (346)	.003 (345)	-.020 (353)	.142** (345)	.115* (340)	-.022 (357)	1 (364)			
K) Age	.077 (352)	.131* (340)	.127* (342)	.007 (341)	.083 (348)	.030 (340)	.152** (336)	.020 (353)	.021 (358)	1 (358)		
L) Migration background	.086 (356)	-.013 (343)	.032 (346)	-.023 (345)	-.029 (353)	-.014 (345)	.101 (340)	-.050 (357)	-.030 (364)	.171*** (358)	1 (364)	
M) First generation	-.070 (356)	.064 (343)	.022 (346)	-.011 (345)	-.101 (353)	-.199*** (345)	-.112* (340)	-.203*** (357)	.071 (364)	.233*** (358)	.261*** (364)	1 (364)

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Note. Male, migration background, and first generation are dummy coded with e.g., 1 = male and 0 = non-male.

two groups with one covariate would be sensitive to effects with an effect size of .19 – .20 with 80% power ($\alpha = .05$). Then, ANOVAs with $n = 342 - 349$ participants across three groups with one covariate would be sensitive to effects with an effect size of .21 with 80% power ($\alpha = .05$). Finally, ANOVAs with $n = 343 - 356$ participants across four groups with one covariate would be sensitive to effects with an effect size of .22 – .23 with 80% power ($\alpha = .05$). This means that the study could not reliably detect possible effects with an effect size smaller than .19 – .23.

Table 4

ANOVA Summary Table for Four Assessed Acculturation Dimensions and Various Migration-Related Sociodemographic Groups, Controlling for Gender

IV	Minority students' heritage culture maintenance		Minority students' dominant culture adoption		Majority students' acquisition of cultural knowledge		Schools' endorsement of intercultural contact	
	F (df, e)	Effect Size	F (df, e)	Effect Size	F (df, e)	Effect Size	F (df, e)	Effect Size
Nationality	1.27 (2, 351)	.007	1.25 (2, 338)	.007	1.83 (2, 340)	.011	.86 (2, 339)	.005
R ²		.007		.012		.012		.005
Generation	4.48** (3, 351)	.037	.53 (3, 338)	.005	.75 (3, 341)	.007	.02 (3, 340)	.000
R ²		.037		.009		.008		.000
Migration background	2.64 (1, 353)	.007	.05 (1, 340)	.000	.34 (1, 343)	.001	.19 (1, 342)	.001
R ²		.008		.005		.003		.001

Aim 2: Exploring Relationships of Each Acculturation Dimension and School Adjustment

By running hierarchical multiple regressions in SPSS Statistics (Version 27), I analyzed the relationships of the four acculturation dimensions and four measurements of school adjustment (see Table 5). Because school adjustment is embedded in the acculturation process, students' ratings of teacher support, self-efficacy, self-esteem, and self-determination were entered as dependent variables. In multiple regressions, the regression coefficient of an independent variable relates to the average change in the dependent variable, and all the other independent variables are controlled. In the first step, gender, age, and first-generation status were introduced to explore their association and the explained variance concerning teacher support, self-efficacy, self-esteem, and self-determination. In the second step, the four acculturation dimensions, namely attitudes toward migration background students' heritage culture maintenance and dominant culture adoption, majority students' acquisition of cultural knowledge, and schools' endorsement of intercultural contact, were introduced to the model. Missing data were excluded pairwise.

The first model was not significant, $F(3, 334) = 2.56, p = .055$ for teacher support, however it was significant for the other three variables: self-efficacy, $F(3, 325) = 6.98, p < .001$, self-esteem, $F(3, 328) = 8.13, p < .001$, and self-determination, $F(3, 334) = 5.40, p = .001$, explaining 5–7% of the variance. Age was found to have a significant positive relationship with

Table 5

Multiple Regressions Assessing the Relation Between Acculturation Dimensions and Adjustment: Two-Step Regressions Controlling for Gender, Age, and First-Generation Status

Dependent variable	Teacher support		Self-efficacy		Self-esteem		Self-determination	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Block of predictor	β	β	β	β	β	β	β	β
First block: sociodemographic variables								
Male	-.02	-.01	.12*	.13*	.15**	.16**	-.01	-.01
Age	.11*	.09	.19***	.15**	.08	.07	.07	.07
First-generation status	-.13*	-.12*	-.16**	-.15**	-.23***	-.21***	-.22***	-.20***
Second block: acculturation								
Minority students' heritage culture maintenance		.08		.13*		.17**		.20***
Minority students' dominant culture adoption		.03		.01		-.04		-.09
Majority students' acquisition of cultural knowledge		.05		.15*		-.06		-.03
Schools' endorsement of intercultural contact		.16*		.03		.12		.13
R^2	.02	.08	.06	.13	.07	.12	.05	.13
ΔR^2		.06		.07		.05		.08

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

self-efficacy, meaning the older students were, the better they rated their self-efficacy. Gender was found to have a significant positive relationship with self-efficacy and self-esteem, meaning that boys rated their self-efficacy and self-esteem higher than girls. First-generation status was found to have a significant negative relationship with self-efficacy, self-esteem, and self-determination, meaning that first-generation students rated their self-efficacy, self-esteem, and self-determination lower than non-first-generation students. Given the similar associations found for the sociodemographic variables in the first and the second step, the introduction of the four acculturation dimensions into the model did not interfere much with their association with the adjustment variables.

The second model introduced the four acculturation dimensions and was significant for teacher support, $F(7, 330) = 4.25, p < .001$, self-efficacy, $F(7, 321) = 6.88, p < .001$, self-esteem, $F(7, 324) = 6.26, p < .001$, self-determination, $F(7, 330) = 6.82, p < .001$, and explained an additional 5–8% of the variance. Concerning the four acculturation dimensions, migration background students' heritage culture maintenance was found to have a significant positive relationship with self-efficacy, self-esteem, and self-determination. This means that the more students agreed with migration background students' heritage culture maintenance, the higher they rated their self-efficacy, self-esteem, and self-determination. Then, majority students' acquisition of cultural knowledge was found to have a significant positive relationship with self-efficacy. This means that the higher the students agreed with majority students' acquisition of cultural knowledge, the higher they rated their self-efficacy. Finally, the dimension of schools' endorsement of intercultural contact was found to have a significant positive relationship with teacher support. This means that the more students agreed that schools should enable intercultural contact, the better they rated their teachers' support.

Discussion

The aim of this study was to expand the validation of a four-dimensional assessment of attitudes toward mutual acculturation in the Swiss school context (Sidler et al., 2021) in two ways: first, to assess group differences concerning each dimension, and second, to explore the relationship of each dimension with four factors of school adjustment, namely teacher support, self-esteem, self-efficacy, and self-determination.

Are There Group Differences Within the Four Acculturation Dimensions?

Migration related group differences in relation to the four acculturation dimensions were explored through univariate ANOVAs. This followed the interactive acculturation model (Bourhis et al., 1997) and the structure of the four-dimensional assessment of attitudes toward minority and majority acculturation. As migrant students or students with migration backgrounds are diverse concerning their generational status, residence status, and countries of origin (Nauck & Genoni, 2019), three grouping variables were considered: migration background (a combination of the students' nationality and place of birth as well as their parents' place of birth), nationality, and migrant generation.

The only significant mean difference was found for the first dimension, migration background students' heritage culture maintenance: Second generation students rated this dimension as more important than first generation students and third generation/majority students. This is surprising, as minority group members were expected to rate the first dimension as more important than majority group members. However, this could relate to first-generation students legitimizing and reproducing exclusionary and/or assimilationist practices imposed on them through integration policies (Duemmler, 2015), resulting in their feeling that heritage culture maintenance is not welcome or important. Second-generation students, however, may escape such integration policies yet still experience diverse cultural backgrounds at home and at school (Göbel & Buchwald, 2017; Makarova, 2008). The actual mean difference between second generation, first generation, and third generation/majority students, however, was small: all groups agreed that heritage culture maintenance was important, just to a slightly different degree. The more interesting finding is that no further group differences were found. Neither based on their migration background nor based on their nationalities did students differ in relation to the four dimensions. Moreover, there were no differences found concerning students' generation status in relation to their attitudes toward majority acculturation (majority students' acquisition of cultural knowledge and schools' endorsement of intercultural contact) as well as toward migration background students dominant culture adoption. This means that overall, different attitudes toward mutual acculturation are not explained by minority and majority group membership.

What Are the Relationships of Each Acculturation Dimension and School Adjustment?

The associations between each acculturation dimension and each measurement of school adjustment were explored through multiple regressions. Significant positive associations were found for 3 of the 4 dimensions: First, positive attitudes toward the heritage culture maintenance of migration background students had positive associations with self-efficacy, self-esteem, and self-determination. Second, positive attitudes toward majority students' acquisition of cultural knowledge had a positive association with self-efficacy. Third, positive attitudes toward schools' endorsement of intercultural contact had a positive association with teacher support. No significant association was found between attitudes toward migration background students' dominant culture adoption and school adjustment. This was surprising, because in previous research, only attitudes toward minority acculturation have been related to school adjustment (Makarova & Birman, 2015, 2016; Schachner et al., 2017), meaning that associations were expected for at least the two minority dimensions. One reason for this could be that the association of each dimension and school adjustment was assessed instead of combining the dimensions as Berry et al. (1989) and Bourhis et al. (1997) proposed. Additionally, the dominant culture adoption dimension only correlated weakly with majority students' acquisition of cultural knowledge, whereas the other three dimensions showed medium correlations with each other. Thus, whereas adolescents found migration background students' heritage culture maintenance, majority students' acquisition of cultural knowledge, and schools' endorsement of intercultural contact to be rather

important, the migration background students' dominant culture adoption dimension fell off. This was surprising and it is not clear, whether this comes from not considering dominant culture adoption important, not wanting to adopt (concerning minority students), or not wanting minority students to adopt (concerning majority students). The latter would relate to findings on Swiss youth reproducing exclusion following the "Swiss–foreigner divide" in Swiss schools (Duemmler, 2015). Nevertheless, the positive correlations of three out of four mutual acculturation dimensions to the four concepts of school adjustment strengthens concurrent validity of the measurement.

Limitations and Future Directions

It is important to stress that with cross-sectional data, no insights into the directionality of the relationship result. Whereas significant positive correlations between attitudes toward mutual acculturation and school adjustment strengthen construct validity, longitudinal research is needed to understand its interaction better. Thus, further research should study (a) the development of attitudes toward mutual acculturation and their (b) association with school adjustment longitudinally to better understand what supports students' school adjustment no matter their migration background.

Conclusion

In this study, the validation of a four-dimensional assessment of attitudes toward mutual acculturation in the Swiss school context (Sidler et al., 2021) was extended in two ways. First, group differences concerning each acculturation dimension were assessed and were found only for the migration background students' heritage culture maintenance dimension: Although on average, minority and majority students consider heritage culture maintenance important, it is of higher importance to second generation students. Second, significant relationships of each acculturation dimension except for the migration background students' dominant culture adoption dimension and school adjustment were found, which strengthens the concurrent validity of the assessment. The more important students rated migration background students' heritage culture maintenance, majority students' acquisition of cultural knowledge, and schools' endorsement of intercultural contact, the better was their school adjustment. To conclude, this study confirmed concurrent validity of the four dimensions and showed their equal importance for minority as well as majority students and therefore demonstrates the importance of a mutual acculturation framework for students no matter their migration background.

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Minority and Majority Adolescents' Attitudes toward Mutual Acculturation and its Association with Psychological Adjustment (Sidler et al., 2022)



Minority and Majority Adolescents' Attitudes toward Mutual Acculturation and its Association with Psychological Adjustment

Petra Sidler¹ · Gülseli Baysu² · Wassilis Kassis¹ · Clarissa Janousch¹ · Raia Chouvati³ · Christos Govaris³ · Ulrike Graf⁴ · Christian Rietz⁴

Received: 15 December 2021 / Accepted: 13 March 2022 / Published online: 6 April 2022
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Abstract

Although acculturation is considered a mutual process, no measure assesses attitudes toward mutual acculturation. Through a novel four-dimensional measurement, this study addresses this research gap by assessing attitudes toward minority and majority acculturation and its relation to psychological adjustment for immigrant-background minority and non-immigrant majority adolescents in public secondary schools in three European countries: in Germany ($n = 346$, 46% female, $M_{\text{age}} = 12.78$ years, range 11–16), Greece ($n = 439$, 56% female, $M_{\text{age}} = 12.29$ years, range 11–20), and Switzerland ($n = 375$, 47% female, $M_{\text{age}} = 12.67$ years, range 11–15). Latent profile analyses led to three distinct acculturation profiles in all three countries: strong and mild mutual integration profiles, where both migrant and majority students are expected to integrate, and a third profile assuming lower responsibility upon the majority. Additionally, those in the strong- and mild-integration profiles reported stronger psychological adjustment than those assuming lower responsibility upon the majority, which held for all students in Switzerland and mostly for those without a migration background in Germany. The findings demonstrate the importance of a mutual acculturation framework for future research. Moreover, as most adolescents fit in with one of the mutual integration patterns, findings stress that no matter their migration background, adolescents favor mutual integration including the expectation on schools to enhance intercultural contact.

Keywords Mutual acculturation · Majority acculturation · Psychological adjustment · Self-esteem · Self-determination · Latent profile analysis

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1007/s10964-022-01604-6>.

✉ Petra Sidler
petra.sidler@fhnw.ch

- ¹ Institute for Research and Development, School of Education, University of Applied Sciences and Arts Northwestern Switzerland, Brugg-Windisch, Switzerland
- ² School of Psychology, Queen's University, Belfast, United Kingdom
- ³ Department of Primary Education, University of Thessaly, Thessaly, Greece
- ⁴ Faculty of Educational and Social Sciences, University of Education Heidelberg, Heidelberg, Germany

Introduction

Societies and schools are becoming increasingly more culturally diverse. With such diversity comes several challenges as members of different groups, including the youth, acculturate and learn to mutually accommodate each other. Acculturation is defined as the cultural and psychological change of individuals and groups when having intercultural contact (Berry, 2019), which implies that both groups can change. However, acculturation attitudes are commonly assessed by combining attitudes toward only *minority group members'* (a) maintenance of their heritage culture and (b) dominant culture adoption (Bourhis et al., 1997). Following theoretical considerations on the reciprocity and mutuality of acculturation (Chirkov, 2009), empirical research has started assessing not only minority but also majority acculturation (Kunst et al., 2021). However, assessing attitudes toward both minority and majority acculturation is still a research gap. Furthermore, in the school context, migrant students' acculturation has often been analyzed in

relation to their adjustment, finding an integration strategy to be predominantly positively associated with school and psychological adjustment, yet also stressing inconsistent results due to a variety of contexts and assessments (Makarova & Birman, 2016). However, this research relies heavily on measures of minority group members' acculturation, thus understanding the relation of attitudes toward mutual acculturation and adjustment presents another research gap. To address these gaps, a novel four-dimensional mutual acculturation attitudes scale was used, which considers both immigrant-background minority and non-immigrant-background majority adolescents' attitudes toward mutual acculturation—that is, their attitudes toward *migration background students' heritage culture maintenance* and *dominant culture adoption*, as well as toward *majority students' acquisition of cultural knowledge* and *schools' endorsement of intercultural contact* (Sidler et al., 2021). Thus, to address the first research gap, attitudes toward mutual acculturation of both, immigrant-background and non-immigrant-background youth are analyzed and, to address the second research gap, put into relation with psychological adjustment.

Mutual Acculturation at School

In the tradition of cross-cultural psychology, acculturation results from intercultural contact and is a process of continuous cultural and psychological change (Berry, 2019). The words *ad cultura* are Latin for “leading to a culture” (Zick, 2010). In this study, culture is understood as a vague, dynamic, and always-changing concept (MacLachlan et al., 2004), which helps to make sense of the historically diverse conceptualizations and assessments of acculturation. Culture includes artefacts, behaviors, and attitudes or values (Rudmin, 2009). Thus, acculturation is understood as the process of dealing with and adjusting to a change in visible artefacts, behaviors, and attitudes within a specific context, which shapes the relationship between acculturation and adjustment (Birman & Simon, 2014). Following the bidimensional assessment of acculturation attitudes (Bourhis et al., 1997), the combination of the two minority dimensions (heritage culture maintenance and dominant culture adoption) leads to four acculturation strategies: *integration* (agreement with both dimensions), *assimilation* (agreement with adoption, disagreement with maintenance), *separation* (agreement with maintenance, disagreement with adoption), and *marginalization/individualism* (disagreement with both dimensions).

The school context is an acculturation context and is acknowledged to be a key environment for adolescents' continued acculturation (Horenczyk & Tatar, 2012). Whether and how schools handle cultural diversity affects belonging and educational outcomes of both, migrant and

majority students, as acculturation affects both groups (Baysu et al., 2021). Thus, acculturation is defined as a mutual process, and members of the majority group and minority groups are *acculturating agents* (Sidler et al., 2021). This contrasts with how majority acculturation commonly has been assessed. The interactive acculturation model (Bourhis et al., 1997), for example, assessed majority and minority attitudes toward minority acculturation. In this sense, majority acculturation would relate to majority members' attitudes toward minority acculturation. Similarly, more recent research assessing majority acculturation attitudes or expectations in the school context has measured majority members' attitudes toward minority acculturation, therefore focusing on the minority group members as the only acculturating agents (Makarova & Birman, 2015, 2016). However, an interactive acculturation model, in the sense that both sides are interacting and adjusting, relates not only to the two different perspectives at stake (minority and majority adolescents having attitudes toward minority acculturation) but to who is experiencing a change in the cultural context and, thus, who is acculturating (minority and majority adolescents having attitudes toward minority and majority acculturation, the latter including schools). In diverse schools, peer interactions lead to contact with a variety of cultural backgrounds (Miklikowska, 2017); thus, not only immigrant-background but also non-immigrant-background students experience intercultural contact and therefore acculturation at school.

Moreover, intercultural interactions and communications require minority and majority students to acquire new intercultural skills (Landis & Bhawuk, 2020), meaning that both, non-immigrant background, and immigrant background adolescents adjust to the intercultural context at school and therefore acculturate. Yet, national institutions like schools must also be adapted to better satisfy the needs of all groups and individuals living together (Berry, 2019). Thus, next to being an acculturation context, schools are cultural actors with pervasive power ideologies (Warikoo & Carter, 2009). Schools also have agency insofar that they actively shape the setting of intercultural contact and intercultural learning by implementing school diversity policies (Celeste et al., 2019), raising awareness about implicit bias and stereotypes (Warikoo et al., 2016), or ignoring the facticity of intercultural contact. Diversity approaches at school were found to affect ethnic minority and majority adolescents (Baysu et al., 2021), illustrating schools' agency as well as how immigrant-background and non-immigrant-background students are affected by it. Majority-group members and institutions thus become recipients and minority-group members become agents of social change (Kunst et al., 2021). Therefore, instead of focusing only on minority students as acculturating agents, majority students and schools are also considered in this study.

To clarify, in this study, the term *minority acculturation* relates to the acculturation of those who have a migration background (including the first, second, and 2.5 generation), and *majority acculturation* relates to the acculturation of those who do not have a migration background (the so-called majority members or natives). Thus, minority acculturation and minority or migrant students relate to students with a migration background, whereas majority acculturation and majority students relate to students without a migration background.

Acculturation and Psychological Adjustment

In the school context, three aspects of adolescents' adjustment are commonly measured as acculturation outcomes: a) students' psychological adjustment including their self-esteem and self-determination; b) students' sociocultural adjustment such as acquiring school-relevant competence and conduct as well as having good social relationships with other students and teachers; and c) students' educational outcomes and aspirations (Makarova & Birman, 2015, 2016). This study focuses on two indicators of psychological adjustment, namely self-esteem and self-determination, as important components of adolescent adjustment in school. Empirical research on the associations between acculturation and different components of adolescent adjustment has yielded inconsistent results (Makarova & Birman, 2015, 2016). For adolescents with a migration background, an integration strategy is often associated with successful adjustment at school (Nguyen & Benet-Martínez, 2013); however, it often also introduces challenges to adolescents with a migration background (Brown et al., 2013). Moreover, an assimilation strategy was also found to lead to positive adjustment, particularly in contexts expecting assimilation (Makarova & Birman, 2015). Thus, the specific school setting plays an important role when it comes to the association of acculturation and psychological adjustment for adolescents with a migration background.

Research on majority acculturation and adjustment is scarce, yet a study in Norway assessed majority students' culture maintenance and their adoption of immigrants' cultures (Haugen & Kunst, 2017). They found that separated majority members reported more identity threat, more ethnic discrimination, and higher self-esteem than integrated and undifferentiated majority members. In another study, it was found that majority members' openness predicted more adoption of minority cultures, whereas conscientiousness predicted less adoption of the minority cultures (Kunst et al., 2021). As intergroup contact experiences and cross-group friendships were found to be beneficial for everyone (Killen et al., 2007) and as cultural diversity is increasing in schools, majority students' acculturation may also be related to their psychological adjustment.

It should be acknowledged that most studies assessing the relation of acculturation and adjustment, including this study, are cross-sectional, questioning the direction of association between acculturation and adjustment (Kunst, 2021). Moreover, those who did assess the association longitudinally found little evidence for the integration hypothesis, meaning that an integration orientation is most conducive to adjustment (Bierwaczzonek & Kunst, 2021). However, the absence of longitudinal associations, which often control for cross-sectional ones, does not undermine the presence or importance of cross-sectional associations. Thus, while assessing how acculturation is interrelated to psychological adjustment, this study does not imply causality (Grigoryev & Berry, 2022), as the associations can work both ways.

Geographical Contexts: Germany, Greece, and Switzerland

From an ecological perspective (Bronfenbrenner, 1979), schools are embedded in and can interact with national contexts as distal contexts that have integration policies considering immigrant minorities. Nation-states and their climate, policies, and schools are important macro contexts for adolescents' acculturation (Motti-Stefanidi et al., 2012). Acculturation attitudes and ethnic identities may vary relative to the country of residence and may be linked to multicultural climate and policies (Yağmur & Van de Vijver, 2012).

Germany, Greece, and Switzerland are interesting case studies because of their partly overlapping and partly dissimilar migration histories and integration policies toward immigrants (Migrant Integration Policy Index [MIPEX], 2020). Germany and Switzerland are commonly considered typical migration-arrival countries, with Germany having about 13,380,000 (16% of the total population) and Switzerland having about 2,550,000 (30% of the total population) foreign-born residents in 2019 (OECD, 2021). Concerning Greece, whereas many people moved through Greece onwards to other European countries, many also remained: In 2019, the foreign-born population in Greece amounted to 1,340,000 (13% of the total population; OECD, 2021). In terms of integration policies, the MIPEX assesses policies for integrating migrants to create a multidimensional picture of equal rights and migrants' opportunities to participate in society. Concerning education, the MIPEX captures how accessible education is for migrant students, how teachers are being trained in dealing with cultural diversity at school, and whether migrant students' special needs are considered. In 2019, Greece scored 46 (unfavorable political participation and slightly unfavorable education and access to nationality), Switzerland scored 50 (slightly unfavorable anti-discrimination and access to nationality), and Germany scored 58 points

(no unfavorable ratings). It is thus explored whether the prevalence and effectiveness of integration profiles would differ across these three countries ranging from more to less unfavorable attitudes toward diversity.

The Present Study

This study assessed immigrant background and non-immigrant background adolescents' attitudes toward mutual acculturation, and the associations between their acculturation profiles and psychological adjustment. Following previous research, this study expected to find the so-called integration profiles as the most common profiles in each country and that these integration profiles should predict psychological adjustment for students with and without a migration background. Primarily, this analysis offers cross-national insights into adolescents' attitudes toward mutual acculturation, including minority and majority acculturation in three ways: First, minority and majority students and schools are defined as acculturating agents and included in the measurement. Then, the attitudes of students with and without a migration background are analyzed in each country, taking their specific perspective on mutual acculturation into account, thus resulting in various acculturation profiles. Finally, a person-centric approach is employed to analyze adolescents' endorsement of four acculturation dimensions, which allows for identifying acculturation profiles inductively, rather than assuming a fixed set of profiles or groups, as is usually done in the acculturation framework. The combination of these three points is a novel approach and enhances acculturation research. Additionally, building upon the acculturation profiles leads to cross-national insights into their relations with psychological adjustment like self-esteem and self-determination. Thus, the aim of this study was twofold: first, to explore adolescents' attitudes toward mutual acculturation, and second, to assess the relation between these acculturation profiles and psychological adjustment.

Methods

Participants

Participants were part of a random convenient sample of seventh graders from lower secondary education classes (like middle school in the United States) in rural and urban regions of Germany, Greece, and Switzerland. The German sample comprised 346 students in 14 schools (46% female, 54% male, 0.3% other, $M_{\text{age}} = 12.78$ years, $SD = 0.78$). The Greek sample comprised 439 students in 14 schools (56% female, 44% male, 0.2% other, $M_{\text{age}} = 12.29$ years,

$SD = 0.88$), and the Swiss sample comprised 375 students in 20 schools (47% female, 53% male, 0% other, $M_{\text{age}} = 12.67$ years, $SD = 0.69$).

Given the presence of first-generation immigrant students in each country (Germany: 28% first-generation; Greece: 12% first-generation; Switzerland: 19% first generation), questionnaires were not only prepared in the two national languages (German and Greek) but also translated into five additional languages (Arabic, English, Farsi, French, and Turkish) following the four-eyes principle, a content translation, and a culturally sensitive approach (Peña 2007). Most students in each country filled out the questionnaire in their country's official language (93 and 96% of the students in German in Germany and Switzerland, respectively; 91% in Greek in Greece).

As migration background is defined diversely in the three countries, migration background was operationalized dichotomously by combining three single-item indicators: country of birth of students and their parents and students' nationalities. If students and their parents were all locally born (i.e., in Germany, Greece, or Switzerland) and students had only the local (i.e., only the German, Greek, or Swiss) nationality, they were identified as not having a migration background—that is, as belonging to the majority. Otherwise, if any of these conditions were not met, the respective student was identified as having a migration background (79% in Germany, $n = 272$; 47% in Greece, $n = 207$; and 76% in Switzerland, $n = 283$).

Procedure and Sampling

The data used for this study was collected in 2019 and 2020 through a web-based survey within the project *Overcoming Inequalities with Education: School and Resilience* of the NCCR—On the Move. In all three countries, data collection was guided by research assistants who visited school classes during school time, and students filled out the questionnaire via tablets in approximately 1 h. Research assistants instructed the students and answered possible questions to ensure a similar data collection environment. A protocol was written for each school class. In line with ethics approval in each country, parental consent and child assent were received.

In each country, a local ethical committee was contacted for approval before the sampling started. In Germany, upper-level school offices and school districts were contacted via e-mail and/or telephone. With their permission, teachers of the seventh grade were contacted by e-mail or phone. Teachers informed the students and their parents about the study and asked for consent in writing. In sum, 14 schools with 28 classes were recruited in the two northern upper-level school offices, Karlsruhe and Stuttgart, in the region of Baden-Württemberg. In Greece, schools

were contacted in three regions, namely Athens, Larisa, and Crete. Local school counselors advised and helped in recruiting classes. The focus was on schools in Athens, as 34.6% of the Greek student population goes to school in Athens (Hellenic Statistical Authority 2020). Whereas schools in Athens have a multicultural composition, immigrants and refugees in Larisa and on the island of Crete are considered to be more integrated in the local society (Kotoyannos et al. 2019). In total, 14 schools with 48 classes were recruited. In Switzerland, cantonal educational offices were contacted first. Afterwards, school directors and then class teachers were contacted via email and phone calls. Through the teachers, the parents and students were informed and asked for consent. Twenty schools with a total of 32 classes were recruited in the Aargau, Basel-Stadt, and Solothurn cantons.

The sample size was not determined by an a priori power analysis: the three national samples are convenient random samples, meaning that as many schools as possible were contacted to recruit full classes. The Swiss sample (46% female, $n = 167$; 53% Swiss, $n = 193$), consisting of students of the vocational and technical school tracks, was compared with official statistics of students in the relevant cantons. The gender and immigrant composition of the Swiss sample was comparable to cantonal statistics, as the lowest school level has a lower percentage of females and Swiss nationals (FSO, 2020a, 2020b), but in other countries, such population data were not available.

Measures

Attitudes toward mutual acculturation

The four-dimensional assessment of attitudes toward mutual acculturation consists of seven items per dimension (Sidler et al., 2021; see Supplementary Material Table 1B for all items verbatim). Using a 4-point Likert scale ranging from *disagree* (1) to *agree* (4), it measures attitudes toward (1) *Migration background students' heritage culture maintenance* (e.g., “I find that it is important for teenagers from another country who live in [country] to be allowed to preserve their traditions and customs.”; Germany, Greece, Switzerland Cronbach α ¹, respectively, 0.85, 0.85, 0.84); (2) *Migration background students' dominant culture adoption* (e.g., “I find that it is important for teenagers from other countries who live in [country] to adopt the dominant way of life in [country].”; Germany, Greece, Switzerland Cronbach α respectively 0.88, 0.88, 0.91); (3) *Majority students' acquisition of cultural knowledge* (e.g., “I find it is

important that German/Greek/Swiss teenagers who live in [country] have to get to know the religions of teenagers from other countries who live in [country].”; Germany, Greece, Switzerland Cronbach α s, respectively 0.91, 0.91, 0.92); (4) *Schools' endorsement of intercultural contact* (e.g., “I find it is important that the [country] schooling system allows teenagers from other countries and [country] teenagers to exchange information about languages.”; Germany, Greece, Switzerland Cronbach α s, respectively 0.90, 0.90, 0.92).

Higher scores indicate higher agreement with the relevant dimension. Each dimension was calculated through the means of at least one up to all seven items. Both Cronbach's alphas and McDonald's omegas showed high reliability across all countries and dimensions, from alpha and omega of 0.84 (migrant students' heritage culture maintenance in Switzerland) up to 0.92 (majority students' acquisition of cultural knowledge and schools' endorsement of intercultural contact in Switzerland).

Given the multi-level structure of the data, intraclass correlations were assessed on two (students – school classes) and three levels (students—school classes—schools). Across all three countries, intraclass correlations were all lower than 0.100, indicating small variance at the school and class level.

Given the cross-national design of this study, confirmatory factor analyses (CFA) were run in each country (see Supplementary Material, Table 2B for factor loadings) and cross-national measurement invariance (see Supplementary Material, Table 3B for multigroup-CFA values) was assessed in JASP (0.16.0.0). The 28-item and four-factor model of the assessment of attitudes toward mutual acculturation was tested and confirmed through a CFA across the three independent samples. Results showed good factor loadings and a sufficient fit across countries (Xia & Yang, 2019). First, assessing the invariance of the factor structure across countries supported the configural invariance (the baseline model, M2 in Table 3B in the Supplementary Material). Comparing the baseline model to the model with constrained factor loadings (M3) supported the metric invariance. Finally, further constraining the intercepts to be equal (M4) supported the scalar invariance (Xia & Yang, 2019). These results show that comparisons across the German, Greek, and Swiss samples are meaningful and valid.

Self-esteem

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a 10-item scale that assesses global self-worth through positive and negative feelings concerning oneself. Respondents answer on a 4-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (4; e.g., “Overall, I am satisfied with myself.”). Cronbach's alpha showed good

¹ McDonald's omega ω were also calculated as reliability coefficients and were equal to the Cronbach alphas (or differed by 0.01 in one case).

reliability across all countries, and McDonald's omega showed good reliability for Germany and Switzerland, however, there was no value for Greece (Germany $\alpha = 0.78$ and $\omega = 0.75$; Greece $\alpha = 0.73$ and $\omega = \text{no value}$; and Switzerland $\alpha = 0.82$ and $\omega = 0.80$).

Self-determination

General self-determination was assessed following Deci and Ryan's (2010) self-determination theory adapted to the school context. Respondents answered questions on a 4-point Likert scale ranging from *do not agree* (1) to *agree* (4). The 18 items assess the three basic needs dimensions of autonomy (e.g., "I was free to do things in my own way."), competence (e.g., "I finished difficult tasks and assignments successfully."), and relatedness (e.g., "I felt I was very close with and had strong bonds with classmates who are important to me."). Cronbach's alpha showed acceptable reliability across all countries, and McDonald's omega showed acceptable reliability for Greece and Switzerland, however, there was no value for Germany (Germany $\alpha = 0.65$ and $\omega = \text{no value}$; Greece $\alpha = 0.70$ and $\omega = 0.65$; and Switzerland $\alpha = 0.78$ and $\omega = 0.75$).

Gender

Students reported their gender as either "girl," "boy," or "other." For data analysis, a dummy variable (male = 1, female or other = 0) was used, following theories on dominant masculinities (Connell, 1998).

Results

Descriptive Statistics

Table 1 shows the descriptive statistics (means and standard deviations) for the German, Greek, and Swiss samples. The reliabilities of the four acculturation attitudes are good to excellent in all three samples. Students in all three countries agree quite uniformly with immigrant students maintaining their cultural characteristics. Students in all three countries also agree with the two majority dimensions: majority students' acquisition of cultural knowledge and schools' endorsement of intercultural contact. The most variety arose in the second dimension, immigrant students adopting the dominant cultural characteristics, with students in Greece tending to agree whereas students in Germany and Switzerland were indecisive. Differences between the three samples concerning the four dimensions were studied using univariate analysis of variance (ANOVA). Statistically significant differences were found in the second dimension, migrant students' dominant culture adoption, and the fourth dimension, schools'

Table 1 Mean and standard deviation of the four acculturation dimensions and psychological adjustment

	Country	<i>n</i>	<i>M</i>	<i>SD</i>
Migrant students' heritage culture maintenance	GER	327	3.43	0.65
	GRE	406	3.42	0.68
	SWI	356	3.42	0.60
Migrant students' dominant culture adoption	GER	308	2.52	0.85
	GRE	395	2.86	0.80
	SWI	343	2.48	0.86
Majority students' acquisition of cultural knowledge	GER	321	2.97	0.80
	GRE	397	3.08	0.78
	SWI	346	2.96	0.78
Schools' endorsement of intercultural contact	GER	320	3.13	0.76
	GRE	382	3.28	0.67
	SWI	345	3.14	0.75
Self-esteem	GER	325	2.91	0.55
	GRE	359	3.01	0.51
	SWI	345	2.95	0.54
Self-determination	GER	330	2.82	0.41
	GRE	404	2.83	0.42
	SWI	357	2.90	0.45

The four acculturation dimensions and the two psychological adjustment measures were assessed on a 4-point Likert scale ranging from 1 (totally disagree) to 4 (totally agree)

GER Germany, GRE Greece, SWI Switzerland, *M* mean, *SD* standard deviation

endorsement of intercultural contact. The Greek sample scored significantly higher on the adoption dimension than the German and Swiss samples, $F(2, 1043) = 23.35$, $p < 0.001$, $\eta^2 = 0.04$. Additionally, the Greek sample scored significantly higher on the school dimension than the German and Swiss samples, $F(2, 1044) = 4.93$, $p = 0.007$, $\eta^2 = 0.01$. No further statistically significant differences were found between the three national samples for the first dimension, migrant students' heritage culture maintenance, or the third dimension, majority students' acquisition of cultural knowledge.

Table 2 shows correlations between the four dimensions and psychological adjustment. Correlations between the four dimensions varied in effect strength across countries, but all correlations were positive in all three countries (and all but three were significant). Correlations between self-esteem and self-determination were significant and positive in all three countries. Correlations between psychological adjustment and the four acculturation dimensions, however, varied greatly in terms of statistical significance as well as the direction and strength of association across dimensions and countries.

Acculturation Profiles via Latent Profile Analysis

To answer the first research question, latent profile analyses (LPA) were conducted with the four dimensions of the

Table 2 Correlations between the four acculturation dimensions and psychological adjustment (assessed via self-esteem and self-determination)

	Country	Migrant students' heritage culture maintenance	Migrant students' dominant culture adoption	Majority students' acquisition of cultural knowledge	Schools' endorsement of intercultural contact	Self-esteem
Migrant students' heritage culture maintenance	GER	1				
	GRE					
	SWI					
Migrant students' dominant culture adoption	GER	0.118* (n = 306)	1			
	GRE	0.097 (n = 387)				
	SWI	0.004 (n = 343)				
Majority students' acquisition of cultural knowledge	GER	0.296*** (n = 316)	0.405*** (n = 302)	1		
	GRE	0.355*** (n = 384)	0.347*** (n = 382)			
	SWI	0.453*** (n = 343)	0.202*** (n = 339)			
Schools' endorsement of intercultural contact	GER	0.333*** (n = 311)	0.225*** (n = 297)	0.609*** (n = 311)		
	GRE	0.409*** (n = 369)	0.233*** (n = 368)	0.596*** (n = 369)	1	
	SWI	0.518*** (n = 343)	0.052 (n = 338)	0.583*** (n = 340)		
Self-esteem	GER	0.215*** (n = 317)	0.014 (n = 299)	0.110 (n = 310)	0.058 (n = 312)	1
	GRE	0.062 (n = 349)	-0.105 (n = 343)	-0.036 (n = 347)	0.046 (n = 338)	
	SWI	0.219*** (n = 342)	-0.035 (n = 332)	0.079 (n = 336)	0.172** (n = 337)	
Self-determination	GER	0.250*** (n = 320)	0.005 (n = 303)	0.082 (n = 315)	0.108 (n = 313)	0.547*** (n = 318)
	GRE	0.134** (n = 390)	-0.083 (n = 382)	0.007 (n = 379)	0.093 (n = 362)	0.575*** (n = 343)
	SWI	0.269*** (n = 352)	-0.093 (n = 342)	0.119* (n = 344)	0.210*** (n = 343)	0.634*** (n = 342)

Missing data was excluded pair-wise

GER Germany, GRE Greece, SWI Switzerland

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

attitudes toward mutual acculturation (migrant students' heritage culture maintenance, migrant students' dominant culture adoption, majority students' acquisition of cultural knowledge, and schools' endorsement of intercultural contact) as continuous variables in Mplus 8.3 (Muthén & Muthén, 1998–2019). LPA is a statistical person-centric approach that allows for the recovery of hidden groups from observed data (Oberski, 2016). The assumption is that “people can be *typed* with varying degrees of probabilities into categories (subpopulations) that have different configural profiles of personal and/or environmental attributes” (Spurk et al., 2020, pp. 1–2). Therefore, latent typologies are created based on data and the probability of everyone belonging to a specific subgroup. For each country, LPAs were conducted for the national overall sample first (see Appendix, Figs. 4–6). Then separate LPAs were calculated for the two subsamples in each country: students with and without a migration background. In deciding on the number of profiles in LPA, models with up to six latent profiles were examined, and model fit indices and theoretical considerations in the analysis of the various patterns guided the selection of the number of profiles in each sample (Geiser, 2009; Nylund et al., 2007). To assess the classification of participants, maximum likelihood estimation was applied with robust standard errors. In summary, three profiles were found in the three national samples and each of the national migration background and non-migration background subsamples: the mutual integration profile, with the highest agreement in all four dimensions (except for the adoption dimension in Switzerland); the mutual mild-integration profile, with the highest agreement with heritage culture maintenance; and the low-responsibility-on-majority profile, with the strongest disagreements with the two majority dimensions. The most common profile across countries and groups was the mutual integration profile and most students were found in one of the two integration profiles (see Table 3 for an overview).

In Mplus, while running the LPAs, missing data were handled using full information maximum likelihood (FIML), except in the case of missing values on all variables ($n = 10$, 3% in Germany; $n = 15$, 3% in Greece; and $n = 16$, 4% in Switzerland). FIML uses all available data without imputing missing data, which may introduce randomness in the data. Thus, it is unbiased and preferable to other methods (Dong & Peng, 2013). Across the three countries and the two migration and non-migration background groups, missing data ranged from 0 to 7% in the first dimension on migration background students' heritage culture maintenance (Germany $n = 9$, 4% migration background; $n = 0$, 0% non-migration background; Greece $n = 13$, 7% migration background; $n = 5$, 2% non-migration background; and Switzerland $n = 3$, 1% migration background; $n = 0$, 0% non-migration background); from 4 to 11% in the second dimension on migration background

students' dominant culture adoption (Germany $n = 24$, 10% migration background; $n = 4$, 5% non-migration background; Greece $n = 19$, 11% migration background; $n = 10$, 5% non-migration background; and Switzerland $n = 11$, 4% migration background; $n = 5$, 6% non-migration background); from 1 to 13% in the third dimension on non-migration background students' cultural knowledge acquisition (Germany $n = 14$, 6% migration background; $n = 1$, 1% non-migration background; Greece $n = 22$, 13% migration background; $n = 5$, 2% non-migration background; and Switzerland $n = 9$, 4% migration background; $n = 4$, 5% non-migration background); and from 1 to 19% in the fourth dimension on schools' endorsement of intercultural contact and exchange (Germany $n = 15$, 6% migration background; $n = 1$, 1% non-migration background; Greece $n = 31$, 19% migration background; $n = 11$, 5% non-migration background; and Switzerland $n = 10$, 4% migration background; $n = 4$, 5% non-migration background).

Germany

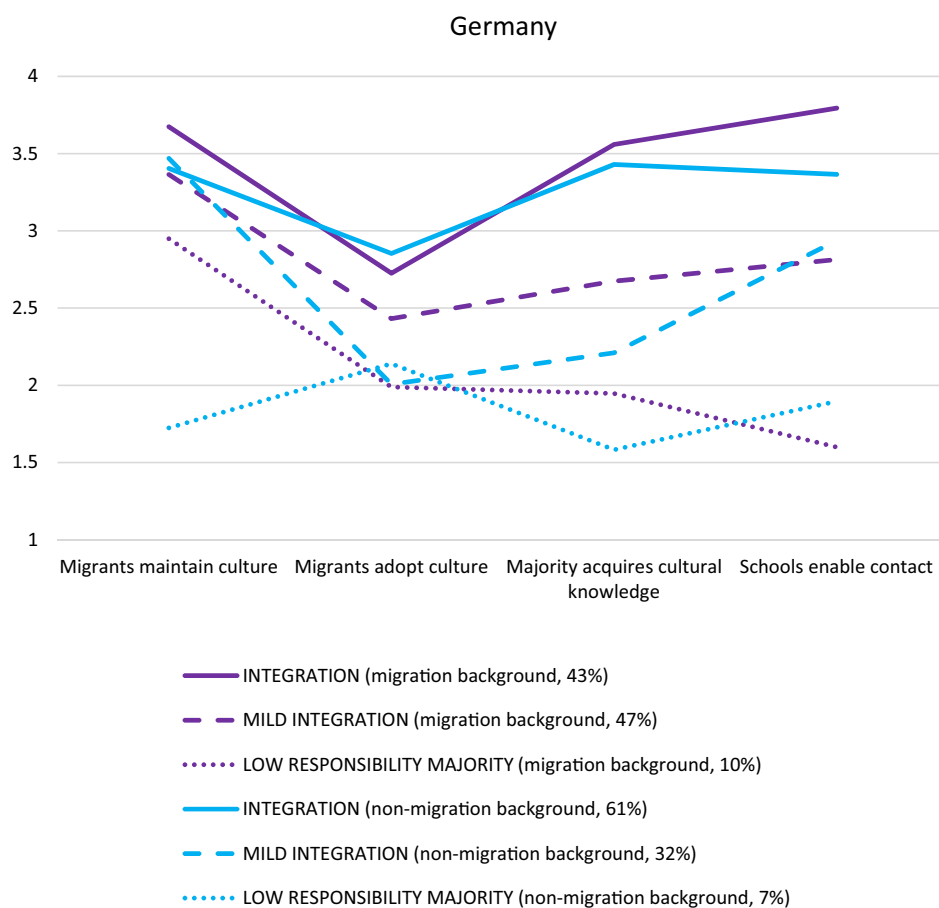
Model fit (see Appendix, Table 5) was best for the three-profile solution in the whole sample ($N = 336$). In the two subsamples, for those with ($n = 262$) and without ($n = 74$) a migration background, although the three-profile solution did not significantly improve the model fit over the two-profile solution (see Appendix, Table 5), a three-profile solution was chosen because the third class presented a theoretically distinct profile, compared to a two-profile solution. In all three analyses, three similar profiles were found (see Fig. 1 and Appendix for the full sample figure). First, in the mutual integration profile (migration background subsample $n = 113$, 43%; non-migration background sample $n = 45$, 61%), students agreed or tended to agree with all four dimensions (agreement is shown as a value equal to or greater than 3 out of 4 on the y-axis; a tendency to agree is shown as a value equal to or greater than 2.5 on the y-axis). Moreover, the mutual integration profile was very similar for students with and without a migration background. Second, in the mutual mild-integration profile (migration background subsample $n = 123$, 47%; non-migration background sample $n = 24$, 32%), students agreed with most dimensions but less so than those in the mutual integration group. Moreover, the mutual mild-integration profile slightly differed across students with and without a migration background. Those without a migration background tended to disagree with immigrants' need to adopt the dominant culture and the majorities' need to acquire intercultural knowledge, compared to those with a migration background, who tended to agree with these dimensions. Most students in the German sample across both groups were in one of the integration profiles. Finally, the low-responsibility-on-majority profile consisted of a

Table 3 Overview findings acculturation profiles

Acculturation profile	Country	Migration background	Migration background students' heritage culture maintenance	Migration background students' dominant culture adoption	Majority students' acquisition of cultural knowledge	Schools' endorsement of intercultural contact
Mutual Integration	Germany	With (<i>n</i> = 113, 43%)	Agree	(Agree)	Agree	Agree
		Without (<i>n</i> = 45, 61%)	Agree	(Agree)	Agree	Agree
	Greece	With (<i>n</i> = 79, 40%)	Agree	Agree	Agree	Agree
		Without (<i>n</i> = 95, 42%)	Agree	Agree	Agree	Agree
	Switzerland	With (<i>n</i> = 105, 40%)	Agree	(Agree)	Agree	Agree
		Without (<i>n</i> = 40, 43%)	Agree	(Disagree)	Agree	Agree
Mutual Mild-Integration	Germany	With (<i>n</i> = 123, 47%)	Agree	(Disagree)	(Agree)	(Agree)
		Without (<i>n</i> = 24, 32%)	Agree	Disagree	(Disagree)	(Agree)
	Greece	With (<i>n</i> = 99, 51%)	Agree	(Agree)	(Agree)	Agree
		Without (<i>n</i> = 101, 44%)	Agree	(Agree)	(Agree)	Agree
	Switzerland	With (<i>n</i> = 145, 53%)	Agree	(Disagree)	(Agree)	(Agree)
		Without (<i>n</i> = 42, 46%)	Agree	(Agree)	(Agree)	(Agree)
Low-responsibility-on-majority	Germany	With (<i>n</i> = 26, 10%)	(Agree)	Disagree	Disagree	Disagree
		Without (<i>n</i> = 5, 7%)	Disagree	(Disagree)	Disagree	Disagree
	Greece	With (<i>n</i> = 18, 9%)	Disagree	(Disagree)	Disagree	Disagree
		Without (<i>n</i> = 32, 14%)	Agree	(Disagree)	Disagree	(Agree)
	Switzerland	With (<i>n</i> = 17, 7%)	Disagree	Disagree	Disagree	Disagree
		Without (<i>n</i> = 10, 12%)	(Agree)	(Agree)	Disagree	Disagree

Agree is defined as a value between 3 and 4; (Agree) relates to values between 2.5 and 2.9; (Disagree) relates to values between 2.1 and 2.4; and Disagree is defined as a value between 1 and 2

Fig. 1 Latent Profile Analysis of the German Subsamples With ($n = 262$) vs. Without ($n = 74$) Migration Background. Note. Analyzing attitudes toward mutual acculturation via a four-dimensional framework provided three distinct profiles: mutual integration, mutual mild-integration, and low responsibility majority. 1 = disagree, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree



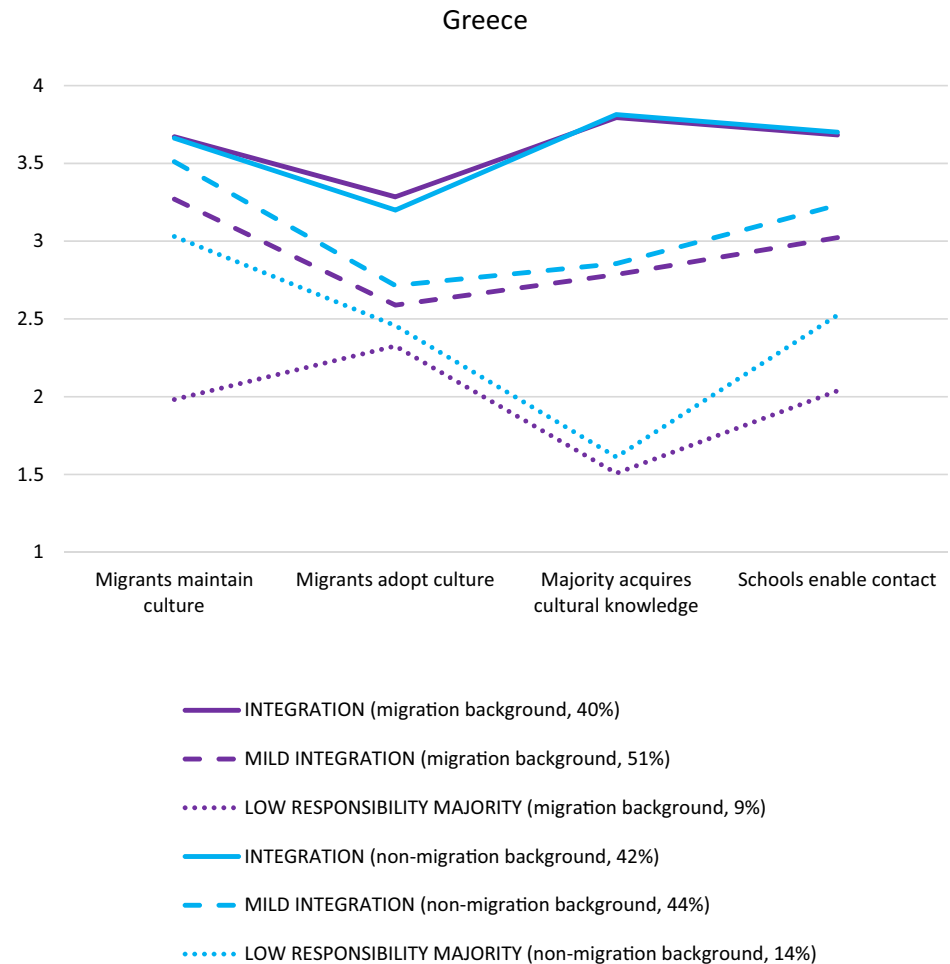
relatively smaller group of students (migration background subsample $n = 26$, 10%; non-migration background sample $n = 5$, 7%), who mostly disagreed with the two majority dimensions (i.e., that majority students should acquire cultural knowledge and schools should enable intercultural contact; disagreement is shown as a value equal to or lower than 2; a tendency to disagree is shown as a value lower than 2.5). This profile differed across groups mostly regarding the heritage culture maintenance dimension so that those without a migration background disagreed with migrants maintaining their culture, compared to those with a migration background (who agreed with this dimension). Across three profiles, students with a migration background varied the most in their attitudes toward schools' endorsement of intercultural contact. Students without a migration background, however, varied the most in their attitudes on majority students' acquisition of cultural knowledge.

Greece

Model fit (see Appendix, Table 6) was best for the three-profile solution in the full sample ($N = 424$) and the subsample of students without a migration background ($n = 228$). In the subsample of those with a migration background ($n = 196$),

although the three-class model did not significantly improve the model fit over a two-class model, similar to the subsample analyses in Germany, a three-profile solution was chosen because the third class also presented a theoretically distinct and meaningful profile. Model-fit indices were still good for the three-profile solution in this subsample. In all three analyses (full sample and two subsample analyses), three similar profiles were found (see Fig. 2, see Appendix for the full sample figure). First, among those in the mutual integration profile (migration background subsample $n = 79$, 40%; non-migration background sample $n = 95$, 42%), students agreed with all four dimensions, and those with and without a migration background did not differ from one another. Second, in the mutual mild-integration profile (migration background subsample $n = 99$, 51%; non-migration background sample $n = 101$, 44%), students agreed or tended to agree with all dimensions but most strongly so with the heritage culture maintenance dimension, that is, migrants are allowed to maintain their cultures. Overall, those in the mutual mild-integration profile agreed with the dimensions less strongly than those in the mutual integration profile. Moreover, those with and without a migration background did not differ from one another. As in the German sample, most students across both groups in the Greek sample were in either of the two integration profiles. Third, the

Fig. 2 Latent Profile Analysis of the Greek Subsamples With ($n = 196$) vs. Without ($n = 228$) Migration Background. Note. Analyzing attitudes toward mutual acculturation via a four-dimensional framework provided three distinct profiles: mutual integration, mutual mild integration, and low responsibility majority. 1 = disagree, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree



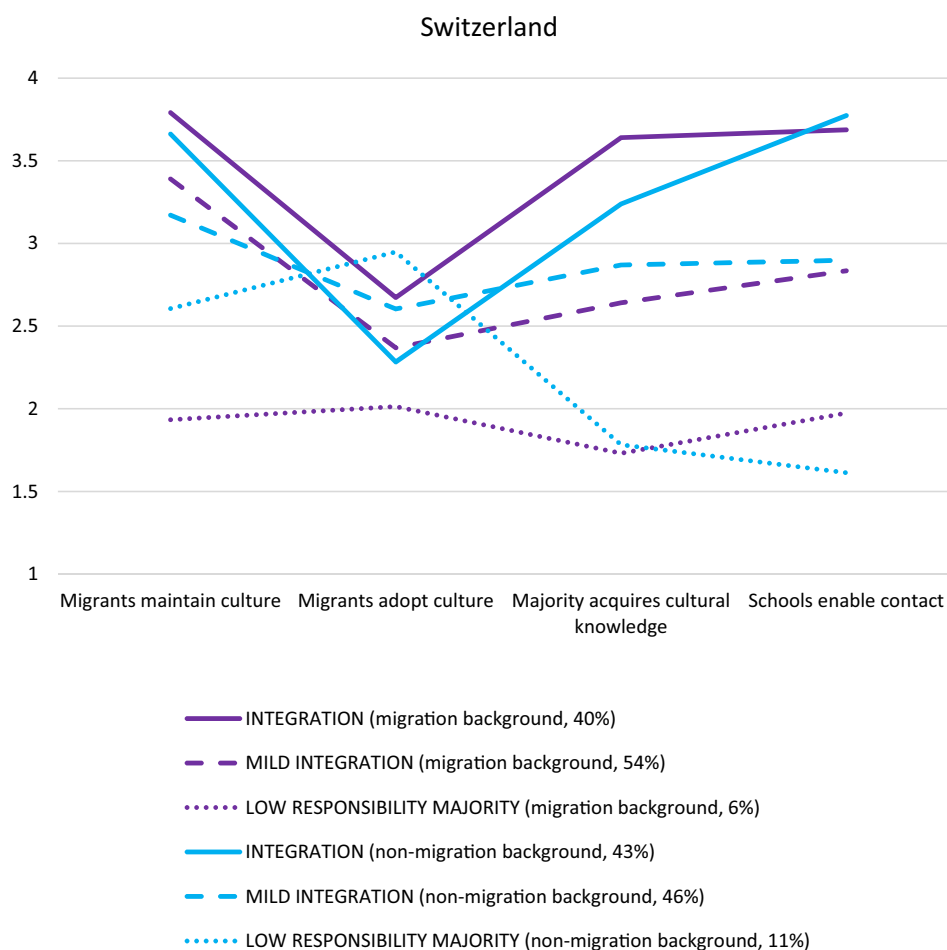
low-responsibility-on-majority profile consisted of a smaller group of students (migration background subsample $n = 18$, 9%; non-migration background sample $n = 32$, 14%), who tended to disagree with most dimensions and strongly disagreed with the dimension concerning majority students' acquisition of cultural knowledge. In three out of the four dimensions, students with and without a migration background did not differ, but in the dimension regarding migrants maintaining culture, surprisingly, those with a migration background disagreed, and those without a migration background agreed with it. Across the three profiles, students with and without a migration background varied the most in their attitudes toward majority students' acquisition of cultural knowledge.

Switzerland

The three-profile model was again opted for in the full sample ($N = 359$; see Appendix, Table 7). Comparing the three-profile with the two-profile solution, the three-profile solution improved the model fit and the three profiles were theoretically distinct and meaningful. Although the four-profile model still provided a significant improvement over

the three-profile model in terms of model fit, the fourth profile did not add a theoretically distinct group. In the two subsamples, those with ($n = 267$) and without ($n = 92$) a migration background, a three-profile model was chosen. Among those with a migration background, a three-profile model provided the best fit both in terms of model fit indices and theoretically. Among those without a migration background, although model fit indices were similar for two- and three-class solutions, the third class still added a meaningful and distinct group. In all three samples, three similar profiles were found (see Fig. 3, see Appendix for the full sample figure). First, in the mutual integration profile (migration background subsample $n = 105$, 40%; non-migration background sample $n = 40$, 43%), students largely agreed with the four dimensions but much less so with the dimension concerning migrants adopting culture. Although students with and without a migration background were mostly similar in their attitudes, particularly in the adoption dimension, responses of students with a migration background were slightly above the scale's midpoint (on the agree side) whereas students without a migration background were slightly below the scale's midpoint (on the

Fig. 3 Latent Profile Analysis of the Swiss Subsamples With ($n = 267$) vs. Without ($n = 92$) Migration Background. Note. Analyzing attitudes toward mutual acculturation via a four-dimensional framework provided three distinct profiles: mutual integration, mutual mild integration, and low responsibility majority. 1 = disagree, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree



disagree side). Second, in the mutual mild-integration profile (migration background subsample $n = 145$, 53%; non-migration background sample $n = 42$, 46%), students largely agreed with all dimensions but more strongly so with the heritage culture maintenance dimension. Overall, those in the mutual mild-integration profile agreed with the dimensions less strongly than those in the mutual integration profile. Moreover, students with and without a migration background were largely similar in their attitudes. Similar to the other countries, most students in the Swiss sample across both groups fit one of the integration profiles. Third, the low-responsibility-on-majority profile consisted of a smaller group of students (migration background subsample $n = 17$, 7%; non-migration background sample $n = 10$, 12%), who disagreed with the two majority dimensions (majority students' acquisition of cultural knowledge and schools' endorsement of intercultural contact). However, students with and without a migration background differed in their expectations of migrants: Although those without a migration background agreed with both migrant dimensions, more so with migrants adopting the culture, those with a migration background tended to disagree with these dimensions. Additionally, across three profiles, students

with and without a migration background varied the most in their attitudes concerning both majority dimensions.

Acculturation Profiles and Psychological Adjustment

To answer the second research question, several univariate ANOVAs were run in SPSS (version 27) to determine whether students with and without a migration background in the three profiles of mutual acculturation (integration, mild integration, and low-responsibility majority) significantly differed in terms of their psychological adjustment (see Table 4). In each country, to allow for the group-specific patterns of students with and without a migration background, the latent profile solution of each subgroup was fused into one. Therefore, the variable used for the ANOVA comprises the three profiles, each of which consists of the respective profile of students with and without a migration background. The effects of the found acculturation profiles of students with and without a migration background on self-esteem and self-determination were assessed while controlling for gender. The interactions of acculturation profiles with a migration background were tested. When comparing mean differences of the three

Table 4 ANOVA summary table for psychological adjustment

Country	DV IV	Self-Esteem			Self-Determination		
		<i>F</i> (df, e)	<i>p</i>	Effect Size	<i>F</i> (df, e)	<i>p</i>	Effect Size
Germany	Acculturation attitudes LPA	6.29 (2, 316)	0.002	0.038	4.80 (2, 319)	0.009	0.029
	Migration background	7.50 (1, 316)	0.007	0.023	2.71 (1, 319)	0.101	0.008
	LPA × Migration	4.69 (2, 316)	0.010	0.029	3.73 (2, 319)	0.025	0.023
	R ²			0.09			0.05
Greece	Acculturation attitudes LPA	0.69 (2, 349)	0.505	0.004	0.25 (2, 390)	0.781	0.001
	Migration background	6.36 (1, 349)	0.012	0.018	10.15 (1, 390)	0.002	0.025
	LPA × Migration	0.79 (2, 349)	0.453	0.005	2.92 (2, 390)	0.055	0.015
	R ²			0.03			0.04
Switzerland	Acculturation attitudes LPA	3.48 (2, 337)	0.032	0.020	7.10 (2, 347)	<0.001	0.039
	Migration background	0.01 (1, 337)	0.921	0.000	0.65 (1, 347)	0.422	0.002
	LPA × Migration	0.30 (2, 337)	0.743	0.002	2.98 (2, 347)	0.052	0.017
	R ²			0.05			0.06

acculturation profiles (post hoc tests), Bonferroni correction and bootstrap of 1000 samples were used. Bootstrap confidence intervals for the mean differences are reported in addition to *p* values. In summary, the acculturation profiles differed significantly concerning psychological adjustment in Germany and Switzerland but not in Greece. Those with and without a migration background significantly differed in psychological adjustment in Germany and Greece but not in Switzerland. The interaction between the two was significant in self-esteem and self-determination in Germany. However, neither country nor having a migration background changed the finding that those in the integration profile had higher psychological adjustment than those in the mild-integration and/or those in the low-responsibility-on-majority groups, and those in the mild-integration profile had higher psychological adjustment than those in the low-responsibility-on-majority group although the differences between the latter two were not always significant.

In SPSS, when running the ANOVAs, listwise deletion was used as the default option. Due to the missingness in control variables and outcome variables, the missing values ranged from 6 to 19% across different sets of analyses ($n = 23$, 7% for self-esteem and $n = 20$, 6% for self-determination in Germany; $n = 83$, 19% for self-esteem and $n = 42$, 10% for self-determination in Greece; and $n = 31$, 8% for self-esteem and $n = 21$, 6% for self-determination in Switzerland).

In a first analysis, it was also tested whether the acculturation profiles differed in terms of the teacher support they experienced. Similar to psychological adjustment, significant results were found only in Germany and Switzerland: those in the integration profile reported higher teacher support than

those in the mild-integration profile and those in the low-responsibility-on-majority profile in Germany, and those in the integration profile reported higher teacher support than those in the low-responsibility-on-majority profile in Switzerland. Yet, to focus the findings on psychological adjustment, these results were excluded from this publication.

Sensitivity analyses were run in G*Power (3.1.9.7) and found that ANOVAs with $n = 323$ – 397 participants across six groups with one covariate would be sensitive to effects with an effect size of 0.22 in Germany, 0.20–0.21 in Greece, and 0.21 in Switzerland with 80% power ($\alpha = 0.05$). This means that the study was not able to reliably detect effects with an effect size smaller than 0.20–0.22 across the three countries.

Germany

Acculturation profiles significantly differed in terms of self-esteem and self-determination. Students with and without a migration background significantly differed in self-esteem. Finally, the interaction of migration background and acculturation profiles showed a significant effect on self-esteem and self-determination.

Looking at acculturation profiles more specifically, those in the integration profile ($M = 2.95$, $SD = 0.55$, $p = 0.004$, 95% CI [0.15, 0.73]) and those in the mild-integration profile ($M = 2.91$, $SD = 0.55$, $p = 0.014$, 95% CI [0.02, 0.62]) reported significantly higher self-esteem than those in the low-responsibility-on-majority profile ($M = 2.74$, $SD = 0.54$). Moreover, those in the integration profile ($M = 2.87$, $SD = 0.41$) reported higher self-determination than those in the mild-integration ($M = 2.77$, $SD = 0.41$, $p = 0.024$, 95% CI

[0.02, 0.22]) and low-responsibility-on-majority profiles ($M = 2.76$, $SD = 0.43$, $p = 0.006$, 95% CI [0.12, 0.44]), but those in the mild-integration profile reported significantly higher self-determination than those in the low-responsibility-on-majority profile ($p = 0.047$, 95% CI [-0.02, 0.34]). Overall, those in the integration profile reported higher psychological adjustment than the two other groups.

Looking at students with and without a migration background, those with a migration background ($M = 2.93$, $SD = 0.53$) had significantly higher self-esteem than those without a migration background ($M = 2.85$, $SD = 0.59$).

These main effects were qualified by the significant interactions between acculturation profiles and migration background, which showed that the significant differences in self-esteem and self-determination only emerged for the non-migration background subsample. Those in the integration profile ($M = 3.00$, $SD = 0.52$, $p = 0.001$, 95% CI [0.35, 1.34]) and those in the mild-integration profile ($M = 2.73$, $SD = 0.61$, $p = 0.004$, 95% CI [0.02, 1.17]) reported higher self-esteem than those in the low-responsibility group ($M = 2.06$, $SD = 0.45$). Students without a migration background in the integration profile ($M = 2.94$, $SD = 0.32$) reported higher self-determination than those in the mild-integration group ($M = 2.75$, $SD = 0.40$, $p = 0.051$, 95% CI [0.01, 0.35]) and those in the low-responsibility group ($M = 2.34$, $SD = 0.23$, $p = 0.001$, 95% CI [0.34, 0.81]). Those in the mild-integration group ($M = 2.75$, $SD = 0.40$) reported higher self-determination than those in the low-responsibility group ($M = 2.34$, $SD = 0.23$, $p = 0.002$, 95% CI [0.11, 0.67]). Although significant, the mean differences, particularly in self-determination, were overall small.

Greece

Acculturation profiles did not significantly differ in terms of self-esteem and self-determination. Students with and without a migration background significantly differed in self-esteem and self-determination. No significant interaction effects were found.

Looking at the effects of migration background, those without a migration background reported higher self-esteem ($M = 3.06$, $SD = 0.50$) and higher self-determination ($M = 2.89$, $SD = 0.43$) than those with a migration background ($M = 2.93$, $SD = 0.51$ for self-esteem; $M = 2.77$, $SD = 0.40$ for self-determination). Although significant, the mean differences were again overall small.

Switzerland

Although acculturation profiles significantly differed in terms of self-esteem and self-determination, students with and without a migration background did not significantly differ, and no interaction effects were found.

Looking at acculturation profiles, those in the integration profile ($M = 3.06$, $SD = 0.57$) reported significantly higher self-esteem than those in the mild-integration ($M = 2.88$, $SD = 0.52$, $p = 0.017$, 95% CI [0.03, 0.28]) and low-responsibility-on-majority profiles ($M = 2.82$, $SD = 0.44$, $p = 0.014$, 95% CI [0.05, 0.44]). Similarly, those in the integration profile ($M = 3.01$, $SD = 0.42$) reported higher self-determination than those in the mild-integration ($M = 2.83$, $SD = 0.44$, $p = 0.003$, 95% CI [0.05, 0.25]) and low-responsibility-on-majority profiles ($M = 2.74$, $SD = 0.52$, $p = 0.002$, 95% CI [0.11, 0.56]).

Discussion

Acculturation is often misconceived as a process that only minority members experience. As a result, little is known as to how majority members acculturate (but see Kunst et al., 2021). The present study goes beyond assessing either minority or majority acculturation by combining them into a four-dimensional assessment of attitudes toward both minority and majority acculturation within the school context. Thus, both minority and majority adolescents' attitudes toward *migration background students' heritage culture maintenance* and *dominant culture adoption*, as well as toward *majority students' acquisition of cultural knowledge* and *schools' endorsement of intercultural contact* (Sidler et al., 2021) were assessed. First, through a multigroup CFA, measurement invariance of the four-dimensional assessment of attitudes toward mutual acculturation was established across Germany, Greece, and Switzerland (see Supplementary Material for results). Thus, comparisons across the three samples using this measure proved meaningful and valid. The main aims of this study were twofold: first, to analyze adolescents' attitudes toward mutual acculturation in these three European countries, and second, to assess the association between these acculturation profiles and psychological adjustment. Each aim will be discussed in the next sections.

Mutual Acculturation for Adolescents with and without a Migration Background

In relation to the first research question, the study sought to assess how and to what extent adolescents' attitudes toward mutual acculturation differ within and across minority and majority groups. Three acculturation profiles were found in each country and each group: the mutual integration profile, with the highest agreement in all four dimensions; the mutual mild-integration profile, with a high agreement with heritage culture maintenance and fluctuating agreement to the other three dimensions relative to context and group; and the low-responsibility-on-majority profile, with the strongest disagreements with the two majority dimensions (see Table 3). The most common profile across countries and groups was the mutual integration profile and most

students were found in one of the two integration profiles. The third profile low-responsibility-on-majority showed most cross-national variations, which reflect the three different national contexts (e.g., MIPEX). These results add a more nuanced understanding of acculturation to those of previous studies focusing only on attitudes toward minority acculturation, as the acculturation profiles in this study were based on the assessment of attitudes toward mutual acculturation. By assessing attitudes toward mutual acculturation, this study shows how integration profiles are more diverse than would be expected by traditional assessments of bicultural attitudes that focus only on attitudes toward minority acculturation. These findings strengthen previous research using LPA in acculturation research as a robust person-centric technique to model acculturation without anticipating profiles beforehand (Fox et al., 2013). Moreover, the three profiles differed most concerning the two majority dimensions, which stresses the importance of a mutual acculturation framework, as the two new dimensions are distinct features of the three profiles.

Adolescence is a time when opinions and attitudes are formed and developed, rendering research on attitudes toward mutual acculturation key to understanding acculturation expectations. One common finding across contexts and groups in this study was that most adolescents fit one of the two integration profiles, namely in Germany (90% of those with and 94% of those without a migration background), Greece (91% of those with and 86% of those without a migration background), and Switzerland (93% of those with and 89% of those without a migration background). This aligns with previous research on migration background adolescents finding that they favor integration (Makarova & Birman, 2015, 2016). Concerning non-migration background majority adolescents, this openness could stem from their young age. Given the rise of migration in the 21st century, they may have experienced other cultures at an earlier age and therefore have a more open-minded mindset. This might also be the case for migration background adolescents, as in a study in Sweden, adolescents were found to become more open to diverse perspectives over time (Bayram Özdemir et al., 2021), stressing a developmental perspective during adolescence. Another commonality across the two integration profiles is that all students in an integration profile agreed with schools' endorsement of intercultural contact, even though a weaker agreement is found in the mild-integration profiles. The latter strengthens findings concerning schools being a shared ground for promoting openness to diversity (Bayram Özdemir et al., 2021) and therefore for schools to actively shape intercultural contact and exchange. Similar to the schools' endorsement of intercultural contact dimension, there is a strong agreement across the integration profiles in relation to migration background students' maintenance of heritage culture. In particular, adolescents with a migration background across all three countries agree with the

heritage culture maintenance dimension, thus demonstrating the importance of making space for heritage culture maintenance within the context of school. Yet, there were also slight cross-national differences: Across all three profiles, it is only the majority students in Greece and Switzerland and the migration background students in Germany who agree with the first dimension concerning heritage culture maintenance no matter which pattern they fit. This finding is particularly interesting in the Swiss context, as Switzerland's adult majority has voted to ban burqas and minarets in the last decade (Arlt, 2021; Dodd, 2015). In Germany, the agreement of all students with a migration background with the first dimension on heritage culture maintenance probably reflects their experience on heritage culture maintenance. This result aligns with previous findings on minority adolescents in Germany stressing their culture maintenance (Dimitrova et al., 2015). Most cross-country variation across the two integration profiles was found in relation to migration background students' adoption of the local dominant culture and majority students' acquisition of cultural knowledge, which could relate to the diverse national contexts following the MIPEX, the unfamiliarity with the concept of majority acculturation, and the emphasis on context in acculturation research (Birman & Simon, 2014).

The differences across groups and countries emerged particularly in the low-responsibility-on-majority profile, shifting between separation (agreement only with heritage culture maintenance), individualism (disagreement with all four dimensions), and one-sided integration (agreement with the two minority acculturation dimensions: heritage culture maintenance and dominant culture adoption). However, given the small number of adolescents in each pattern, these differences should be analyzed with caution. Among those endorsing this profile, students with a migration background show an individualism pattern in Greece and Switzerland and a separation pattern in Germany. Students without a migration background show an individualism pattern in Germany, a one-sided integration pattern in Switzerland (disagreeing with the two majority dimensions), and a separation/integration pattern in Greece (fully disagreeing only with majority students acquiring cultural knowledge). An individualism pattern could be due to adolescents focusing on individualism or color-blindness (Bourhis et al., 1997; Dovidio et al., 2016) or, due to globalization and digitalization, such that they prefer a global mindset instead of the focus on divisions into ethno-cultural groups. This kind of global mindset could also explain why this pattern was found for both groups of students—those with and without a migration background. Yet, migration background students' disagreement with heritage culture maintenance (i.e., having an individualism pattern like in Greece and Switzerland) could also be due to their experience of assimilationist pressures within the school context (Archakis et al., 2018; Makarova et al., 2019) or unfavorable integration policies (e.g., MIPEX). Then, the

one-sided integration profile of majority students strengthens the importance of a mutual acculturation framework, because if only attitudes toward minority acculturation had been assessed, these students would have fallen into an integration category. Yet, in comparison to the majority students in one of the integration profiles, the majority students in the one-sided integration profile are a distinct group in relation to how they expect the majority to acculturate. Given that integration policies do not focus on majority members, this disagreement with majority students' acquisition of cultural knowledge could stem from the unfamiliarity with this concept. The common factor in the low-responsibility-on-majority profiles lies in the small group sizes across countries and groups and the strong disagreement with the two majority dimensions (except for majority students in Greece only disagreeing strongly with the third dimension).

Mutual Acculturation and Psychological Adjustment

Concerning the second research question, the associations between the aforementioned acculturation profiles and psychological adjustment were assessed. Psychological adjustment was measured via self-esteem and self-determination. An integration or bicultural orientation was predominantly positively associated with adjustment for students with a migration background (Makarova & Birman, 2015, 2016), and very few results have been established for students without a migration background (Haugen & Kunst, 2017). Yet, the results for students with a migration background were also inconsistent, which could stem from contextual factors influencing acculturation (Birman & Simon, 2014). The findings of this study strengthen the integration hypothesis that having a mutual integration strategy is associated with positive psychological adjustment. Namely, in Switzerland, those in the mutual integration group reported higher self-esteem and higher self-determination than those in the other two groups, and no significant interaction effects with migration background were found. This relates to and enhances previous research in Switzerland finding a positive relationship between psychosocial adaptation and integration orientations for minority adolescents (Hoti et al., 2017). Yet, the results also indicate important contextual variety: In Germany, integration and mild-integration groups reported higher self-esteem than the low responsibility group; strong- and mild-integration groups reported higher self-determination than the mild-integration and low-responsibility-on-majority groups. However, through interaction effects of migration background and acculturation profiles, the significant differences in self-esteem and self-determination only emerged for the non-migration-background subsample. Thus, in Germany, the benefits of a mutual integration profile were more obvious for students without a migration background. A study in Norway found

that majority members' openness predicted more adoption of minority cultures (Kunst et al., 2021), thus high self-esteem and self-determination of German majority students might relate to mutual integration attitudes and not vice versa. Future longitudinal research in the German context would be needed to gain more clarity on the directionality between attitudes toward mutual acculturation and positive psychological adjustment. In Greece, however, psychological adjustment in terms of self-esteem and self-determination was not significantly associated with the acculturation profiles regardless of students' migration background. This could relate to previous findings on contextual variability in the adaptive value of integration (Phalet & Baysu, 2020), meaning that in less welcoming contexts, an integration strategy might not prove to be beneficial. It could also mean that the relationship between acculturation attitudes and adjustment is not as strong as supposed (Bierwiazzonek & Kunst, 2021). Yet, an ANOVA with $n = 356$ (self-esteem) respectively $n = 397$ (self-determination) participants across six groups with one covariate would be sensitive to effects with an effect size of 0.21 and 0.20 respectively with 80% power ($\alpha = 0.05$). This means that the study was not able to reliably detect effects with an effect size smaller than 0.21 and 0.20 respectively. Thus, there might be a small relation between acculturation profiles and psychological adjustment in Greece, yet this study might not have detected it.

The findings of this study go beyond previous research, as having a strong mutual integration strategy relates to agreeing strongly not only with minority acculturation but also with majority acculturation. Additionally, whereas previous research focused on minority adolescents' adjustment, the results of this study indicate a relationship between a mutual integration orientation and positive psychological adjustment not only for adolescents with a migration background but also or even only for adolescents without a migration background. Additionally, schools are expected to enhance intercultural contact in the two mutual integration profiles, which aligns with students having higher self-esteem, well-being, and motivation to learn in schools where diversity is valued and discussed (Vedder & van Geel, 2012). The cross-national diversity demonstrates that researchers should consider perspectives and context (Birman & Simon, 2014) when assessing acculturation attitudes and psychological adjustment. Moreover, longitudinal research designs are needed to understand the relationship and directionality between acculturation attitudes and positive adjustment better (Bierwiazzonek & Kunst, 2021).

Strengths, Future Directions, and Limitations

Through a four-dimensional exploration of acculturation attitudes combining minority and majority acculturation, the findings of this study enhance acculturation-attitude theory with

latent patterns assessed using a mutual acculturation framework based on minority and majority acculturation. Moreover, this study's results empirically substantiate the importance of combining minority and majority acculturation, as both are important for students with and without a migration background. Hence, this study shows the inherent mutuality of acculturation and the shared responsibility of minority and majority members, including institutions, to enhance successful acculturation. Therefore, further studies assessing acculturation attitudes and psychological adjustment should also include majority acculturation, as this study's results emphasize the importance of the four dimensions for students with and without a migration background.

Practical implications arise in the context of school. Although diverse associations between attitudes toward mutual acculturation and psychological adjustment were found, the overall patterns are very similar across groups and countries. Namely, a strong relationship emerged between positive psychological adjustment and mutual integration, meaning the expectations placed on minority and majority adolescents as well as on schools to integrate. Most of the participating students saw schools as actors within the process of acculturation and found it important that schools enable intercultural contact, emphasizing schools and teachers' ability to enable intergroup contact and interactions (Phalet & Baysu, 2020) while promoting minority and majority students learning about each other's cultures.

However, two limitations should be addressed: First, given the study's cross-sectional design, neither directional nor causal statements can be made about the relationship between attitudes toward mutual acculturation and psychological adjustment, which researchers should study using a longitudinal design (Bierwiazek & Kunst, 2021). Second, the categorization based on migration background allows for differentiation between students who belong to the dominant national majority and those who do not, accounting for power relations and practices aiming at legitimizing the majority's dominant societal position (Connell, 1998). However, such categorization leads to loss of information, as migrants can be diverse regarding migration generation, migrant status, and countries of origin (Nauck & Genoni, 2019). Additionally, it may be problematic, as self-identification is not taken into account, and students might count as having a migration background but say otherwise (Horvath, 2019). Nevertheless, as this four-dimensional assessment of attitudes toward mutual acculturation relates to the acculturation of minority and majority students, assessing the perspective of minority and majority students (without dissecting the minority group further) promises insights into whether and how societal power relations affect the assessed attitudes toward mutual acculturation.

Conclusion

Acculturation is a mutual process, rendering it important to study acculturation attitudes not only from minority and majority perspectives but also toward minority and majority acculturation. This study explored adolescents' attitudes toward mutual acculturation and assessed the relationship between these acculturation profiles and psychological adjustment. Three distinct acculturation profiles were found for students with and without a migration background in Germany, Greece, and Switzerland, namely, two mutual integration profiles (strong vs mild) in which both immigrant background and majority students are expected to integrate, and a third one assuming lower responsibility for the majority. The patterns looked very similar across groups and countries and most adolescents fit in with one of the mutual integration profiles, suggesting similar developmental processes across contexts. Across the three profiles, students' opinions varied most among the majority dimensions, that is, whether majority adolescents should acquire intercultural knowledge and whether schools should endorse intercultural contact. Then, the most notable differences were found in the low-responsibility-on-majority profiles, ranging from separation, individualism, and one-sided integration patterns across countries and groups. Finally, acculturation profiles mattered in terms of adolescents' psychological adjustment, although this varied across groups and countries. In Germany and Switzerland, those in the strong integration groups reported the highest and those in the low-responsibility-on-majority group the lowest psychological adjustment, whereas those in the mild-integration group were somewhere in between. In Greece, however, integration profiles did not significantly benefit adolescents' psychological adjustment. Overall, our findings stress the value of a mutual acculturation framework, which includes not only the majority and minority perspective but also minority and majority acculturation. Practically, these findings stress that most adolescents with and without a migration background are in favor of mutual integration and expect schools to enhance intercultural contact and exchange at school.

Acknowledgements The authors would like to express their gratitude to all schools, teachers, students, and parents involved in the study in the three countries and would like to thank all research assistants who supported the data collection.

Authors' Contributions PS participated in the study design and data collection, performed the statistical analysis and data interpretation, and drafted the manuscript; GB guided statistical analysis, participated in data interpretation and in drafting the manuscript; WK conceived of the study, participated in its design and coordination, and gave input on statistical analyses; CJ participated in data collection and gave input on statistical analyses; RC participated in data collection and contributed to the draft; CG participated in the study coordination and contributed to the draft; UG participated in the study coordination and data collection, and contributed

to the draft; and CR contributed to the study coordination, gave input on statistical analyses, and contributed to the draft. All authors read and approved the final manuscript.

Funding The Swiss National Science Foundation (SNFS) funded this study through the National Center of Competence in Research NCCR—on the move via the project *Overcoming Inequalities with Education—School Resilience* (grant number 51NF40-182897). The University of Applied Sciences and Arts Northwestern Switzerland (FHNW) generously supported this study. Neither funder had roles in the study design, data collection, data analysis, or drafting of the manuscript. Open access funding provided by FHNW University of Applied Sciences and Arts Northwestern Switzerland.

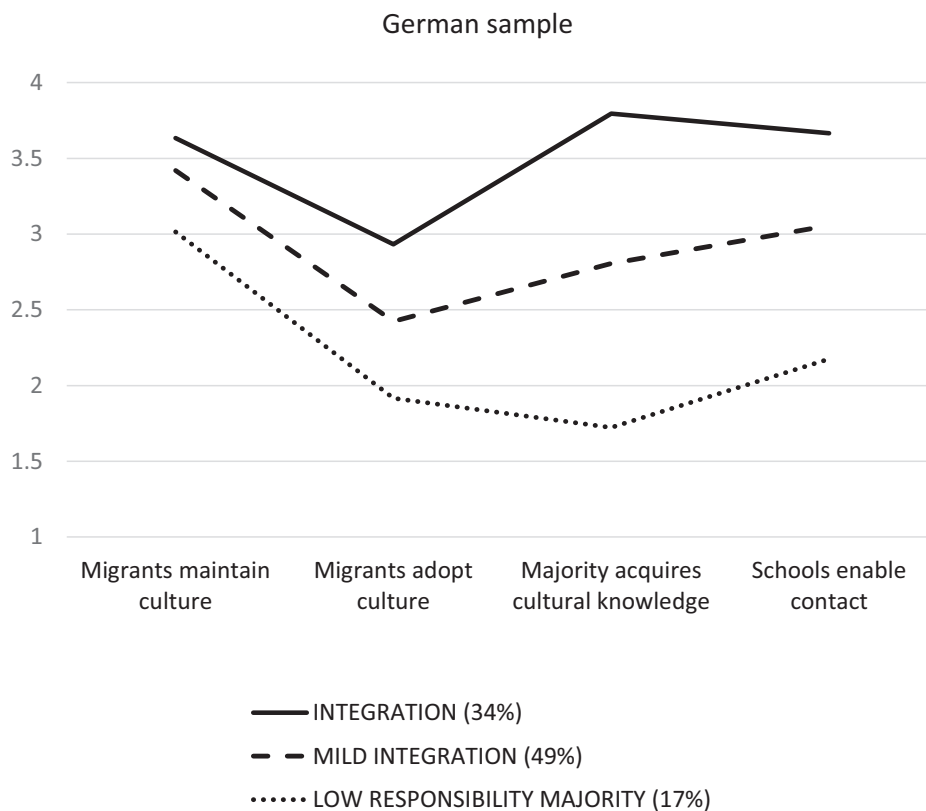
Data Sharing and Declaration The datasets generated and analyzed during the current study are not yet publicly available but are available from the corresponding author on reasonable request.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethics Approval The study design was ethically approved in all three countries: In Germany, the Ministry of Education, Youth, and Sports Baden-Württemberg, the Common Ethics Committee of the University of Education Heidelberg, and the SRH (Stiftung Rehabilitation Heidelberg) endorsed the project. In Greece, the General Assembly of the Pedagogical Department of Primary Education of the University of Thessaly recommended the study. In Switzerland, the Cantonal Bureau for Education in the Cantons of Aargau, Basel-Stadt, and Solothurn, and the Ethics Committee of the Faculty of Arts and Social Sciences of the University of Zurich approved the study.

Fig. 4 Latent Profile Analysis of the German National Sample ($n = 336$). Note: Analyzing attitudes toward mutual acculturation via a four-dimensional framework provided three distinct profiles: Integration, mild integration, and low responsibility majority. 1 = disagree, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree



Informed Consent Participants' legal guardian or next of kin provided written informed consent to participate in the study. Additionally, written informed consent was obtained from the adolescents themselves.

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Appendix

Latent Profile Analyses with National Samples

Figures 4–6

Model Fit Indices for Latent Profile Analyses

Tables 5–7

Fig. 5 Latent Profile Analysis of the Greek National Sample (n = 424). Note: Analyzing attitudes toward mutual acculturation via a four-dimensional framework provided three distinct profiles: Integration, mild integration, and low responsibility majority. 1 = disagree, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree

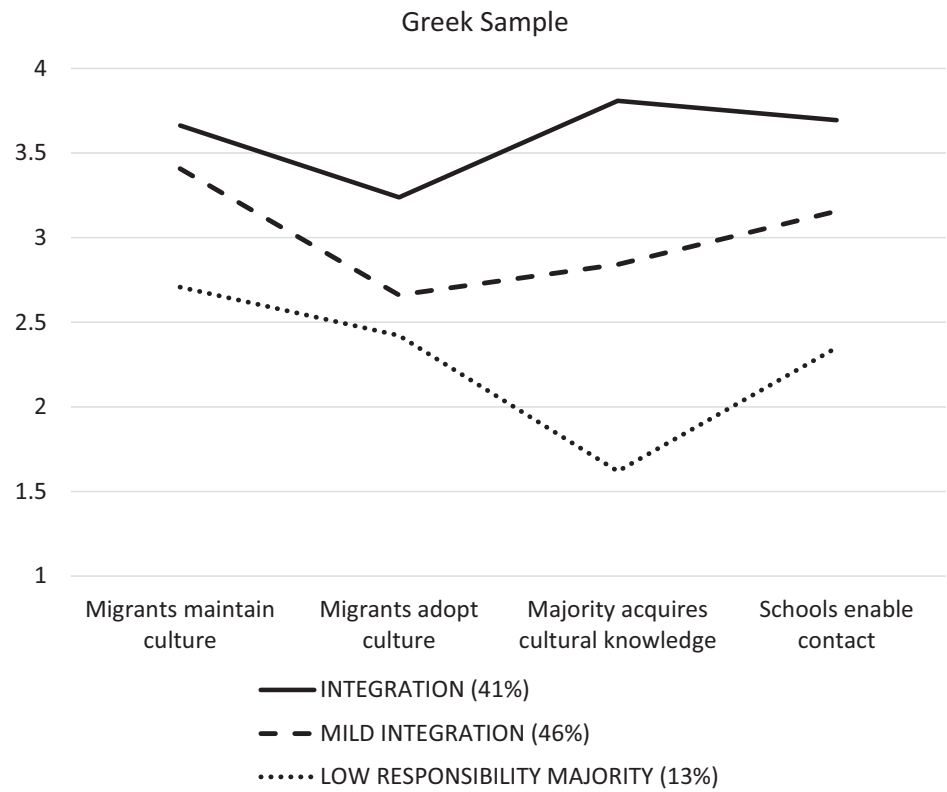


Fig. 6 Latent Profile Analysis of the Swiss National Sample (n = 359). Note: Analyzing attitudes toward mutual acculturation via a four-dimensional framework provided three distinct profiles: Integration, mild integration, and low responsibility majority. 1 = disagree, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree

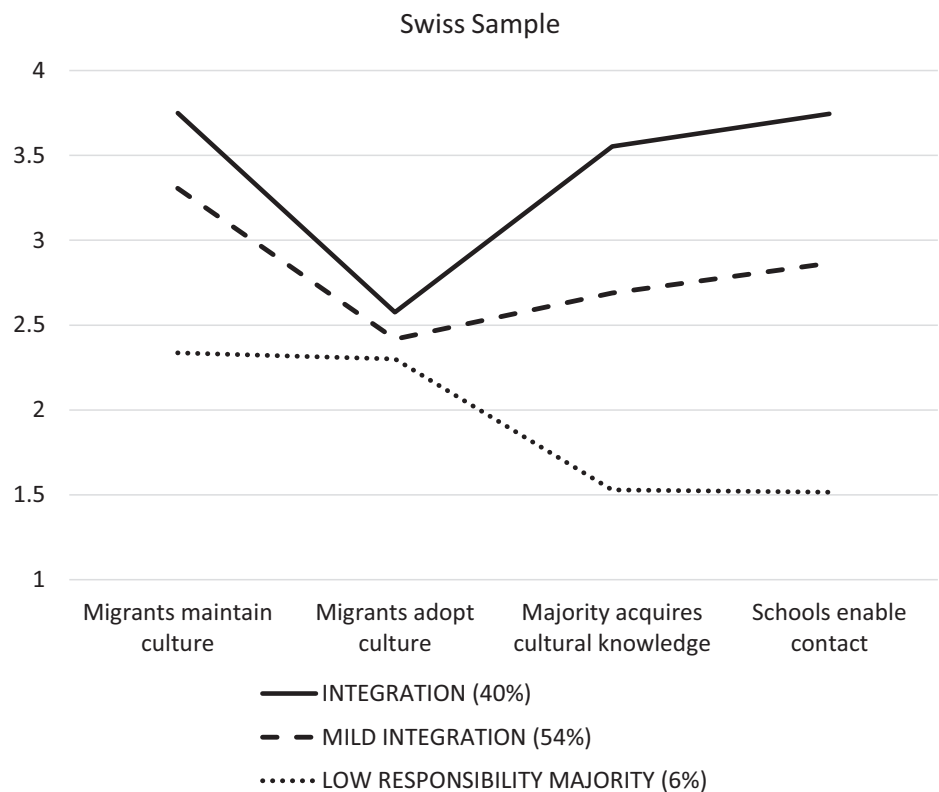


Table 5 Model fit indices for latent profile analyses of the German national, migration background, and non-migration background samples

#	Log likelihood	AIC	BIC	aBIC	Entropy	aLMR		BLRT	Sample proportion per class	Classification accuracy
						p value	p value			
GER nat										
1	-1454.697	2925.393	2955.930	2930.553					336	
2	-1362.122	2750.245	2799.867	2758.629	0.732	<0.001	<0.001	<0.001	93 (29%); 243 (71%)	0.882–0.938
3	-1320.774	2677.548	2746.256	2689.158	0.803	<0.001	<0.001	<0.001	165 (49%); 58 (17%); 113 (34%)	0.894–0.940
4	-1289.928	2625.856	2713.650	2640.691	0.837	0.22	<0.001	<0.001	19 (6%); 43 (14%); 114 (34%); 160 (46%)	0.883–0.934
5	-1261.933	2579.866	2686.745	2597.926	0.892	<0.05	<0.001	<0.001	63 (19%); 13 (4%); 139 (40%); 108 (33%); 13 (4%)	0.904–0.962
6	-1246.084	2558.167	2684.132	2579.452	0.895	0.34	<0.001	<0.001	12 (4%); 129 (38%); 12 (4%); 104 (31%); 67 (20%); 12 (3%)	0.790–0.978
GER mbg										
1	-1115.923	2247.845	2276.392	2251.029					262	
2	-1037.841	2101.681	2148.070	2106.854	0.734	<0.01	<0.001	<0.001	76 (31%); 186 (69%)	0.897–0.932
3	-1001.596	2039.192	2103.422	2046.354	0.844	0.15	<0.001	<0.001	113 (43%); 26 (10%); 123 (47%)	0.895–0.957
4	-972.185	1990.369	2072.441	1999.521	0.879	<0.05	<0.001	<0.001	35 (15%); 110 (41%); 14 (6%); 103 (39%)	0.910–0.956
5	-951.417	1958.834	2058.747	1969.975	0.880	0.30	<0.001	<0.001	94 (36%); 7 (3%); 22 (8%); 110 (41%); 29 (12%)	0.858–0.996
6	-934.295	1934.590	2052.345	1947.720	0.890	0.11	<0.001	<0.001	20 (7%); 86 (33%); 3 (1%); 108 (41%); 10 (4%); 35 (14%)	0.870–0.999
GER non-mbg										
1	-336.477	688.953	707.386	682.175					74	
2	-317.607	661.213	691.166	650.198	0.961	<0.05	<0.001	<0.001	68 (92%); 6 (8%)	0.975–0.994
3	-306.743	649.485	690.958	634.233	0.799	0.38	<0.001	<0.001	24 (32%); 5 (7%); 45 (61%)	0.873–0.982
4	-298.848	643.697	696.690	624.209	0.862	0.45	0.14	0.14	5 (7%); 31 (43%); 26 (36%); 12 (15%)	0.871–0.995
5	-288.991	633.982	698.496	610.257	0.906	0.32	<0.05	<0.05	5 (7%); 7 (10%); 33 (43%); 4 (6%); 25 (35%)	0.919–0.996
6	-281.914	629.828	705.862	601.866	0.924	<0.05	0.17	0.17	4 (5%); 1 (2%); 7 (10%); 33 (43%); 4 (6%); 25 (35%)	0.932–1.000

Classification accuracy relates to the average latent class probabilities. Model fit for the chosen profile solution is in bold

GER Germany, nat national sample, mbg migration background sample, non-mbg non-migration background sample, AIC Akaike information criterion, BIC Bayesian information criterion, aBIC Sample-size adjusted BIC, aLMR LRT Lo-Mendell-Rubin adjusted likelihood ratio test, BLRT bootstrap likelihood ratio test

Table 6 Model fit indices for latent profile analyses of the Greek national, migration background, and non-migration background samples

#	Log likelihood	AIC	BIC	aBIC	Entropy	aLMR <i>p</i> -value	BLRT <i>p</i> -value	Sample proportion per class	Classification accuracy
GRE nat									
1	-1745.532	3507.063	3539.461	3514.074				424	
2	-1621.568	3269.136	3321.782	3280.529	0.868	<0.05	<0.001	70 (18%); 354 (83%)	0.921–0.973
3	-1558.662	3153.323	3226.218	3169.098	0.851	<0.001	<0.001	56 (13%); 196 (46%); 172 (41%)	0.928–0.942
4	-1525.927	3097.854	3190.998	3118.011	0.844	0.29	<0.001	33 (8%); 22 (6%); 207 (48%); 162 (38%)	0.863–0.929
5	-1494.859	3045.719	3159.111	3070.257	0.820	0.23	<0.001	35 (8%); 165 (39%); 171 (38%); 37 (11%); 16 (5%)	0.858–0.954
6	-1464.835	2995.670	3129.311	3024.590	0.833	0.58	<0.001	24 (6%); 38 (11%); 161 (36%); 32 (7%); 159 (37%); 10 (3%)	0.805–0.900
GRE mbg									
1	-793.946	1603.892	1630.117	1604.774				196	
2	-727.751	1481.503	1524.118	1482.936	0.863	<0.001	<0.001	151 (77%); 45 (23%)	0.932–0.976
3	-692.776	1421.552	1480.558	1423.535	0.831	0.27	<0.001	18 (9%); 99 (51%); 79 (40%)	0.875–0.932
4	-671.921	1389.841	1465.238	1392.376	0.867	0.23	<0.001	77 (38%); 78 (40%); 31 (16%); 10 (5%)	0.875–0.941
5	-659.430	1374.861	1466.648	1377.947	0.881	0.31	<0.001	8 (5%); 78 (40%); 32 (16%); 76 (38%); 2 (1%)	0.818–0.948
6	-647.190	1360.379	1468.557	1364.016	0.860	0.39	<0.05	39 (19%); 2 (1%); 67 (34%); 9 (5%); 3 (2%); 76 (38%)	0.832–0.993
GRE non-mbg									
1	-936.238	1888.475	1915.910	1890.555				228	
2	-872.993	1771.987	1816.568	1775.367	0.813	<0.05	<0.001	39 (19%); 189 (81%)	0.906–0.955
3	-841.517	1719.034	1780.762	1723.714	0.877	<0.05	<0.001	32 (14%); 95 (42%); 101 (44%)	0.941–0.963
4	-815.422	1676.843	1755.718	1682.824	0.883	0.38	<0.001	17 (7%); 120 (51%); 81 (37%); 10 (4%)	0.909–0.947
5	-791.641	1639.282	1735.304	1646.563	0.911	0.22	<0.001	94 (42%); 14 (6%); 19 (8%); 12 (5%); 89 (39%)	0.903–0.952
6	-774.687	1615.374	1728.542	1623.954	0.865	0.50	<0.001	10 (5%); 13 (5%); 8 (3%); 89 (38%); 85 (38%); 23 (11%)	0.870–0.950

Classification accuracy relates to the average latent class probabilities. Model fit for the chosen profile solution is in bold

GRE Greece, nat national sample, mbg migration background sample, non-mbg non-migration background sample, AIC Akaike information criterion, BIC Bayesian information criterion, aBIC Sample-size adjusted BIC, aLMR LRT Lo-Mendell-Rubin adjusted likelihood ratio test, BLRT Bootstrap likelihood ratio test

Table 7 Model fit indices for latent profile analyses of the Swiss national, migration background, and non-migration background samples

#	Log likelihood	AIC	BIC	aBIC	Entropy	aLMR <i>p</i> -value	BLRT <i>p</i> -value	Sample proportion per class	Classification accuracy
SWI nat									
1	-1550.784	3117.567	3148.634	3123.254				359	
2	-1444.806	2915.611	2966.094	2924.852	0.867	<0.05	<0.001	51 (15%); 308 (85%)	0.890–0.975
3	-1394.488	2824.976	2894.876	2837.771	0.778	0.06	<0.001	22 (6%); 195 (54%); 142 (40%)	0.895–0.956
4	-1351.172	2748.344	2837.660	2764.693	0.905	<0.01	<0.001	173 (47%); 14 (4%); 132 (37%); 40 (12%)	0.931–0.997
5	-1326.829	2709.657	2818.390	2729.560	0.872	<0.01	<0.001	39 (12%); 15 (4%); 80 (23%); 175 (47%); 50 (15%)	0.893–0.975
6	-1301.328	2668.656	2796.806	2692.113	0.861	0.21	<0.001	11 (3%); 161 (44%); 33 (10%); 25 (7%); 79 (21%); 50 (15%)	0.869–0.946
SWI mbg									
1	-1168.322	2352.645	2381.343	2355.978				267	
2	-1086.344	2198.687	2245.322	2204.104	0.908	0.24	<0.001	27 (11%); 240 (89%)	0.907–0.981
3	-1036.084	2108.169	2172.739	2115.669	0.787	<0.05	<0.001	17 (6%); 145 (54%); 105 (40%)	0.896–0.967
4	-1009.311	2064.622	2147.129	2074.205	0.916	0.25	<0.001	9 (3%); 30 (12%); 133 (49%); 95 (36%)	0.920–0.969
5	-981.724	2019.448	2119.891	2031.115	0.874	0.17	<0.001	10 (4%); 37 (14%); 102 (37%); 24 (9%); 94 (36%)	0.865–0.978
6	-956.331	1978.662	2097.042	1992.412	0.860	<0.05	<0.001	10 (4%); 37 (14%); 102 (37%); 43 (17%); 51 (19%); 24 (9%)	0.862–0.979
SWI non-mbg									
1	-378.109	772.218	792.392	767.140				92	
2	-339.743	705.486	738.270	697.234	0.864	0.11	<0.001	18 (20%); 74 (80%)	0.901–0.973
3	-327.833	691.666	737.058	680.240	0.804	0.27	<0.001	40 (43%); 42 (46%); 10 (11%)	0.847–0.966
4	-315.268	676.537	734.538	661.937	0.879	0.65	<0.001	9 (11%); 50 (53%); 30 (33%); 3 (3%)	0.905–0.996
5	-305.499	666.998	737.608	649.225	0.897	0.10	<0.001	3 (3%); 3 (3%); 9 (11%); 37 (41%); 40 (41%)	0.897–1.000
6	-298.301	662.603	745.822	641.656	0.888	0.67	0.36	3 (3%); 3 (3%); 29 (32%); 38 (39%); 14 (15%); 5 (7%)	0.906–0.996

Classification accuracy relates to the average latent class probabilities. Model fit for the chosen profile solution is in bold

SWI Switzerland, nat national sample, mbg migration background sample, non-mbg non-migration background sample, AIC Akaike information criterion, BIC Bayesian information criterion, aBIC Sample-size adjusted BIC, aLMR LRT Lo-Mendell-Rubin adjusted likelihood ratio test, BLRT Bootstrap likelihood ratio test

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Petra Sidler Is a doctoral student at the University of Neuchâtel, the NCCR—on the move, and the School of Education of the University of Applied Sciences and Arts Northwestern Switzerland. Her major research interests include mutual acculturation, migration and inclusion, and cultural diversity.

Gülseli Baysu Is a Lecturer at Queen's University Belfast, Northern Ireland, United Kingdom. Her major research interests include cultural diversity, immigration and integration, and intergroup relations.

Wassilis Kassis Is a Full Professor at the School of Education of the University of Applied Sciences and Arts Northwestern Switzerland. His major research interests include academic and social resilience processes and outcomes of adolescent students.

Clarissa Janousch Is a doctoral student at the University of Zurich and the School of Education of the University of Applied Sciences and Arts Northwestern Switzerland. Her major research interests include resilience and mental health processes.

Raia Chouvati Is a doctoral student at the University of Thessaly, Greece. Her major research interests include resilience processes, migration, and cultural diversity.

Christos Govaris Is a Professor at the University of Thessaly, Greece. His major research interests include issues of theory and practice of intercultural education.

Ulrike Graf Is a Professor for Educational Sciences / Primary School Education at the University of Education Heidelberg in Heidelberg, Germany. Her major research interests include resilience and Humanistic Pedagogy.

Christian Rietz Is a Professor for Mixed Methods Research at the University of Education Heidelberg in Heidelberg, Germany. His major research interests include newer developments in quantitative statistics and the integration of qualitative and quantitative methodology in research designs.

Adolescents' Mutual Acculturation Attitudes and Their Association with National Self-Identification in three Swiss cantons (Sidler, 2023)

Adolescents' Mutual Acculturation Attitudes and Their Association with National Self-Identification in three Swiss cantons

1 **Petra Sidler**^{123*}

2 ¹Institute for Research and Development, School of Education, University of Applied Sciences and
3 Arts Northwestern Switzerland, Brugg-Windisch, Switzerland

4 ²NCCR—On the move, University of Neuchâtel, Switzerland

5 ³Culture, Society, and Behavior Lab, Department of Psychology, University of Oslo, Norway

6 *** Correspondence:**

7 Petra Sidler

8 petra.sidler@fhnw.ch

9

10 Word count: 9'713

11 6 tables and 3 figures

12 **Keywords:** mutual acculturation¹, majority acculturation², acculturation attitudes³, self-
13 identification⁴, Switzerland⁵, adolescence⁶, latent profile analysis⁷

14 **Abstract**

15 Acculturation is a mutual process, meaning that minority and majority group members acculturate
16 and thus experience cultural and psychological changes when having intercultural contact. This study
17 assessed attitudes toward mutual acculturation through a four-dimensional measurement examining
18 attitudes toward migration background students' (1) heritage culture maintenance and (2) dominant
19 culture adoption, (3) majority students' intercultural knowledge acquisition, and (4) schools'
20 intercultural contact endorsement. Acculturation attitudes are commonly analyzed through minority
21 and majority perspectives; however, the ways in which researchers differentiate between minority
22 and majority group members can be challenging. How researchers categorize group members can
23 differ significantly from how those members self-identify. This matters particularly for adolescents
24 because they explore group identities and belongings. So far, adolescents' attitudes toward *mutual*
25 *acculturation* in relation to self-identification measures have not been studied. The current study
26 addresses this research gap by analyzing attitudes toward mutual acculturation in relation to whether
27 adolescents self-identify as (1) being Swiss, (2) not having a migration background, and (3) the
28 interaction of the two. The sample consisted of 319 adolescents in public secondary schools in three
29 German-speaking cantons in Switzerland (45% female, $M_{\text{age}} = 13.60$ years, range 12–16). Latent
30 profile analyses resulted in three distinct acculturation profiles. The first is a *mutual integration*
31 *profile* ($n = 147$, 46%), where minority and majority adolescents and schools are expected to
32 integrate. The second is a *multiculturalism* profile ($n = 137$, 43%), with slightly lower expectations

33 on majority and minority adolescents and schools. The third is a *cultural distancing* profile ($n = 33$,
34 10%), which places particularly low expectations on majority adolescents and schools. Through an
35 analysis of variance and a multiple logistic regression, those in the *cultural distancing* profile were
36 found to identify significantly stronger as not having a migration background compared to those in
37 the *mutual integration* profile. Thus, students having separation expectations toward students with a
38 migration background and non-involvement expectations toward schools and majority students have
39 a higher probability to self-identify as not having a migration background and therefore as belonging
40 to the majority group than students having mutual integration expectations toward minority and
41 majority students and schools.

42 Introduction

43 Global migratory flows have resulted in societies becoming more culturally diverse. In 2020, almost
44 281,000,000 individuals resided outside of their countries of birth, accounting for 3.6 percent of the
45 global population (International Organization for Migration [IOM], 2022). Nonetheless, migrants
46 constitute a fraction of the worldwide population; as of 2020, 96.4 percent of the world's population
47 resided in the nations where they were born. Yet, in addition to international migrants, there are
48 migratory flows inside nation-states. Internal migrants, on the other hand, outnumber international
49 migrants. According to the most current estimate from 2009, there were around 740 million internal
50 migrants worldwide (IOM, 2022). Cross-border and intra-border migratory flows frequently result in
51 intercultural contact between individuals and groups with varied languages, lifestyles, faiths, and
52 customs. *Acculturation* refers to the cultural and psychological changes that people and communities
53 undergo because of intercultural contact (Berry, 2019). However, cultural variety induced by intra-
54 and cross-border migration is seen not just between countries but also inside societies and their
55 institutions. According to an ecological approach (Bronfenbrenner, 1979), institutions such as
56 schools interact with and are rooted in national settings. As a result, global and domestic migratory
57 patterns not only make society more culturally varied, but also its institutions, such as schools. Thus,
58 nation-states and schools are both crucial macro-contexts for adolescents' acculturation (Motti-
59 Stefanidi et al., 2012) and their national as well as ethnic identity development (Kotowski, 2013).

60 Acculturation is the subject of extensive research, with the initial term dating back to 1936 and
61 referring to first-hand intercultural encounter that results in behavioral and attitudinal changes
62 (Redfield et al., 1936). Anthropologists and sociologists were among the first to investigate
63 acculturation, particularly focusing on the dynamics of distinct cultural groups coming into ongoing
64 contact (Boas, 1948; Burgess and Park, 1933; Redfield et al., 1936). Several decades later, social
65 psychologists began to investigate the issue. Psychologists, on the other hand, were more concerned
66 in the individual level, and therefore focused on how people, rather than groups, respond to changes
67 in their cultural context (Rudmin, 2009). The common focus of this extensive research on
68 acculturation is minority group members' acculturation. Thus, the main aim has been concerned with
69 how ethnic minorities or immigrants adjust to their host country (e.g., Berry et al., 1989), or how
70 majority group members expect minority group members to acculturate (e.g., Bourhis et al., 1997).
71 Only very recently did researchers start to study majority group members' acculturation (Haugen and
72 Kunst, 2017; Kunst et al., 2021). This new line of research looks at how incorporating parts of
73 minority cultures affects the dominant culture. However, investigating either minority or majority
74 acculturation (i.e., how either minority group members or majority group members acculturate)
75 provides only one side of the narrative. To recognize the interactive character and hence mutuality of
76 the acculturation process (Berry, 2009; Chirkov, 2009), it is key to assess the acculturation of
77 minority and majority group members concurrently. Thus, *mutual acculturation* refers to how both

78 minority and majority group members acculturate. Moreover, following an ecological perspective
79 (Bronfenbrenner, 1979), not only do individuals adjust to a change in cultural context but also do
80 institutions. Institutions should be adjusted to take the needs of all individuals and cultural groups
81 living together into account (Berry, 2019). This is particularly important in schools, as their diversity
82 policies do not only set the foundation for broader narratives for inclusion and exclusion in the
83 society, but diversity policies also play a key part in accommodating students with and without
84 migration backgrounds (Celeste et al., 2019). Schools are therefore conceptualized as being an
85 acculturation context while also being an acculturating agent that chooses whether and how it adjusts
86 to changes concerning the intercultural composition in school classes. Thus, in this study mutual
87 acculturation attitudes were assessed on a four-dimensional scale measuring attitudes toward (1)
88 heritage culture maintenance of migration-background adolescents, (2) dominant culture adoption of
89 migration-background adolescents, (3) intercultural knowledge acquisition of majority adolescents,
90 and (4) intercultural contact endorsement of schools (for measurement validation see Sidler et al.,
91 2021).

92 Acculturation attitudes are commonly analyzed through minority and majority perspectives and
93 group categorizations are essential to make divergent experiences and attitudes evident (Criado-
94 Perez, 2019). However, study results may vary depending on the type of categorization chosen,
95 therefore it is key to use self-identification, country of birth, nationality, as well as migration and
96 generation status with caution (Moffitt and Juang, 2019). This means that the ways in which
97 researchers differentiate between minority and majority group members can be challenging. The
98 concept *migration background* is often used to this end, which often relies on nationality and
99 countries of birth of an individual and its parents (Horvath, 2019). When assessing differences
100 between those with and without migration backgrounds, researchers face the methodological
101 challenge of grouping participants and defining what it means to have a migration background.
102 However, tackling this challenge through variables like nationality and place of birth may lead to
103 categorizing generations of families as having a migration background, implying that they can never
104 fully arrive in their country of residence (El-Tayeb, 2014). Moreover, categorizing also means fixing
105 something that is fluid; migration movements vary over time and thus identities and feelings of
106 belongings may also vary. Nevertheless, assessing how experiences and opportunities differ
107 according to migration background may be key in discovering the root of discrimination; what
108 escapes categorization probably also escapes detection (Criado-Perez, 2019). Unfortunately, using
109 such terms might also lead to stigmatizing, stereotyping, and impinging negatively on study
110 participants (Moffitt et al., 2020). Moreover, how researchers categorize group members can differ
111 significantly from how the group's members self-identify (Horvath, 2019). Self-identification
112 measures evaluate self-perception and self-categorization based on experienced intercultural
113 relations, which may differ from ascribed categorizations. This matters particularly for adolescents
114 because they explore group identities and feelings of belonging in various contexts (Phinney, 1992;
115 Portes and Rivas, 2011). Therefore, the key is to study not only the acculturation attitudes of young
116 minority and majority members through concepts such as migration background, nationality, place of
117 birth, ethnic groups, and migrant generation but also through self-identification. So far, attitudes
118 toward *mutual acculturation* have not been studied in relation to self-identification. This study
119 addresses this research gap by analyzing attitudes toward mutual acculturation in relation to whether
120 adolescents self-identify as belonging to the Swiss majority. National self-identification was assessed
121 by adolescents' self-identification as (1) being Swiss, as (2) not having a migration background, and
122 (3) the interaction of the two. Thus, to tackle the research gap, mutual acculturation attitudes were
123 analyzed in terms of adolescents' national self-identification.

124 To clarify, the terms *minority* and *majority* are used in this study to reflect social power hierarchies
125 (Connell, 1998). Thus, the term *majority* relates to the dominant group and the term *minority* relates
126 to non-dominant groups in a society and therefore not necessarily to a numerical majority or
127 minority. Such a differentiation is important as it reflects the political climate on immigrant
128 integration and immigrant rights in Switzerland. For example, foreign nationals are excluded from
129 active and passive voting rights on the federal level and most cantonal levels in Switzerland, and thus
130 are not allowed to actively shape the political decisions affecting their lives (Blatter et al., 2017).
131 Thus, Swiss nationals are considered a dominant majority in the sense that they have a right to shape
132 the political decisions for themselves as well as for foreign nationals. Moreover, following
133 integration policies in the Federal Act on Foreign Nationals (2005), integration is understood as an
134 effort solely put on foreign nationals. Thus, again, Swiss nationals are a dominant majority to which
135 foreign nationals must adapt to. Thus, in this study, *minority acculturation* relates to the acculturation
136 of individuals with a migration or ethnic minority background (not because they are fewer in
137 numbers, but because they have less power in the political society), and *majority acculturation*
138 relates to the acculturation of individuals possessing the Swiss nationality as well as Swiss
139 institutions.

140 **1 Mutual Acculturation at School**

141 Following the tradition of cross-cultural psychology, acculturation is a process of ongoing cultural
142 and psychological change resulting from direct or remote intercultural contact (Ferguson and
143 Bornstein, 2012; Berry, 2019). Acculturation entails the Latin words *ad cultura*, which mean
144 “leading to a culture” (Zick, 2010). Culture is a fluid and dynamic construct of a groups’ shared
145 meanings, understandings, and referents (Shore, 2002), along with specific artifacts and behaviors
146 (Rudmin, 2009). Nations may build on a specific culture; therefore, national boundaries may also be
147 cultural boundaries. However, culture is not limited by the concept of nations. The acculturation
148 framework includes acculturation conditions, attitudes, and outcomes (Arends-Tóth and van de
149 Vijver, 2006). Acculturation conditions refer to individual and contextual characteristics, whereas
150 acculturation attitudes relate to preferences on how individuals or groups acculturate. Acculturation
151 conditions and attitudes lead to outcomes such as psychological, emotional, and sociocultural
152 adjustment. Acculturation attitudes have been assessed for minority acculturation (Berry et al., 1989;
153 Bourhis et al., 1997), majority acculturation (Haugen and Kunst, 2017; Kunst et al., 2021), and
154 mutual acculturation (Sidler et al., 2021, 2022).

155 Attitudes toward minority acculturation are commonly assessed using a bidimensional model. Berry
156 et al. (1989) combined minority group members’ heritage culture maintenance and having
157 relationships with other groups, which led to four acculturation strategies. Bourhis et al. (1997)
158 developed the model further into combining minority group members’ heritage culture maintenance
159 and their dominant culture adoption. Bourhis et al. (1997) proposed to assess both dimensions from
160 majority as well as minority group members’ perspectives. Through the combination of two
161 dimensions that concern minority group members’ heritage culture maintenance and dominant or
162 mainstream culture adoption, four acculturation strategies emerged: *integration/multiculturalism*
163 (agreement with both dimensions), *assimilation/melting pot* (agreement with adoption, disagreement
164 with maintenance), *separation/segregation* (agreement with maintenance, disagreement with
165 adoption), and *marginalization/exclusion* (disagreement with both dimensions; Bourhis et al., 1997).

166 As these two dimensions concerning minority acculturation can be assessed from minority and
167 majority group members' perspectives (Bourhis et al., 1997), acculturation orientations of minority
168 group members that concern their own acculturation and majority group members' acculturation
169 expectations of minority group members can be measured Attitudes toward majority acculturation
170 have been assessed concerning whether aspects of minority cultures were incorporated in the
171 dominant culture and, if so, how they were incorporated (Haugen and Kunst, 2017). A recent review
172 found strategies concerning majority group members' acculturation orientations that included
173 integration, separation, assimilation, marginalization, and diffusion (Kunst et al., 2021). Yet,
174 assessing either minority or majority acculturation examines only one side of the story. Mutual
175 acculturation, in the sense that all groups are interacting and adjusting when facing intercultural
176 contact, relates to assessing the two perspectives at stake toward all groups acculturating due to
177 experiencing a change in cultural context. To illustrate, expecting minority group members to
178 integrate while majority group members are not expected to integrate is a different finding than if
179 both groups are expected to integrate in the wider society. Thus, mutual acculturation relates to
180 assessing the common effort between minority and majority group members concerning mutual
181 social and cultural inclusion.

182 The school setting is recognized as a key environment for adolescents' continuous acculturation
183 (Horenczyk and Tatar, 2012). Adolescents' attitudes toward mutual acculturation at school have been
184 assessed through a four-dimensional model that combines minority and majority group members'
185 perspectives on minority and majority acculturation in the school context (Sidler et al., 2021).
186 Specifically, attitudes toward minority acculturation have been assessed following Bourhis et al.
187 (1997) model measuring attitudes toward migration background adolescents 1) heritage culture
188 maintenance and 2) dominant culture adoption. Attitudes toward majority acculturation have been
189 assessed toward 3) majority adolescents' intercultural knowledge acquisition and 4) schools'
190 intercultural contact endorsement (Sidler et al., 2021, 2022). Intercultural interactions and
191 communications require the acquisition of new intercultural skills by both minority and majority
192 students (Landis and Bhawuk, 2020), implying that both minority and majority adolescents adjust to
193 the intercultural context at school and thus acculturate. As acculturation means "leading to a culture"
194 (Zick, 2010), intercultural knowledge acquisition is a first acculturating step. Notably, to adopt
195 specific cultural characteristics, one must acquire some sort of knowledge about them first. Thus,
196 majority students' acculturation is conceptualized as intercultural knowledge acquisition. Next to
197 majority students, schools are also considered to be an agent within the realm of majority
198 acculturation, because they are a national institution with prevalent power ideologies (Warikoo and
199 Carter, 2009). Berry (2019) has pointed out that national institutions like schools must be adjusted to
200 better meet the needs of all groups and individuals now living together. Thus, next to being an
201 acculturation context, schools are also cultural actors. Schools have agency in the sense that they
202 shape the environment for intercultural contact and learning through school diversity policies
203 implementation (Celeste et al., 2019, Schwarzenhal et al., 2020). Schools may raise awareness
204 concerning stereotypes and implicit bias (Warikoo et al., 2016), or they may choose to ignore the
205 facticity of intercultural contact and acculturation at school. Specifically, whether and how schools
206 handle cultural diversity has an impact on both minority and majority adolescents' educational
207 outcomes and belonging (Baysu et al., 2021) as well as their intercultural competence development
208 (Schwarzenhal et al., 2020). The way in which schools frame or refrain from framing cultural
209 diversity matters because adolescent students develop intergroup attitudes and intercultural skills
210 (Raabe and Beelmann, 2011) and therefore schools' diversity policies set the basis for broader
211 narratives concerning intercultural relations. Thus, in shaping cultural diversity policies and creating

212 diversity climates, schools make a choice between taking an active or a passive part in the
213 acculturation process.

214 **2 Acculturation and Categorization**

215 To assess how attitudes toward minority, majority, or mutual acculturation differ between minority
216 and majority group members, researchers face a categorization challenge. Reflecting on the link
217 between the use of categorizations and the authority of interpretation is key because researchers, as
218 well as policy makers, play a part in continuing social norms concerning national belonging (Moffitt
219 and Juang, 2019). Following a constructivist perspective, categorizations implicitly constitute the
220 groups they describe (Brubaker, 2009). This means that categorizations such as migration
221 backgrounds and ethnic and racial labels are socially constructed and not a naturally given fact in the
222 real world. However, not only do perceived and ascribed belongings to socially constructed groups
223 have a real impact on people (Elias and Feagin, 2020) but also categories such as nationalities; the
224 Quality of Nationality Index (2018) shows how nationality impacts individuals' personal and
225 professional trajectories. However, terminology matters because categorizations risk misrepresenting
226 immigrants and their descendants by depicting them as a uniform group compared to an
227 essentialized, nonimmigrant national group (Moffitt and Juang, 2019). Group labels may lead to
228 discursive but biased boundaries, which ultimately affect policy strategies and the daily lives of
229 potentially miscategorized individuals. Moreover, categorizations may relate to exclusionary notions
230 of national identity and impose societal and historical power structures on individuals (Erick and
231 Schwartzman, 2015). Self-identification presents an alternative group categorization. Self-
232 identification measures shift the agency from the receiving society to individuals with or without
233 supposed migration backgrounds, allowing them to define themselves according to how they identify
234 in that moment. Self-identification measures thus account for the fluidity of not only identities but
235 also concepts such as migration background that are officially treated as being more objective. Using
236 national terms inclusively and including all individuals who self-identify as a part of a nation helps
237 shift the construction of national belonging to better reflect the contemporary population (Moffitt and
238 Juang, 2019). In the German context, 80% of individuals who have heritage outside of Germany
239 identify as German (Foroutan et al., 2014); however, when the national label *German* is used, many
240 of them are excluded (Moffitt and Juang, 2019). Self-identification measures allow individuals to
241 decide for themselves how they are described, regardless of how much their self-perceptions rely on
242 societal power structures. Preferred group labels may change over time and across social contexts,
243 particularly for adolescents, who develop their own labels and try out various identities (Portes and
244 Rivas, 2011). Self-identification has been assessed on a continuum in this study, so that study
245 participants can describe themselves both as being Swiss and as having a migration background
246 simultaneously. Thus, national self-identification was assessed through whether adolescents consider
247 themselves 1) to be Swiss, 2) to have a migration background, and 3) the interaction of the two.
248 Assessing the interaction of the self-identification measures means acknowledging that simultaneous
249 self-identification as being Swiss and having a migration background is not a contradiction and
250 therefore that self-identifications are nuanced.

251 **3 Acculturation Context**

252 According to the eco-developmental model of human development, adolescents' development is
253 embedded in their surrounding environment (Bronfenbrenner, 1979). Their surroundings consist of a
254 variety of microsystems such as the family, peer group, and school, which are important settings not

255 only for adolescents' development but also their acculturation. Furthermore, in accordance with
256 Bronfenbrenner's (1979) ecological approach, microsystems are embedded in the larger social
257 environment, implying that schools are incorporated in national contexts while interacting with them.
258 Acculturation experiences are influenced by both national governments' and schools' migration,
259 integration, and diversity policies and atmosphere, making both nation-states as well as schools
260 essential macro settings for adolescents' acculturation (Motti-Stefanidi et al., 2012). In acculturation
261 research, the contextual approach stresses that the link between acculturation and acculturation
262 outcomes like adjustment is defined by the surrounding contexts (Birman and Simon, 2014) and their
263 interactions (Makarova et al., 2021).

264 Switzerland is an interesting case study; in 2019, Switzerland had about 2,550,00 (30% of the total
265 population) foreign-born residents (Organisation for Economic Co-operation and Development,
266 2021). A culturally diverse population means that schools and teachers are challenged to integrate
267 students with diverse cultural backgrounds (Makarova, 2019). The Migrant Integration Policy Index
268 (MIPEX, 2020) examines integration policies of various countries and creates a multidimensional
269 picture of migrants' opportunities to participate in a given society. Following the 2019 assessment of
270 the MIPEX (2020), Switzerland's integration approach was classified as "temporary integration",
271 meaning that while foreign residents can receive targeted assistance to get equal opportunities, they
272 lack the long-term security concerning permanent stay and to participate as full citizens. Overall,
273 Switzerland scored 50 on the MIPEX 100-point scale and was assessed to have slightly unfavorable
274 policies concerning anti-discrimination and access to nationality. Moreover, concerning education,
275 the MIPEX assessed how accessible education is for students with a migration background, whether
276 there is teacher training concerning dealing with cultural diversity at school, and whether special
277 needs of migrant students are being considered. Switzerland scored 48 on the 100-point scale and the
278 MIPEX stressed that Swiss schools must address issues of segregation and diversity at school.
279 Moreover, as Switzerland was found to have high naturalization barriers (MIPEX, 2020), many
280 foreign residents may self-identify as Swiss because of how long they have resided in the country.
281 Taking a closer look at federal law tackling integration in Switzerland, it becomes evident that
282 whereas integration policies in Switzerland expect openness from the Swiss majority, the policies'
283 regulatory focus lies on the integration of foreign nationals (Federal Act on Foreign Nationals, 2005).
284 Such a conceptualization bases on the assumption that Swiss nationals are already inherently part of
285 the Swiss society, whereas foreign nationals must be integrated into it. However, given the
286 multicultural composition of Switzerland (OECD, 2021), the Swiss society foreign nationals should
287 integrate into may be mainly imagined (Anderson, 2006). Therefore, it seems likely that not only
288 foreign nationals, but also Swiss nationals are challenged to integrate into the modern multicultural
289 Swiss society. However, Swiss law putting this responsibility mainly on foreign nationals reflects
290 power dynamics between the Swiss majority and diverse non-Swiss minorities.

291 **4 The Present Study**

292 This study assesses whether adolescents in Swiss schools differ in their attitudes toward mutual
293 acculturation based on their self-identification as being Swiss, as having a migration background, and
294 the interaction of the two. Previous research has analyzed how minority and majority group members
295 differ in their acculturation orientations and expectations (Berry et al., 1989; Bourhis et al., 1997);
296 however, most research has focused on attitudes toward minority acculturation (i.e., how minority
297 members or migrants intend to acculturate or are expected to acculturate by majority group
298 members). In quantitative methods, minority and majority group members are commonly identified
299 through nationality, place of birth, migrant generation, and concepts such as *migration background*.

300 However, how researchers categorize group members can differ significantly from how members of
301 the same group self-identify. Thus, it is important to study the acculturation attitudes of minority and
302 majority group members not only through concepts such as migration background but also in relation
303 to how these group members self-identify. So far, attitudes toward *mutual acculturation* have not
304 been studied in relation to self-identification. This study addresses this research gap by analyzing
305 attitudes toward mutual acculturation in relation to whether adolescents self-identify as belonging to
306 the Swiss majority. Attitudes toward mutual acculturation were measured with a four-dimensional
307 assessment that conceptualizes minority and majority adolescents, as well as schools, as acculturation
308 agents. Thus, I assessed attitudes toward (1) migration-background adolescents' heritage culture
309 maintenance and (2) migration-background adolescents' dominant culture adoption, (3) majority
310 adolescents' intercultural knowledge acquisition, and (4) schools' endorsement of intercultural
311 contact. The analytic strategy consisted of two steps: First, through latent profile analyses, I
312 inductively identified acculturation profiles. Then, through an analysis of variance (ANOVA) and
313 multiple logistic regressions, I examined these acculturation profiles in relation to adolescents' self-
314 identification as (1) being Swiss, (2) not having a migration background, and (3) the interaction of
315 the two.

316 **5 Methods**

317 **5.1 Participants**

318 The study participants were eighth graders in from 30 classes in 19 schools in the lower secondary
319 level in three German-speaking cantons of Switzerland—namely, Aargau, Basel-Stadt, and
320 Solothurn. In 2020, 319 students (45% female, 54% male, 1% other, $M_{\text{age}} = 13.60$ years, $SD = 0.67$,
321 range 12–16) from rural and urban regions participated in the data collection. The participants had
322 diverse backgrounds, with 42% not possessing Swiss nationality and 19% having been born outside
323 Switzerland. Both parents of 40% of the participants had been born outside Switzerland, and 19% of
324 the participants had only one parent who had been born outside Switzerland. Given the presence of
325 first-generation immigrant students and following intercultural consulting, the questionnaires were
326 translated into five additional languages (Arabic, English, Farsi, French, and Turkish) through a
327 content translation using a culturally sensitive approach and the four-eyes principle (Peña, 2007). Of
328 the students, 95% filled in the questionnaire in German.

329 **5.2 Procedure**

330 The data used for this study were collected in 2020 during the second data collection within the
331 longitudinal project Overcoming Inequalities with Education: School and Resilience of the national
332 center of competencies in research, NCCR—On the Move, in Switzerland. During the COVID-19
333 pandemic, Switzerland has closed its schools only once during spring 2020 (Leybold-Johnson, 2021),
334 allowing for data collection in schools in autumn. Research assistants collected the data through a
335 web-based questionnaire at schools during class hours. They also instructed students, answered any
336 questions, and wrote a protocol for each data collection session. It took students approximately 1
337 hour to fill in the questionnaires on tablets.

338 The sampling started in 2019, after ethical approval by the Ethics Committee of the University of
339 Zurich. After having contacted cantonal educational offices, the research team contacted school
340 directors and class teachers via telephone and email. Teachers informed parents and students of the

341 study and asked both for written consent. The self-identification measures were introduced in the data
342 collection in 2020, which is why the data from 2020 are used in this study.

343 The sample size was not defined by an a priori power analysis and, therefore, it is a convenient
344 random sample. As many schools as possible were contacted to recruit full classes. However, the
345 gender and immigrant compositions of the sample (45% female, $n = 143$; 57% Swiss, $n = 182$) were
346 comparable with official statistics of students within the relevant school tracks and cantons (Federal
347 Statistical Office [FSO], 2020a, 2020b).

348 5.3 Measures

349 Attitudes toward mutual acculturation were assessed using four dimensions, each comprising seven
350 items (see Table 1A in the annex for all items verbatim). The measurement has been validated with
351 data from the first data collection in 2019 (Sidler et al., 2021). I measured the students' attitudes on a
352 4-point Likert scale ranging from 1 (*disagree*), 2 (*somewhat disagree*), 3 (*somewhat agree*), to 4
353 (*agree*). Thus, higher scores relate to higher agreement with the relevant dimension. The four
354 dimensions consist of two for minority acculturation and two for majority acculturation. Thus, I
355 measured attitudes toward (a) *migration-background students' heritage culture maintenance* (e.g., "I
356 find that it is important for teenagers from another country who live in Switzerland to be allowed to
357 preserve their languages"; Cronbach's $\alpha = .87$ and McDonald's $\omega = .86$); (b) *migration background*
358 *students' dominant culture adoption* (e.g., "I find that it is important for teenagers from other
359 countries who live in Switzerland to adopt the dominant traditions and customs of Switzerland";
360 Cronbach's α and McDonald's $\omega = .89$); (c) *majority students' acquisition of cultural knowledge*
361 (e.g., "I find that it is important for Swiss teenagers who live in Switzerland to get to know the ways
362 of life of teenagers from other countries who live in Switzerland"; Cronbach's α and McDonald's $\omega =$
363 $.92$); and (d) *schools' endorsement of intercultural contact* (e.g., "I find that it is important for the
364 Swiss schooling system to allow teenagers from other countries and Swiss teenagers to exchange
365 information about religions"; Cronbach's α and McDonald's $\omega = .94$). Internal consistency measures
366 were very high across the four dimensions, meaning that the seven items in each dimension yielded
367 similar scores.

368 Self-identification was assessed through two dimensions, each consisting of one item that was rated
369 on a 4-point Likert scale ranging from 1 (*yes*), 2 (*somewhat yes*), and 3 (*somewhat no*) to 4 (*no*). The
370 first dimension assessed *Swiss self-identification* ("Would you consider yourself to be Swiss?") and
371 the second dimension assessed *migration background self-identification* ("Would you consider
372 yourself to have a migration background?"). The first item has been reverse-coded, meaning that the
373 higher the mean in each of the two dimensions, the more students consider themselves to be Swiss (4;
374 *yes*) or to not have a migration background (4; *no*).

375 Study participants reported their gender as either "girl" (45%, $n = 143$), "boy" (53%, $n = 170$), or
376 "other" (1%, $n = 2$). Following theories on dominant masculinities (Connell, 1998), a dummy
377 variable (female or other = 0, male = 1) was used for data analysis.

378 5.4 Data Analysis

379 The aim of this study was to assess whether adolescents' mutual acculturation attitudes differed
380 according to their self-identification as being Swiss as well as having a migration background. Latent

381 profile analysis (LPA) was used to identify mutual acculturation profiles in MPlus 8.3 (Muthén and
382 Muthén, 1998–2019). LPA is a person-centric and typological statistical analysis, like latent class
383 analysis, but it uses continuous instead of categorical indicators. LPA reveals latent groups from
384 observed data (Oberski, 2016) that would not have been discovered through variable-centric analyses
385 (Ferguson et al., 2020). The underlying assumption of LPA is that “people can be *typed* with varying
386 degrees of probabilities into categories (subpopulations) that have different configural profiles of
387 personal and/or environmental attributes” (Spurk et al., 2020, pp. 1–2). This means that hidden
388 typologies are formed based on the probability that each participant belongs to a specific pattern.
389 Thus, study respondents are empirically typed into categories based on observations that appear to be
390 similar (Hagenaars and McCutcheon, 2002). These profiles are defined through low variability within
391 a profile as well as high variability among profiles (Masyn, 2013). Thus, instead of using a variable-
392 centric grouping, LPA allows to discover latent profiles based on a person-centric approach.
393 Moreover, LPA was found to be a parsimonious method of modeling acculturation without expecting
394 profiles in advance (Fox et al., 2013). Thus, the main advantage of using LPA to assess acculturation
395 profiles lies in exploring the data and therefore in fitting acculturation profiles to the data instead of
396 fitting the data into pre-expected profiles.

397 LPA with continuous indicators of mutual acculturation consisting of minority as well as majority
398 acculturation were conducted to identify the best-fitting solution. Models were analyzed with up to
399 seven latent profiles and maximum likelihood estimation with robust standard errors (MLR) was
400 applied. Missing data was handled using full information maximum likelihood (FIML), except for
401 when values were missing on all variables ($n = 2$, 1%). Following Dong and Peng (2013), FIML is
402 preferable to other methods because it does not ascribe missing data and therefore uses only available
403 data. All models were estimated with 2000 random start values and 500 iterations, and the 100 best
404 solutions were retained. Means and variances were freely estimated in all profiles and models (Morin
405 et al., 2016). Model fit indices and theoretical considerations concerning the meaningfulness of the
406 profiles and their theoretical interpretability guided model selection (Geiser, 2009). Concerning
407 model fit values like the Akaike information criterion (AIC), the Bayesian information criterion
408 (BIC), the sample-size adjusted BIC (aBIC), and the log likelihood, a lower number indicated a better
409 fit. An elbow graph helps assessing gradient changes concerning model fit improvements when
410 comparing a K-profile model with a K-1 profile model. Entropy reflects the precision of the
411 classification (with 0 for a low accuracy and 1 for a high accuracy) and values over 0.7 are regarded
412 as adequate (Lanza and Cooper, 2016). Then, a significant Lo-Mendell-Rubin Adjusted Likelihood
413 Ratio test (aLMR-LRT; Lo et al., 2001) and Bootstrapped likelihood Ratio test (BLRT; MacLachlan
414 et al., 2019) indicate the best fitting solution when comparing a K-profile model with a K-1 profile
415 model.

416 To assess differences according to self-identification as being Swiss or as having a migration
417 background, LPAs were run for four subsamples based on self-identification as being Swiss (those
418 who identify as somewhat Swiss and those who don't) or as having a migration background (those
419 who identify as somewhat having a migration background and those who don't). However,
420 concerning the LPA results based on self-identification as being Swiss as well as having a migration
421 background, the two-profile-solutions did not have a significant better model fit than the one-profile-
422 solution for none of the four subsamples (Swiss, non-Swiss, migration background, and non-
423 migration background; see Table 2A and 3A in the annex). The Lo-Mendell-Rubin adjusted log-
424 likelihood-ratio test (aLMR) was not significant for any of the seven profile solutions for the non-
425 Swiss and the migration background self-identifying subsamples, possibly due to low sample sizes.
426 For the Swiss and the non-migration background self-identifying subsamples, only the three-profile-

427 solution showed a significant aLMR test. Thus, to assess differences in mutual acculturation attitudes
 428 in relation to self-identification, LPAs were assessed for the full sample in a first step. Then, in a
 429 second step, univariate ANOVAs were run in SPSS (Version 27) to assess group differences based
 430 on self-identification concerning (1) being Swiss, and (2) not having a migration background.
 431 ANOVAs test whether a specific variable's mean value differs among various independent groups.
 432 To confirm the ANOVA and to take the interaction between the two self-identification variables into
 433 account, multinomial logistic regressions were used to investigate whether self-identification as being
 434 Swiss might moderate the effects of self-identification as not having a migration background on the
 435 found mutual acculturation profiles. Both predictors were centered around their means (Aiken et al.,
 436 1991) before computing the interaction term, and all variables were entered into the model together.

437 **6 Results**

438 **6.1 Descriptive Statistics**

439 Table 1 displays frequencies and a crosstab of the two self-identification measures, and Table 2
 440 shows means, standard deviations, and correlations of the four acculturation dimensions, the two self-
 441 identification measures, students' nationality, and country of birth of students and their parents. The
 442 four acculturation dimensions were measured on a 4-point Likert scale ranging from 1 (*disagree*) to 4
 443 (*agree*), so higher means indicate stronger agreement with the relevant dimension.

444 *Insert Table 1 and 2 here*

445 I found the strongest agreement for the first and the fourth dimensions—namely, migration-
 446 background students' heritage culture maintenance and schools' endorsement of intercultural contact.
 447 I found a strong tendency to agree concerning the third dimension, majority students' acquisition of
 448 cultural knowledge. However, I found a slight tendency to disagree concerning the second
 449 dimension, migration-background students' dominant culture adoption. The four acculturation
 450 dimensions' reliability was good to excellent.

451 I assessed group differences based on gender (male vs. female/other) concerning the four
 452 acculturation dimensions through *t* tests. Following theories on dominant masculinities (Connell,
 453 1998), male students were compared with non-male students, referring to those indicating their
 454 gender as female or other. No significant mean differences based on gender appeared for the heritage
 455 culture maintenance dimension (female/other $M = 3.43$, $SD = .59$, $n = 145$; male $M = 3.42$, $SD = .66$,
 456 $n = 163$), $t(306) = .058$, $p = .954$; the dominant culture adoption dimension (female/other $M = 2.32$,
 457 $SD = .76$, $n = 137$; male $M = 2.44$, $SD = .88$, $n = 151$), $t_{Welch}(285.3) = -1.30$, $p = .194$; the
 458 intercultural knowledge acquisition dimension (female/other $M = 2.89$, $SD = .73$, $n = 142$; male $M =$
 459 2.96 , $SD = .84$, $n = 158$), $t(298) = -.761$, $p = .447$; and the intercultural contact endorsement
 460 dimension (female/other $M = 3.29$, $SD = .71$, $n = 141$; male $M = 3.16$, $SD = .78$, $n = 157$), $t(296) =$
 461 1.548 , $p = .123$.

462 Self-identification means were highly similar among the two single self-identification measures. Yet,
 463 looking at the self-identification crosstab, many small groups emerged, showing that the two
 464 categories "Swiss" and "migration background" are not mutually exclusive (see Table 1). Nearly one
 465 third self-identified as belonging to the Swiss majority, i.e., as being Swiss while not having a

466 migration background. Yet, only 5% self-identified as not belonging to the Swiss majority, i.e., as not
467 being Swiss while having a migration background. Thus, national self-identification exists not only
468 on a continuum but also in diverse interactions. Crosstabs between the two self-identification
469 measures and students' nationality as well as students and their parents' country of birth were
470 analyzed (see Figures 1A–6A in the Annex). Most students who possessed the Swiss nationality, who
471 have been born in Switzerland, or whose parents have both been born in Switzerland self-identified
472 as (somewhat) being Swiss as well as (somewhat) not having a migration background. However, the
473 graphs also show diversity in terms of self-identification and nationality as well as country of birth.
474 For example, many students who have been born in Switzerland also self-identified as (somewhat)
475 not being Swiss or as (somewhat) having a migration background. On the other hand, some students
476 who have been born outside of Switzerland self-identified as (somewhat) being Swiss or as
477 (somewhat) not having a migration background. There were students with Swiss nationality who self-
478 identified as (somewhat) having a migration background or as (somewhat) not being Swiss, while
479 there were students without Swiss nationality who self-identified as (somewhat) not having migration
480 background or as (somewhat) being Swiss.

481 Group differences concerning self-identification based on gender (male vs. female/other) were
482 assessed through *t* tests. No significant mean differences based on gender were found concerning
483 self-identification as Swiss (female/other $M = 2.95$, $SD = 1.06$, $n = 146$; male $M = 2.97$, $SD = 1.11$, n
484 $= 170$), $t(314) = -.151$, $p = .880$; and concerning self-identification as not having a migration
485 background (female/other $M = 2.89$, $SD = 1.21$, $n = 142$; male $M = 2.95$, $SD = 1.22$, $n = 155$), $t(295)$
486 $= -.433$, $p = .665$.

487 Table 2 also displays correlations among the four acculturation dimensions, the two self-
488 identification measures and students' nationality as well as students' and parents' countries of birth.
489 Concerning the four acculturation dimensions, only positive significant correlations emerged: There
490 were moderate positive significant correlations between majority students' acquisition of cultural
491 knowledge with both migration-background students' heritage culture maintenance and dominant
492 culture adoption. Then, relatively strong correlations emerged between schools' endorsement of
493 intercultural contact and migration-background students' heritage culture maintenance as well as
494 majority students' acquisition of cultural knowledge. Concerning self-identification measures, a
495 relatively strong positive correlation emerged between self-identifying as Swiss and self-identifying
496 as not having a migration background, reflecting the 31% self-identifying as belonging to the Swiss
497 majority (i.e., being Swiss while not having a migration background). There were strong positive
498 significant correlations between students having the Swiss nationality as well as both parents having
499 been born in Switzerland with students' Swiss self-identification, however, only moderate positive
500 significant correlations between Swiss nationality and both parents born in Switzerland with students
501 self-identifying as not having a migration background. Then, there were moderate positive significant
502 correlations between both parents having been born outside of Switzerland and students self-
503 identifying as not being Swiss and as having a migration background. Moreover, students being born
504 in Switzerland correlated moderately, positively, and significantly with Swiss self-identification and
505 weakly, positively, and significantly with non-migration background self-identification. Finally, there
506 was a weak positive significant correlation between having one parent born outside of Switzerland
507 and students' non-Swiss self-identification. Weak and moderate predominantly negative correlations
508 emerged between the self-identification measures and the four acculturation dimensions: The more
509 students self-identified as either Swiss or as not having a migration background, the less they agreed
510 with migration-background students' heritage culture maintenance, majority students' acquisition of
511 cultural knowledge, and schools' endorsement of intercultural contact; however, these students

512 tended to agree with migration-background students' dominant culture adoption. Students'
 513 nationality and place of birth did not correlate significantly with the four acculturation dimensions.
 514 However, there were weak negative significant correlations between both parents being born in
 515 Switzerland and migration background students' heritage culture maintenance, Swiss students'
 516 intercultural knowledge acquisition, and schools intercultural contact endorsement. Moreover, there
 517 were weak positive significant correlations between having one parent born in Switzerland and the
 518 school dimension, as well as between having both parents born outside of Switzerland and the
 519 heritage culture maintenance dimension.

520 **6.2 Mutual Acculturation Profiles**

521 Adolescents' attitudes toward mutual acculturation were analyzed through latent profile analyses
 522 (LPA) and the four acculturation dimensions were used as continuous variables. Namely, attitudes
 523 toward (1) migration-background adolescents' heritage culture maintenance, (2) migration-
 524 background adolescents' dominant culture adoption, (3) majority adolescents' acquisition of cultural
 525 knowledge, and (4) schools' endorsement of intercultural contact were analyzed. Model fit indices
 526 (see Table 3) and theoretical considerations guided model selection (Geiser, 2009). Whereas model
 527 fit values decreased from the one-profile-solution to the seven-profile-solution, the decrease
 528 extenuated after the three-profile-solution (see Figures 1 and 2 for the LPA elbow plot on AIC, BIC,
 529 aBIC, and log likelihood values). Entropy values were adequate for all profiles, yet best for the four-
 530 and three-profile-solutions. Whereas the Lo-Mendell-Rubin adjusted log-likelihood-ratio test (aLMR
 531 LRT) did not indicate a significant model fit improvement between one and two profiles, it indicated
 532 a significant model fit improvement between three and two profiles as well as between four and three
 533 profiles. However, given the small number of participants in one of the four profiles (3%, $n = 8$) and
 534 the rule of deference to more constrained and parsimonious models (Lanza et al., 2013), the three-
 535 profile-solution was chosen.

536 *Insert Table 3 and Figures 1 and 2 here*

537 Figure 3 displays the three distinct profiles, and Table 4 shows the exact agreement values of
 538 participants within each of the three profiles concerning all four acculturation dimensions. The
 539 *mutual integration profile* ($n = 147$; 46%) is characterized by a strong agreement with migration-
 540 background students' heritage culture maintenance, majority students' acquisition of intercultural
 541 knowledge, and schools' endorsement of intercultural contact as well as a tendency to agree with
 542 migration-background students' dominant culture adoption. The *multiculturalism profile* ($n = 137$;
 543 43%) is characterized by agreement with migration-background students' heritage culture
 544 maintenance, a tendency to agree with the two majority dimensions, and a tendency to disagree with
 545 migration-background students' dominant culture adoption. The *cultural distancing profile* ($n = 33$,
 546 10%) could also be called a separation profile because it is characterized by a tendency to agree with
 547 migration-background students' heritage culture maintenance, a tendency to disagree with migration-
 548 background students' dominant culture adoption, and disagreement with the two majority
 549 dimensions.

550 *Insert Figure 3 and Table 4 here*

551 Figure 3 presents three striking insights concerning adolescents' mutual acculturation attitudes: First,
 552 all three patterns show various agreement magnitudes with migration-background adolescents'

553 heritage culture maintenance, indicating a general acceptance of cultural diversity. Moreover, the
 554 three patterns do not differ much concerning migration-background adolescents' dominant culture
 555 adoption, indicating indecision or indifference concerning culture adoption regarding the various
 556 areas of life. Finally, it is interesting to note that the three profiles vary most concerning the two
 557 majority acculturation dimensions, indicating that majority acculturation is a distinctive feature of the
 558 three patterns. Thus, the patterns clearly show the added value of a mutual acculturation framework,
 559 combining minority and majority acculturation when assessing acculturation attitudes.

560 6.3 Acculturation Profiles and National Self-Identification

561 I assessed group differences concerning the three acculturation profiles using univariate ANOVA and
 562 multinomial logistic regression. Concerning the ANOVA, each profile revealed by LPA was assessed
 563 in relation to participants' self-identification as belonging to the Swiss majority. This national
 564 belonging was assessed according to self-identification as being Swiss or as self-identification as
 565 having a migration background. In a first step, ANOVAs were run with the two self-identification
 566 variables separated. Based on these results, multinomial logistic regressions were run with mean
 567 centered predictors to confirm the ANOVA findings and to understand whether there was an
 568 interaction effect of the two self-identification variables in relation to the three mutual acculturation
 569 profiles.

570 *Insert Table 5 here*

571 Table 5 displays mean values for each self-identification assessment (being Swiss, and not having a
 572 migration background) of each acculturation profile. There were no significant differences among the
 573 three profiles in terms of self-identification as being Swiss: $F(2, 312) = 2.27, p = .105, \eta^2 = .014$.
 574 This means that self-identification in terms of being Swiss did not significantly differ across the three
 575 acculturation profiles. There were significant mean differences in terms of self-identification as
 576 having a migration background, $F_{Welch}(2, 89.99) = 4.70, p = .006, \eta^2 = .031$. Based on a Games-
 577 Howell post hoc test, those in the cultural distancing profile were found to self-identify significantly
 578 stronger as not having a migration background ($M = 3.45, SD = 1.03$) than those in the mutual
 579 integration profile ($M = 2.74, SD = 1.27, p = .005$). No further significant differences arose across the
 580 acculturation profiles in terms of migration background self-identification. I ran sensitivity analyses
 581 in G*Power (Version 3.1.19.7) and found that an ANOVA with 297–315 participants across 3 groups
 582 without covariates is sensitive to effects of .22–.23 magnitude with 80% power (alpha = .05). Thus,
 583 effects with an effect size smaller than .22 could not be reliably detected in this study.

584 *Insert Table 6 here*

585 Table 6 displays three multinomial logistic regression analyses. A significant effect was found
 586 between the cultural distancing and the mutual integration profiles in terms of self-identification as
 587 not having a migration background, $b = .519, SE = .230, OR = 1.681, p = .024, 95\%[1.07, 2.64]$.
 588 Thus, the log odds of self-identifying as not having a migration background were significantly higher
 589 in the cultural distancing profile than in the mutual integration profile, confirming the findings of the
 590 ANOVA. However, the results indicated no significant interaction between self-identification as
 591 being Swiss and as not having a migration background in relation to mutual acculturation profile
 592 membership (see Annex Figures 7A–9A for interaction effect graphs). Simple effect coefficients

593 were computed on three values of Swiss self-identification, first for the mean-centered variable, then
594 1 SD above the mean, and 1 SD below the mean. When self-identification as being Swiss was fixed 1
595 SD above and below the mean, the difference between the cultural distancing and the mutual
596 integration profiles in terms of self-identification as not having a migration background was not
597 significant anymore. All in all, these results indicate that those in the cultural distancing profile self-
598 identified stronger as not having a migration background than those in the mutual integration profile,
599 but self-identification as being Swiss and the interaction between being Swiss and not having a
600 migration background were not a distinctive feature of the three mutual acculturation profiles.

601 7 Discussion

602 This study was aimed at assessing whether adolescents differ in their attitudes toward mutual
603 acculturation based on their self-identification as being Swiss and/or having a migration background.
604 Whereas attitudes toward mutual acculturation have already been assessed in the school context
605 (Sidler et al., 2022), how adolescents' self-identification relates to these mutual acculturation
606 attitudes presented a research gap. Self-identification measures are key because in defining
607 individuals' categorization in relation to ongoing norms of national belonging, researchers implicitly
608 play a role in defining belonging and otherness (Moffitt and Juang, 2019). Addressing self-
609 identification when categorizing study participants matters particularly in acculturation research,
610 because acculturation entails a negotiation of dominance (Zick, 2010). Where the chosen constructs
611 and narratives can foster otherness (Tekin, 2010), they can also be used to enhance mutuality.
612 Therefore, it is vital to be aware of the potential impact of group-based terminology. Thus, assessing
613 mutual acculturation attitudes in terms of national self-identification promised novel insights through
614 giving the authority of interpretation concerning minority and majority group members
615 categorization to the study participants themselves. To address the research gap concerning mutual
616 acculturation attitudes and self-identification, first, attitudes toward mutual acculturation were
617 analyzed through latent profile analyses of the four dimensions, namely migration background
618 students' 1) heritage culture maintenance and 2) dominant culture adoption, 3) Swiss students'
619 intercultural knowledge acquisition, and 4) Swiss schools' intercultural contact and exchange
620 endorsement. Second, the found mutual acculturation profiles were examined in terms of self-
621 identification as 1) being Swiss, 2) not having a migration background, and 3) the interaction of the
622 two.

623 Latent profile analyses led to three acculturation profiles: The *mutual integration profile* was
624 characterized by strong agreement concerning migration-background students' heritage culture
625 maintenance, schools' endorsement of intercultural contact, and Swiss adolescents' intercultural
626 knowledge acquisition. Thus, just as acculturation is a mutual process between minority and majority
627 group members, integration or inclusion goes beyond expecting only openness from majority group
628 members as it is stated in the Federal Act on Foreign Nationals (2005). Adolescents in the mutual
629 integration profile were indecisive concerning the adoption dimension (namely, migration-
630 background adolescents' dominant culture adoption), meaning that they agreed with the adoption of
631 some issues and disagreed with the adoption of others. Because the final adoption score reflects the
632 mid-point of the 4-point Likert answer scale, this pattern is still considered to be an integration
633 pattern. The *multiculturalism* profile was defined by agreement with the heritage culture maintenance
634 dimensions; however, this profile featured a tendency to agree with only the two majority dimensions
635 and a tendency to disagree with the dominant culture adoption dimension. Multiculturalism refers to
636 a society in which various distinct cultural groups are considered to be relevant and given the
637 agreement concerning migration background students' heritage culture maintenance and the tendency

638 to agree that majority students' intercultural knowledge acquisition and schools' intercultural contact
639 endorsement are important, this pattern was defined as a multiculturalism pattern. Finally, the
640 *cultural distancing* or the *separation* profile demonstrated a tendency to agree with the heritage
641 culture maintenance dimension and a tendency to disagree with the dominant culture adoption
642 dimension and disagreement with both majority dimensions. The three profiles found in this study
643 resemble the three profiles found in the first year of the longitudinal data collection (Sidler et al.,
644 2022), showing only a slight variation in the *cultural distancing* profile in terms of shifting from
645 disagreement to agreement concerning migration background students' heritage culture maintenance.
646 Thus, students across the three profiles agreed to a different degree with migration-background
647 adolescents' heritage culture maintenance. This means that there is a general acceptance and
648 tolerance of heritage cultures and therefore of cultural diversity among adolescents in schools in the
649 German-speaking cantons Aargau, Basel-Stadt, and Solothurn in Switzerland. This development
650 toward agreement with migration background students' heritage culture maintenance could be
651 explained by participants' age because adolescents' openness to diverse views has been found to be
652 gradually increasing in Sweden (Bayram Özdemir et al., 2021). Interestingly, adolescents in all three
653 profiles not only agree or tend to agree with migration-background adolescents' heritage culture
654 maintenance but also show indifference regarding or a tendency to disagree with migration-
655 background students' dominant culture adoption. This is a surprising finding in the Swiss context,
656 given that within the past decade, Swiss adult voters decided to ban burqas and minarets (Arlt, 2021;
657 Dodd, 2015), showing strong opinions in opposition to Muslims' maintenance of their cultural
658 heritage. Adolescents therefore have a different attitude toward minority acculturation, and the
659 combination of finding migration background students' heritage culture maintenance important while
660 being indifferent toward their dominant culture adoption could also relate to tolerance instead of
661 exclusionary practices found in other studies (Duemmler, 2015). Then, just as the year before, most
662 adolescents (46%) in this study were in the mutual integration profile, followed by 43% in the
663 multiculturalism profile. The strong prevalence of the mutual integration profile and majority
664 acculturation as a distinctive feature of the three profiles stress the importance of a mutual
665 acculturation framework at school in the Swiss context.

666 One of the characteristics of the mutual integration and the multiculturalism profiles is the
667 importance students place on schools endorsing intercultural contact and exchange. This is an
668 important finding because schools supporting positive intercultural contact and cultural diversity
669 discussions promote intercultural understanding, which in turn prepares students to participate in a
670 culturally diverse society (Schachner et al., 2021). Moreover, creating space for discussions and
671 intercultural contact may also support students in forming intergroup friendships (Schachner et al.,
672 2015), which in turn may again enhance intercultural understanding. Additionally, adolescents'
673 development is influenced by schools' organizational contexts and cultural diversity climates (Juang
674 and Schachner, 2020), particularly in terms of students' acculturation and school adjustment
675 (Schachner et al., 2017). Thus, in addition to providing an important acculturation context (Arends-
676 Tóth and van de Vijver, 2006), schools serve as important acculturation agents in adjusting their
677 cultural diversity policies to the needs of adolescents with and without migration backgrounds to
678 promote their development and intercultural competencies (Sidler et al., 2022). Practically, these
679 findings stress the importance for adolescents that schools implement diversity policies that include
680 endorsing intercultural contact and exchange for students with and without a migration background.
681 Thus, schools should promote intercultural understanding through creating space for students with
682 and without a migration background to discuss cultural diversity and foster exchange about local and
683 heritage cultures.

684 The three identified acculturation profiles were then analyzed in a second step through an ANOVA
685 and multiple logistic regressions in terms of national self-identification. To avoid categorizing
686 adolescents using a top-down approach through categorizations such as migration background based
687 on nationality and countries of birth of adolescents and their parents, the adolescents were asked to
688 self-identify as belonging to the majority in terms of either being Swiss or not having a migration
689 background. Those in the cultural distancing profile were found to identify significantly stronger as
690 not having a migration background than those in the mutual integration profile. No significant
691 interaction effect concerning self-identification as being Swiss and as not having a migration
692 background emerged. Next to being significant effects, the effect size, and the amount of explained
693 variance were not minuscule. Two main findings are to be discussed:

694 First, adolescents in the cultural distancing profile identified significantly stronger as not having a
695 migration background and therefore as belonging to the dominant majority than those in the mutual
696 integration profile. The cultural distancing profile differs from the mutual integration profile in two
697 important aspects: a separation expectation toward minority group members (instead of an integration
698 expectation) and a non-involvement expectation toward majority group members and schools
699 (instead of an integration expectation). Thus, there were exclusionary and distancing tendencies in
700 the cultural distancing profile in that minority group adolescents were not expected to adopt
701 dominant cultural characteristics in Switzerland while Swiss adolescents and Swiss schools were not
702 expected to acquire intercultural knowledge and foster intercultural contact. Adolescents expecting
703 minority group members to separate were more likely to self-identify as belonging to the national
704 majority compared to adolescents expecting minority group members to integrate. This aligns with
705 previous findings in Switzerland concerning students reproducing exclusionary and/or assimilationist
706 practices (Duemmler, 2015). Then, adolescents who had low expectations of the majority to integrate
707 in terms of majority students acquiring intercultural knowledge and schools endorsing intercultural
708 contact were more likely to self-identify as not having a migration background and therefore as
709 belonging to the Swiss majority compared to adolescents expecting majority group members and
710 schools to integrate. Thus, having low expectations on the majority to integrate was related to
711 whether one self-identified as belonging to this majority. This finding relates to Swiss integration
712 policies in that although the Swiss majority is expected to be open-minded, members of the Swiss
713 majority are not expected to actively integrate (Federal Act on Foreign Nationals, 2005). Just as
714 acculturation research has focused predominantly on minority acculturation, national integration
715 policies have focused on how minorities and migrants should integrate in the dominant society. The
716 role majority group members and institutions play concerning the social inclusion of all residents,
717 whether they are majority or minority group members, is therefore largely ignored.

718 The second finding is that there was no significant difference in terms of national self-identification
719 between adolescents in the multiculturalism profile and those in the mutual integration profile.
720 Moreover, there was also no significant difference between all three mutual acculturation profiles
721 concerning the interaction of the two self-identification measures. Thus, national self-identification
722 measures were not a distinctive characteristic concerning mutual acculturation attitudes per se. This
723 could be explained by the age of the participants, as they develop their own labels and try out various
724 identities during adolescence (Portes and Rivas, 2011). Additionally, adolescents might have
725 experienced cultural diversity at earlier ages and therefore developed more open-minded attitudes.
726 However, the sample size could have been too small to find more meaningful effects. Moreover, it
727 could also be explained by the one-sided assessment of self-identification because this study's focus
728 was to measure national self-identification and not self-identification in its diversity. The diversity of
729 experiences among immigrants and their descendants has been well documented (Moffitt and Juang,

2019), and assessing more diverse and more nuanced self-identifications particularly in relation to diverse minority self-identifications might have led to further insights. The same might apply for majority group members because they are affected by not only mutual but also remote acculturation (Ferguson and Bornstein, 2012). Whereas self-identification measures surely help de-essentialize the national/majority and the minority groups, they may rely heavily on internalized social power structures, as these findings would suggest. Self-identification measures therefore do not magically overcome issues of societal power structures and dominance, as adolescents may just as well refer to the same societal power structures when they define themselves—particularly if they were socialized in the relevant society—and base their self-identification on how they are perceived in their environment.

8 Limitations

There are four main limitations to this study: first, the sample size has been a limiting factor. LPAs for subsamples based on self-identification as being Swiss or as having a migration background were not meaningful for both relevant subsamples due to the small sample sizes for those self-identifying as not being Swiss and for those self-identifying as having a migration background. Thus, to assess mutual acculturation patterns based on self-identification and therefore to assess latent mutual acculturation patterns directly for the diverse groups, future research with a bigger sample is needed. Additionally, this study is limited by the specific national self-identification assessment, namely self-identification as (1) being Swiss, (2) not having a migration background, and (3) the interaction of the two. Further research could assess national and ethnic self-identification and their interactions in a more nuanced way. Moreover, as adolescents' self-identifications develop over time, a longitudinal assessment would yield better understanding. Finally, further research is needed to assess self-identification within societal power structures and understand the impact of dominant societal narratives on not only adolescents' self-identification and development thereof but also concerning how self-identification might shape attitudes toward mutual acculturation.

9 Conclusion

This study's main aim was to assess whether adolescents' attitudes toward mutual acculturation altered depending on their self-identification as being Swiss, as having a migration background, and the interaction of the two. Mutual acculturation is a process by which members of minority and majority groups—the latter including national institutions—adjust to and change because of intercultural encounters. Minority and majority perspectives are frequently used to examine acculturation attitudes; however, researchers frequently distinguish between minority and majority group members based on concepts such as place of birth, nationality, migrant generation, or migration background. However, researchers may classify members of a group differently than the group's members self-identify. This can be problematic, as categorizations implicitly constitute the groups they describe and whereas ethnic and national labels are socially constructed, they can have a real impact on people. This is especially important for adolescents, who are exploring their group identities and belongings. Adolescents' attitudes toward *mutual acculturation* have so far not been studied in relation to self-identification measures. This study addressed this research gap by examining adolescents' attitudes toward mutual acculturation in relation to whether they self-identified as belonging to the Swiss majority. National self-identification was assessed through adolescents' self-identification as (1) being Swiss, (2) not having a migration background, and (3) the interaction of the two. Attitudes toward mutual acculturation were measured using a four-

773 dimensional assessment that conceptualizes minority and majority adolescents as well as schools as
774 acculturation agents. Thus, attitudes toward (1) migration-background adolescents' heritage culture
775 maintenance, (2) migration-background adolescents' dominant culture adoption, (3) majority
776 adolescents' intercultural knowledge acquisition, and (4) schools' endorsement of intercultural
777 contact were assessed. With latent profile analyses, I identified three acculturation profiles: (1) a
778 mutual integration profile—where migration-background and Swiss adolescents and schools are
779 expected to integrate—and (2) a multiculturalism profile—considering diverse cultural groups as
780 well as intercultural knowledge and contact as important—as well as (3) a cultural distancing profile
781 with separation expectations toward minority adolescents and non-involvement expectations toward
782 majority adolescents and schools. Those in the cultural distancing profile self-identified significantly
783 stronger as not having a migration background than those in the mutual integration profile. Thus,
784 students with separation expectations toward migration background students and non-involvement
785 expectations toward schools and non-migration background majority students are more likely than
786 students with mutual integration expectations toward minority and majority students and schools to
787 self-identify as not having a migration background and thus to self-identify as belonging to the
788 majority group.

789 **10 Data Availability Statement**

790 The data set generated and analyzed during the current study is not yet publicly available but is
791 available from the corresponding author upon reasonable request.

792 **11 Author Contribution**

793 PS participated in the study design and data collection, performed the statistical analysis and data
794 interpretation, and wrote the manuscript.

795 **12 Ethics Statement**

796 The study design was ethically approved in Switzerland by the Ethics Committee of the Faculty of
797 Arts and Social Sciences of the University of Zurich. I obtained written informed consent from the
798 adolescents and their legal guardians or next of kin.

799 **13 Funding**

800 The Swiss National Science Foundation funded this study through the National Centre of
801 Competence in Research, NCCR—on the move via the project Overcoming Inequalities with
802 Education – School Resilience (grant number: 51NF40-182897). The University of Applied Sciences
803 and Arts Northwestern Switzerland generously supported this study. Neither funder played a role in
804 the study design, data collection, data analysis, or manuscript drafting.

805 **14 Conflict of Interest**

806 The author reports no conflict of interests.

807 **15 Acknowledgements**

808 The author would like to express her gratitude to all schools, teachers, students, and parents involved
809 in the study and would like to thank all research assistants who supported the data collection.

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1040 **17 Tables**

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1043 **Table 1**

1044 *Self-Identification Frequencies and Crosstab: Being Swiss vs. Having a Migration Background (n =*
 1045 *297)*

1046

		Self-identification having a migration background			
		Yes	Somewhat yes	Somewhat no	No
		20%	12%	17%	45%
		(n = 64)	(n = 38)	(n = 53)	(n = 142)
Self-identification being Swiss	Yes	5%	2%	6%	31%
		(n = 14)	(n = 5)	(n = 18)	(n = 91)
	Somewhat yes	4%	5%	8%	9%
		(n = 11)	(n = 14)	(n = 23)	(n = 28)
	Somewhat no	8%	4%	3%	3%
		(n = 24)	(n = 12)	(n = 8)	(n = 10)
	No	5%	2%	1%	4%
		(n = 15)	(n = 7)	(n = 4)	(n = 13)

Note. In total, there were 1% (n = 3) missing answers in Swiss self-identification and 7% (n = 22) missing answers in migration background self-identification.

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1048 **Table 2**

1049 *Means, Standard Deviations, and Correlations of Mutual Acculturation Attitudes, Self-Identification, Nationality, and Country of Birth*

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	<i>n</i>	<i>M</i>	<i>SD</i>	Migration- background students' heritage culture maintenance	Migration- background students' dominant culture adoption	Majority students' acquisition of cultural knowledge	Schools' endorsement of intercultural contact	Self- identification as being Swiss	Self- identificat ion as not having a migration backgrou nd	Having Swiss Nationalit y	Student born in SWI	Both Parents born in SWI	One Parent born in SWI
Migration background students' heritage culture maintenance	308	3.42	.63	1 (<i>n</i> = 308)									
Migration background students' dominant culture adoption	288	2.38	.82	-.001 (<i>n</i> = 285)	1 (<i>n</i> = 288)								
Majority students' acquisition of cultural knowledge	300	2.93	.79	.375*** (<i>n</i> = 293)	.215*** (<i>n</i> = 276)	1 (<i>n</i> = 300)							
Schools' endorsement of intercultural contact	298	3.22	.75	.466*** (<i>n</i> = 294)	.071 (<i>n</i> = 277)	.651*** (<i>n</i> = 287)	1 (<i>n</i> = 298)						
Self- identification as being Swiss	316	2.96	1.08	-.128* (<i>n</i> = 307)	.118* (<i>n</i> = 287)	-.154** (<i>n</i> = 298)	-.051 (<i>n</i> = 297)	1 (<i>n</i> = 316)					

Mutual Acculturation and Self-Identification

Self-identification as not having a migration background	297	2.92	1.21	-.109 (n = 290)	-.014 (n = 276)	-.207*** (n = 282)	-.149* (n = 282)	.406*** (n = 297)	1 (n = 297)				
Having Swiss Nationality	319	na	na	-.110 (n = 308)	.019 (n = 288)	-.108 (n = 300)	-.041 (n = 298)	.627*** (n = 316)	.328*** (n = 297)	1 (n = 319)			
Student born in SWI	319	na	na	.016 (n = 308)	.043 (n = 288)	-.080 (n = 300)	-.057 (n = 298)	.361*** (n = 316)	.133* (n = 297)	.422*** (n = 319)	1 (n = 319)		
Both Parents born in SWI	319	na	na	-.135* (n = 308)	.049 (n = 288)	-.178** (n = 300)	-.158** (n = 298)	.621*** (n = 316)	.458*** (n = 297)	.619*** (n = 319)	.346*** (n = 319)	1 (n = 319)	
One Parent born in SWI	319	na	na	.042 (n = 308)	.019 (n = 288)	.111 (n = 300)	.135* (n = 298)	-.150** (n = 316)	-.107 (n = 297)	-.043 (n = 319)	.010 (n = 319)	-.382*** (n = 319)	1 (n = 319)
Both Parents born outside SWI	319	na	na	.138* (n = 308)	-.076 (n = 288)	.102 (n = 300)	.046 (n = 298)	-.497*** (n = 316)	-.376*** (n = 297)	-.562*** (n = 319)	-.313*** (n = 319)	-.653*** (n = 319)	-.387*** (n = 319)

Note. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$. SWI = Switzerland; na = not applicable. The four acculturation dimensions and the self-identification measures are assessed on a 4-point Likert scale from *disagree/no* (1) to *agree/yes* (4). Thus, concerning the acculturation dimensions, higher means indicate stronger agreement with the respective dimension. Concerning self-identification measures, higher means indicate stronger identification as Swiss or as not having a migration background. Students' nationality and country of birth as well as country of birth of parents have been dummy-coded as (0) *not applicable* and (1) *applicable*.

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Table 3
Overview Model Fit Latent Profile Analyses

#	Log likelihood	AIC	BIC	aBIC	Entropy	aLMR <i>p</i> -value	BLRT <i>p</i> -value	Sample proportion per class	Classification accuracy
1	-1333.281	2682.563	2712.634	2687.260				317 (100%)	
2	-1241.226	2508.452	2557.318	2516.085	.810	.09	< .001	49 (16%); 268 (85%)	.900–.955
3	-1147.108	2330.217	2397.877	2340.785	.917	< .001	< .001	33 (10%); 137 (43%); 147 (46%)	.955–.964
4	-1111.247	2268.494	2354.949	2281.998	.933	.04	< .001	8 (3%); 29 (9%); 146 (46%); 134 (42%)	.954–.989
5	-1089.431	2234.861	2340.111	2251.301	.874	.05	< .001	29 (9%); 82 (26%); 8 (3%); 137 (43%); 61 (19%)	.882–.985
6	-1068.587	2203.174	2327.218	2222.550	.879	.32	< .001	7 (2%); 78 (25%); 132 (42%); 10 (3%); 29 (9%); 61 (19%)	.849–.995
7	-1053.752	2183.504	2326.342	2205.815	.886	.44	< .001	10 (3%); 7 (2%); 26 (8%); 78 (25%); 5 (2%); 129 (41%); 62 (20%)	.848–.999

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; aBIC = sample-size adjusted BIC; aLMR LRT = Lo–Mendell–Rubin adjusted log-likelihood-ratio test; BLRT = bootstrap likelihood ratio test. Classification accuracy relates to the average latent class probabilities. The chosen profile solution is in bold.

1054

1055 **Table 4**

1056 *Mean Values for Each Acculturation Dimension of Each Acculturation Profile (n = 317)*

Profile	<i>n</i>	Heritage culture maintenance		Dominant culture adoption		Intercultural knowledge acquisition		Intercultural contact endorsement	
		<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Cultural distancing	33 (10%)	2.71	.185	2.28	.155	1.76	.139	1.74	.089
Multiculturalism	137 (43%)	3.33	.049	2.31	.057	2.70	.054	2.88	.029
Mutual integration	147 (46%)	3.68	.035	2.47	.086	3.41	.050	3.89	.016

Note. Answer scale ranges from *disagree* (1) to *agree* (4).

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1060 **Table 5**

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1062 *Mean Values for Each Self-Identification Assessment of Each Acculturation Profile (n = 319)*

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Profile	Being Swiss		Not having a migration background	
	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>
Cultural distancing	3.33 (1.02)	33	3.45 (1.03)	31
Multiculturalism	2.89 (1.14)	137	2.98 (1.16)	130
Mutual integration	2.96 (1.03)	145	2.74 (1.27)	136

Note. Self-identification as Swiss was rated on a scale from 1 = *not being Swiss* to 4 = *being Swiss*. Self-identification as having a migration background was rated on a scale from 1 = *having a migration background* to 4 = *not having a migration background*.

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1067 **Table 6**

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1069 *Multinomial Logistic Regressions*

Model		Swiss centered				Swiss low				Swiss high			
Profile		B	SE	Wald	OR [C.I. 95%]	B	SE	Wald	OR [C.I. 95%]	B	SE	Wald	OR [C.I. 95%]
Multi-culturalism (n = 130) vs. Mutual integration (n = 136)	Intercept	.004	.134	.001		-.143	.187	.587		.151	.197	.586	
	No mbg	.189	.112	2.855	1.209 [.97, 1.51]	.106	.164	.420	1.112 [.81, 1.53]	.272	.143	3.615	1.313 [.99, 1.74]
	Swiss	-.136	.127	1.137	.873 [.68, 1.12]	-.136	.127	1.137	.873 [.68, 1.12]	-.136	.127	1.137	.873 [.68, 1.12]
	No mbg * Swiss	-.077	.098	.618	.926 [.77, 1.12]	-.077	.098	.618	.926 [.77, 1.12]	-.077	.098	.618	.926 [.77, 1.12]
Cultural distancing (n = 31) vs. Mutual integration (n = 136)	Intercept	-1.650 ***	.253	42.551		-1.512 ***	.359	17.728		-1.788 ***	.373	22.927	
	No mbg	.519*	.230	5.100	1.681 [1.07, 2.64]	.587	.338	3.027	1.799 [.93, 3.49]	.451	.296	2.314	1.569 [.88, 2.81]
	Swiss	.128	.245	.272	1.136 [.70, 1.84]	.128	.245	.272	1.136 [.70, 1.84]	.128	.245	.272	1.136 [.70, 1.84]
	No mbg * Swiss	.063	.202	.097	1.065 [.72, 1.58]	.063	.202	.097	1.065 [.72, 1.58]	.063	.202	.097	1.065 [.72, 1.58]

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Multi-culturalism (<i>n</i> = 130) vs. Cultural distancing (<i>n</i> = 31)	Intercept	1.654 ***	.252	43.012		1.369 ***	.363	14.241		1.939 ***	.366	28.126	
	No mbg	-.330	.231	2.042	.719 [.46, 1.13]	-.481	.342	1.985	.618 [.32, 1.21]	-.178	.294	.368	.837 [.47, 1.49]
	Swiss	-.263	.243	1.178	.769 [.48, 1.24]	-.263	.243	1.178	.769 [.48, 1.24]	-.263	.243	1.178	.769 [.48, 1.24]
	No mbg * Swiss	-.140	.203	.475	.870 [.58, 1.29]	-.140	.203	.475	.870 [.58, 1.29]	-.140	.203	.475	.870 [.58, 1.29]
	Cox & Snell	.043				.043				.043			
	Nagelkerke	.051				.051				.051			

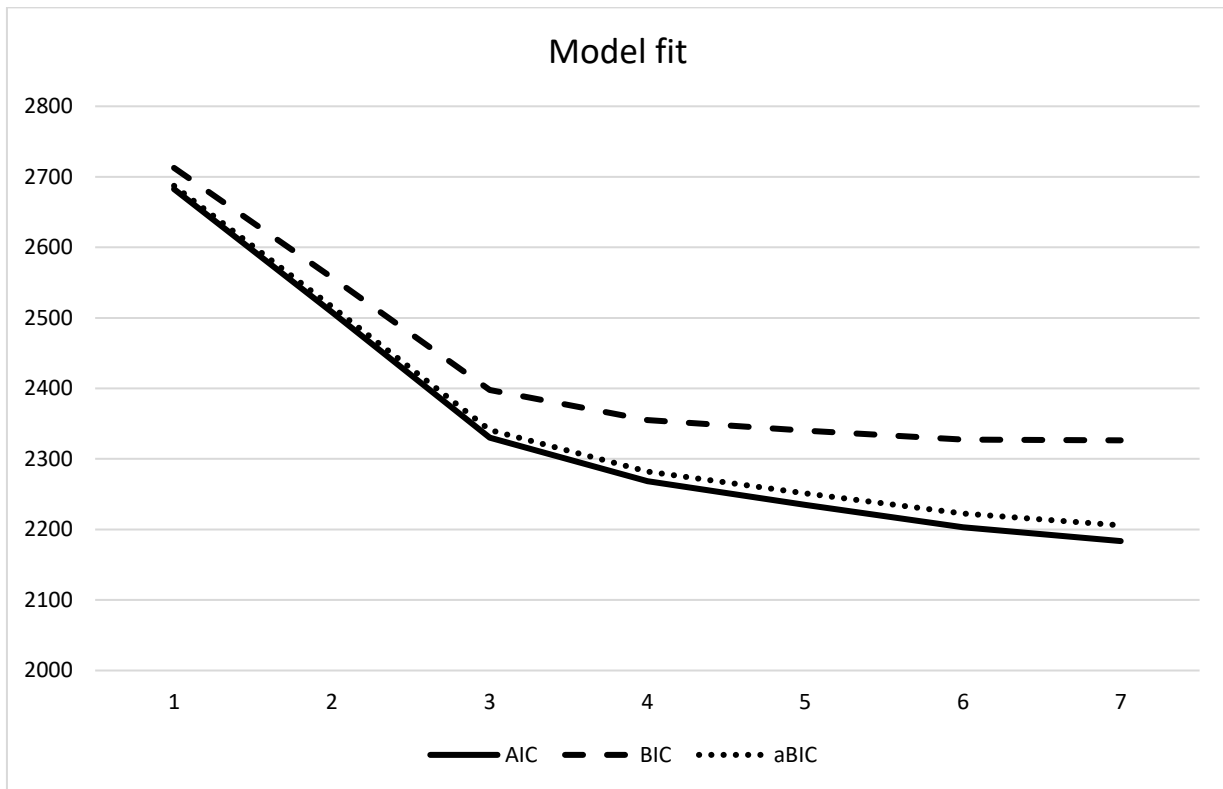
Note. No mbg = no migration background self-identification. Swiss = Swiss self-identification. * $p \leq .05$. *** $p \leq .001$.

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1072 **18 Figures**

1073 **Figure 1**

1074 *Latent Profile Analysis: Model Fit*



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1076 *Note.* AIC = Akaike information criterion; BIC = Bayesian information criterion; aBIC = sample-size
1077 adjusted BIC.

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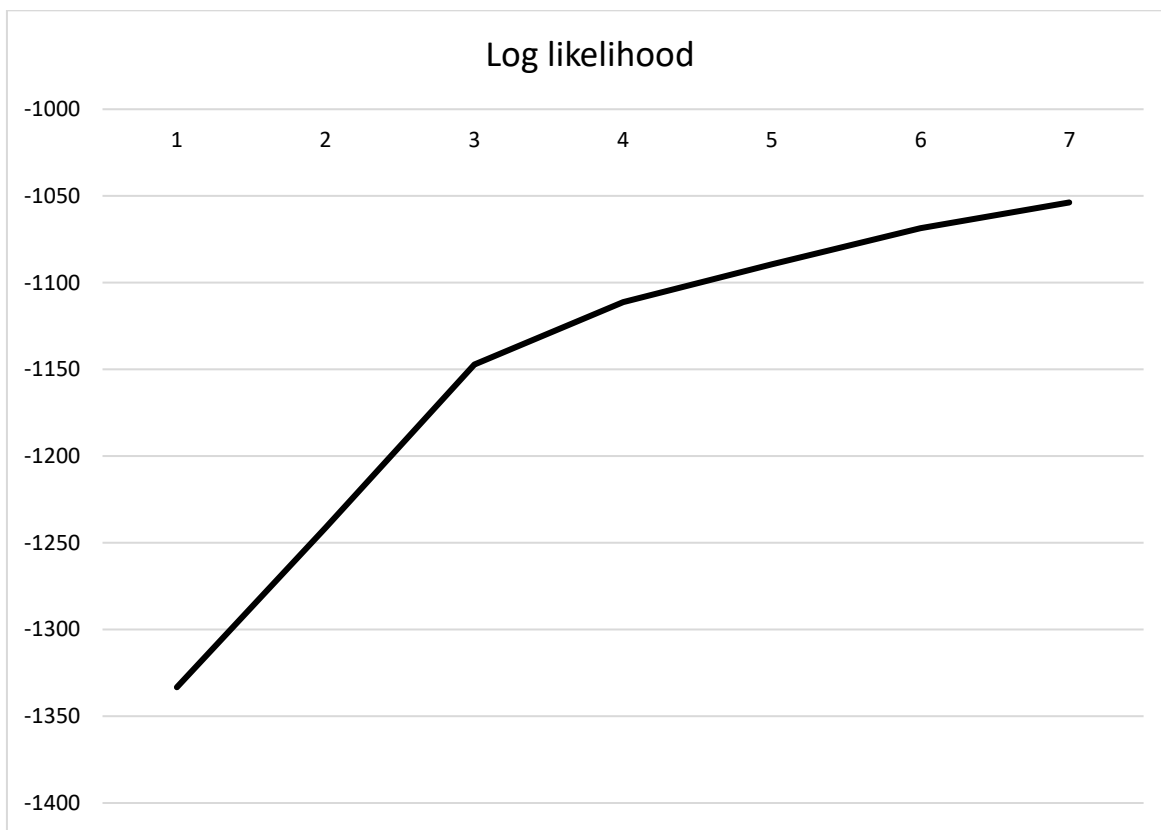
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1084 **Figure 2**

1085 *Latent Profile Analysis: Log Likelihood*

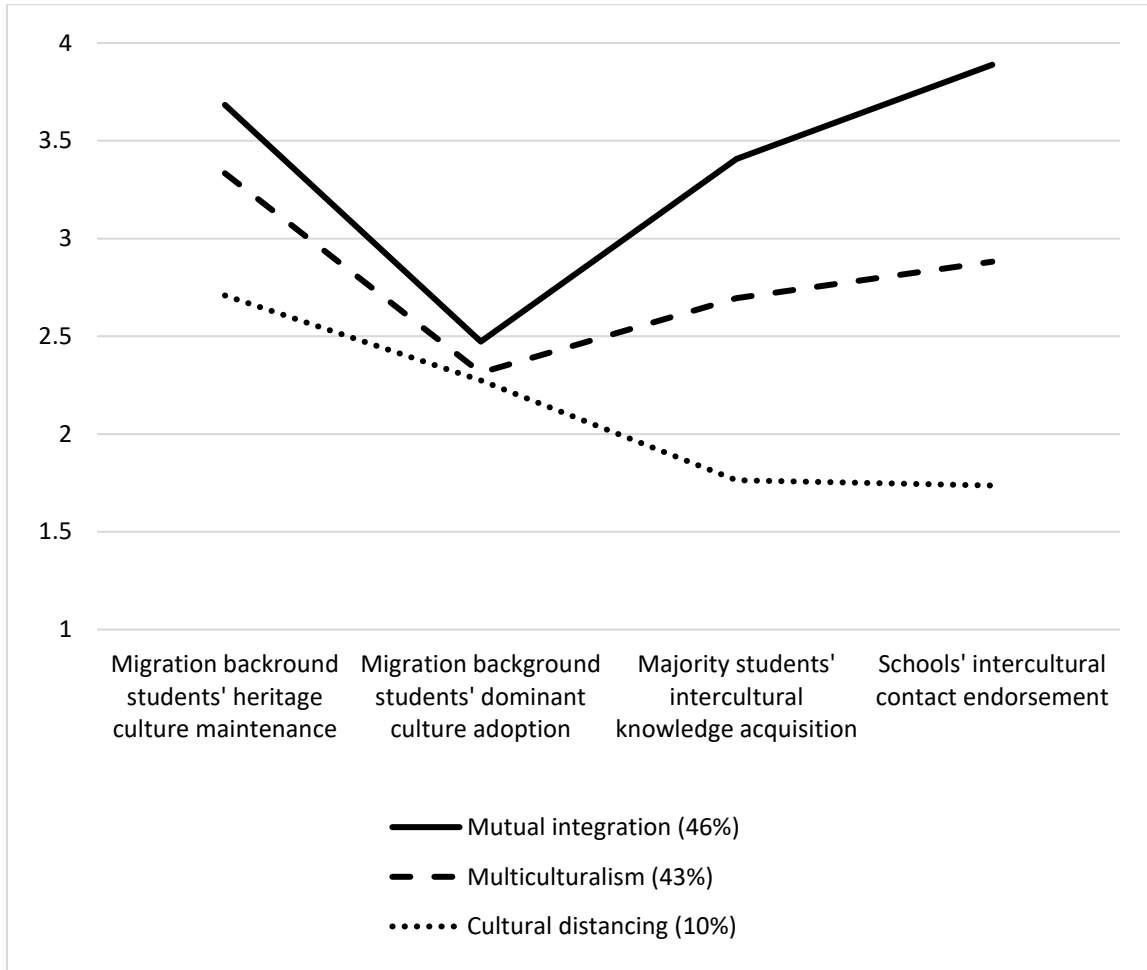


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1088 **Figure 3**

1089 *Acculturation Profiles Assessed Via Latent Profile Analysis (n = 317)*



Note. Acculturation profiles were assessed through two minority dimensions (migration background students' heritage culture maintenance and dominant culture adoption) and two majority dimensions (majority students' intercultural knowledge acquisition and schools' intercultural contact endorsement) on a four-point Likert scale with 1 = disagree, 2 = somewhat disagree, 3 = somewhat agree, 4 = agree.

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1091 **19 Annex**

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1093 **Table 1A**

1094 *Assessment of Attitudes Toward Mutual Acculturation: Items Verbatim*

Dimension	Migrant students' heritage culture maintenance	Migration students' dominant culture adoption	Majority students' acquisition of cultural knowledge	Schools' endorsement of intercultural contact
Introduction	I find that it is important for teenagers from another country who live in Switzerland ...		I find it is important that Swiss teenagers who live in Switzerland have to get to know...	I find it is important that the Swiss schooling system allows teenagers from other countries and Swiss teenagers...
Item 1	...to be allowed to preserve their traditions and customs.	...to adopt the dominant traditions and customs in Switzerland.	... the traditions and customs of teenagers from other countries who live in Switzerland.	... to exchange information about their traditions and customs.
Item 2	...to be allowed to preserve their religion.	...to adopt the dominant religion in Switzerland.	... the religions of teenagers from other countries who live in Switzerland.	... to exchange information about their religions.
Item 3	...to be allowed to preserve their way of life.	...to adopt the dominant way of life in Switzerland.	... the ways of life of teenagers from other countries who live in Switzerland.	... to exchange information about their ways of life.

Mutual Acculturation and Self-Identification

Item 4	...to be allowed to preserve their language.	...to adopt (one of) the official language in Switzerland.	... the languages of teenagers from other countries who live in Switzerland.	... to exchange information about their languages.
Item 5	...to be allowed to preserve their way of clothing.	...to adopt the dominant way of clothing in Switzerland.	... the ways of clothing of teenagers from other countries who live in Switzerland.	... to exchange information about their ways of clothing.
Item 6	...to be allowed to preserve their family culture.	...to adopt the dominant family culture in Switzerland.	... the family cultures of teenagers from other countries who live in Switzerland.	... to exchange information about their family cultures.
Item 7	...to be allowed to preserve their views on professional careers of women and men.	...to adopt the dominant views on professional careers of women and men in Switzerland.	... the views on professional careers of women and men of teenagers from other countries who live in Switzerland.	... to exchange information about their views on professional careers of women and men.

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1098 **Table 2A**

1099 *Overview Model Fit Latent Profile Analyses for two subsamples: those self-identifying as (somewhat) being Swiss (n = 213) and those who*
 1100 *self-identified as (somewhat) not being Swiss (n = 102)*

Swiss	#	Log likelihood	AIC	BIC	aBIC	Entropy	aLMR p-value	BLRT p-value	Sample proportion per class	Classification accuracy
Yes	1	-918.802	1853.604	1880.494	1855.144				213 (100%)	
	2	-857.006	1740.012	1783.709	1742.515	.680	.40	< .001	139 (65%); 74 (35%)	.850–.927
	3	-789.648	1615.297	1675.800	1618.763	.913	< .01	< .001	24 (11%); 91 (43%); 98 (46%)	.956–.978
	4	-761.333	1568.667	1645.976	1573.096	.930	.10	< .001	7 (3%); 97 (46%); 21 (10%); 88 (42%)	.958–.984
	5	-743.177	1542.355	1636.471	1547.747	.877	.18	< .001	7 (3%); 21 (10%); 44 (21%); 51 (24%); 90 (42%)	.872–.979
	6	-726.503	1519.005	1629.928	1525.361	.890	.13	< .001	5 (2%); 19 (10%); 90 (42%); 6 (3%); 43 (20%); 50 (24%)	.882–.999
No	1	-398.862	813.723	834.723	809.454				102 (100%)	
	2	-363.072	752.143	786.268	745.206	.881	.58	< .001	79 (78%); 23 (23%)	.918–.979
	3	-337.876	711.753	759.002	702.147	.959	.12	< .001	24 (24%); 3 (3%); 75 (74%)	.975–.993
	4	-326.116	698.232	758.607	685.958	.868	.36	< .001	3 (3%); 24 (24%); 55 (54%); 20 (20%)	.890–.998
	5	-315.735	687.470	760.969	672.528	.910	.58	< .001	20 (20%); 4 (4%); 52 (51%); 23 (23%); 3 (3%)	.889–.995
	6	-302.112	670.223	756.847	652.612	.936	.56	< .001	2 (2%); 25 (25%); 4 (4%); 8 (8%); 41 (40%); 22 (22%)	.913–1.00

Note. Lo–Mendell–Rubin adjusted log-likelihood-ratio test; BLRT = bootstrap likelihood ratio test. Classification accuracy relates to the average latent class probabilities.

1101 **Table 3A**

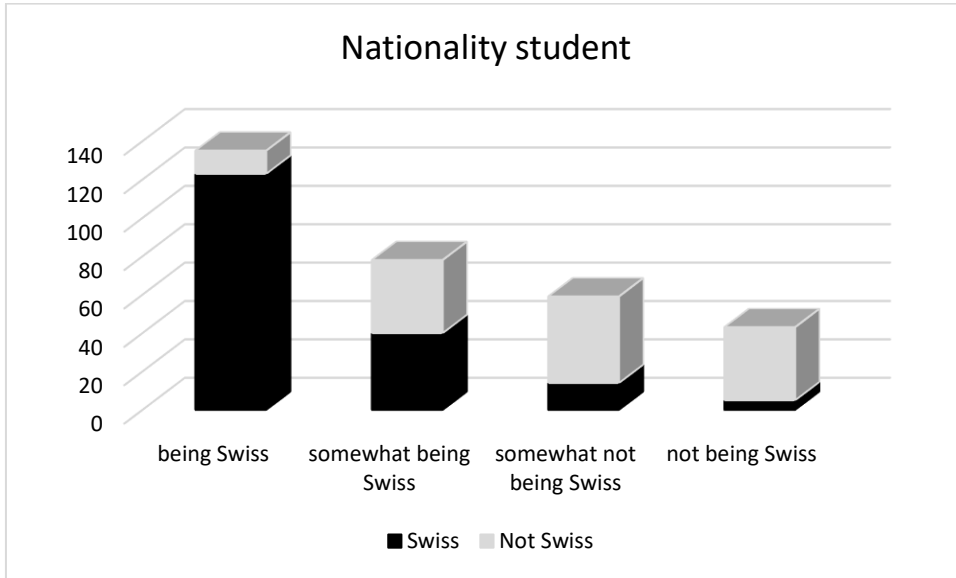
1102 *Overview Model Fit Latent Profile Analyses for two subsamples: those self-identifying as (somewhat) having a migration background (n =*
 1103 *102) and those who self-identified as (somewhat) not having a migration background (n = 195)*

Migration background	#	Log likelihood	AIC	BIC	aBIC	Entropy	aLMR <i>p</i> -value	BLRT <i>p</i> -value	Sample proportion per class	Classification accuracy
Yes	1	-405.701	827.403	848.403	823.134				102 (100%)	
	2	-377.262	780.524	814.649	773.586	.870	.27	< .001	45 (43%); 57 (57%)	.953–.963
	3	-338.068	712.136	759.386	702.530	.952	.12	< .001	6 (7%); 41 (39%); 55 (54%)	.956–1.00
	4	-325.238	696.477	756.851	684.203	.902	.40	< .001	42 (39%); 6 (7%); 30 (29%); 24 (25%)	.919–1.00
	5	-310.564	677.129	750.628	662.186	.925	.19	< .001	42 (40%); 30 (29%); 2 (2%); 4 (5%); 24 (25%)	.925–1.00
	6	-296.917	659.834	746.459	642.224	.938	.52	< .001	28 (27%); 8 (8%); 2 (2%); 5 (6%); 39 (37%); 20 (21%)	.927–1.00
No	1	-838.882	1693.764	1719.948	1694.605				195 (100%)	
	2	-781.262	1588.523	1631.072	1589.890	.794	.07	< .001	36 (21%); 159 (79%)	.933–.950
	3	-727.791	1491.583	1550.497	1493.475	.902	< .01	< .001	79 (40%); 24 (13%); 92 (47%)	.951–.956
	4	-701.965	1449.931	1525.210	1452.349	.923	.13	< .001	24 (13%); 6 (3%); 78 (40%); 87 (44%)	.947–.996
	5	-687.053	1430.107	1521.751	1433.051	.931	.33	< .001	5 (3%); 84 (42%); 76 (40%); 24 (13%); 6 (4%)	.930–.995
	6	-673.211	1412.422	1520.431	1415.892	.934	.64	< .001	5 (3%); 7 (3%); 77 (39%); 23 (12%); 3 (2%); 80 (40%)	.861–.999

Note. Lo–Mendell–Rubin adjusted log-likelihood-ratio test; BLRT = bootstrap likelihood ratio test. Classification accuracy relates to the average latent class probabilities.

1105 **Figure 1A**

1106 *Swiss Self-Identification and Student' Nationality*

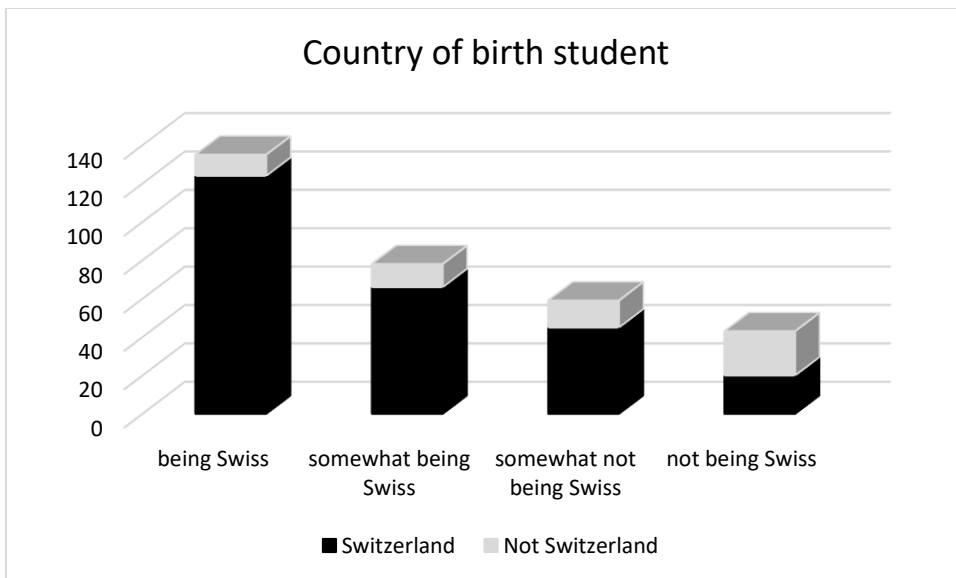


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1109 **Figure 2A**

1110 *Swiss Self-Identification and Student' Country of Birth*

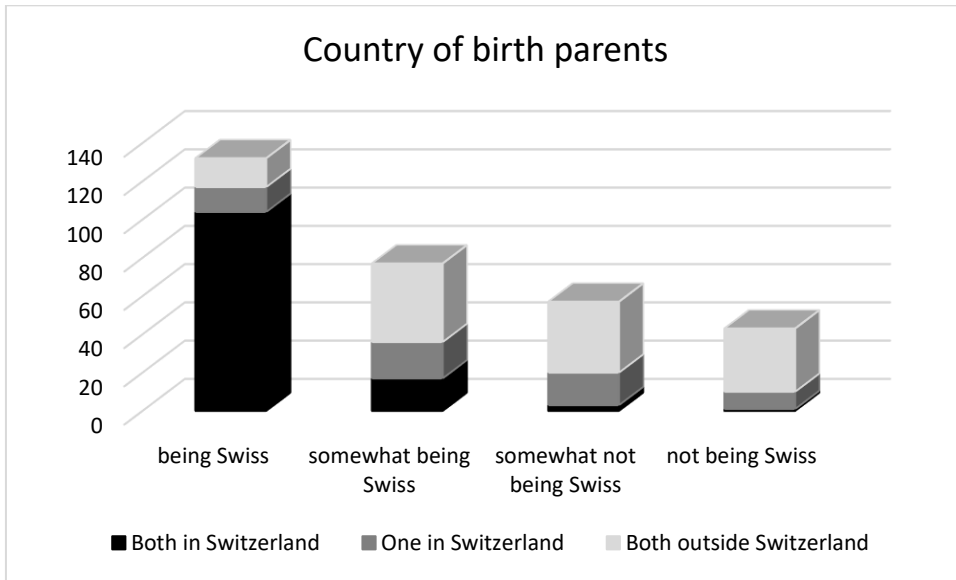


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1113 **Figure 3A**

1114 *Swiss Self-Identification and Parents' Country of Birth*

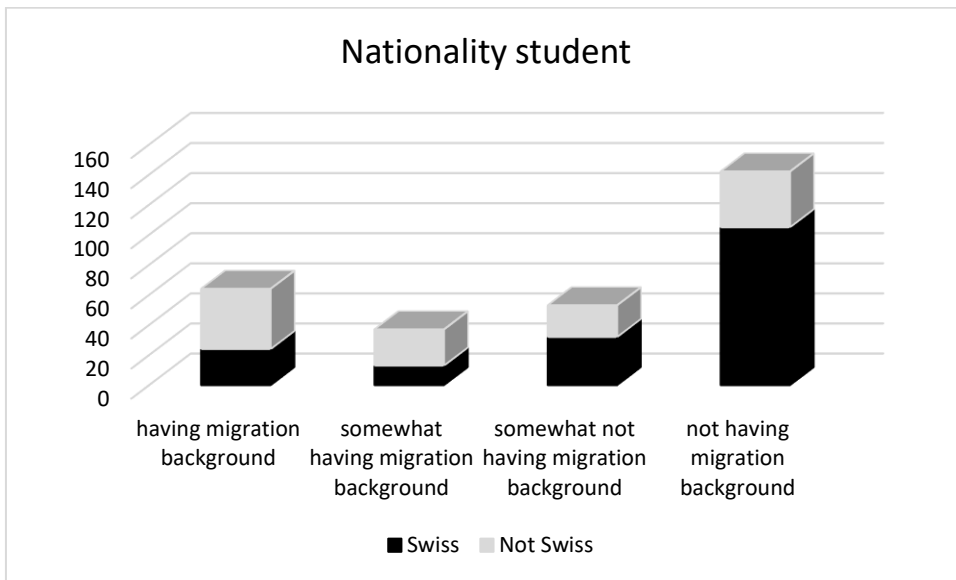


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1117 **Figure 4A**

1118 *Migration Background Self-Identification and Student' Nationality*



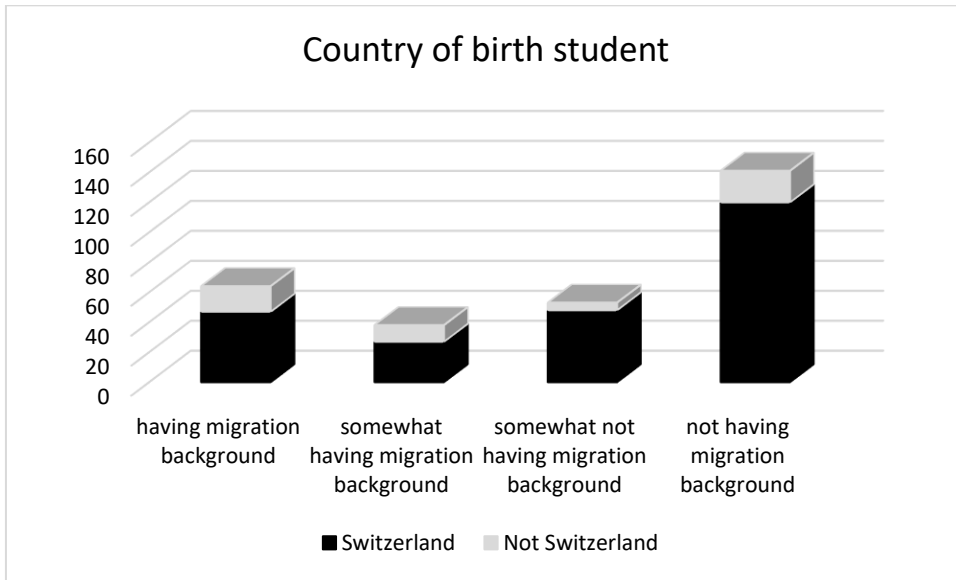
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1122 **Figure 5A**

1123 *Migration Background Self-Identification and Student' Country of Birth*

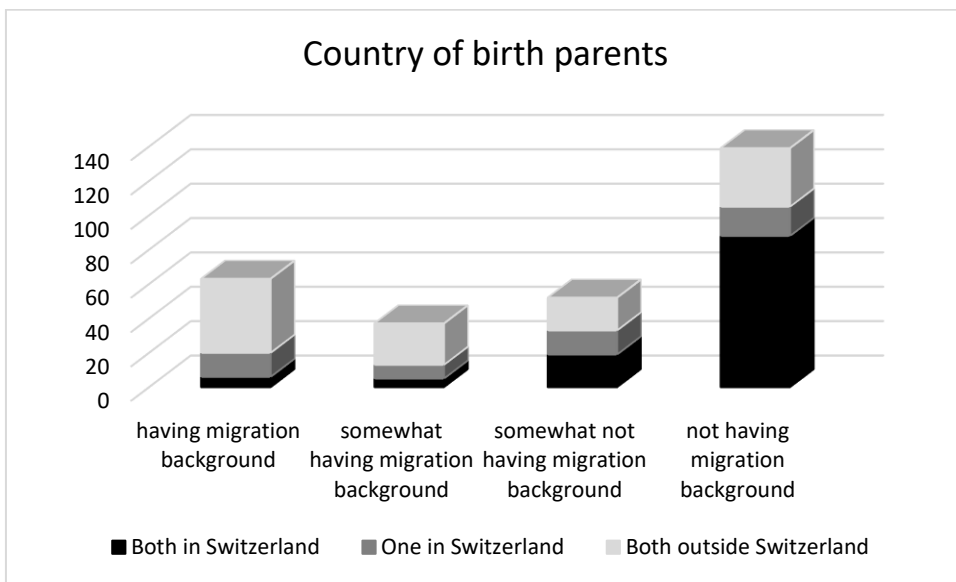


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1126 **Figure 6A**

1127 *Migration Background Self-Identification and Parents' Country of Birth*



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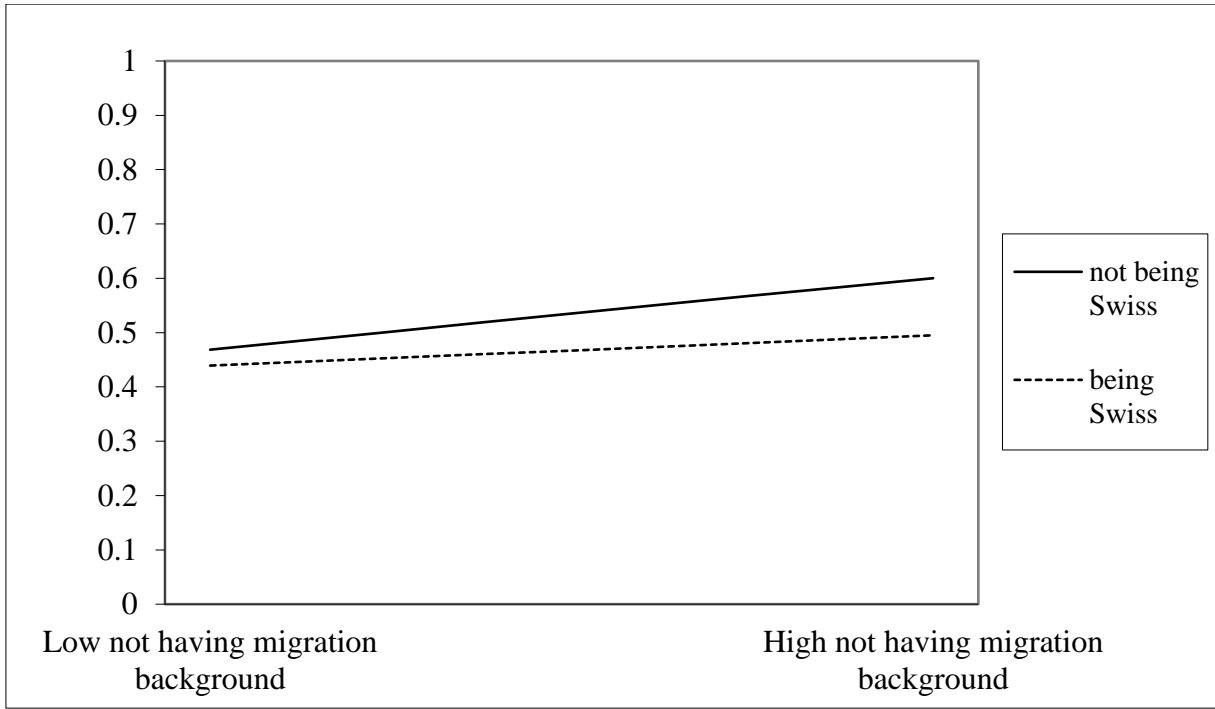
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1131 **Figure 7A**

1132 *Interaction Self-identification Being Swiss * Not Having Migration Background*

1133 *Multiculturalism vs. Mutual Integration*

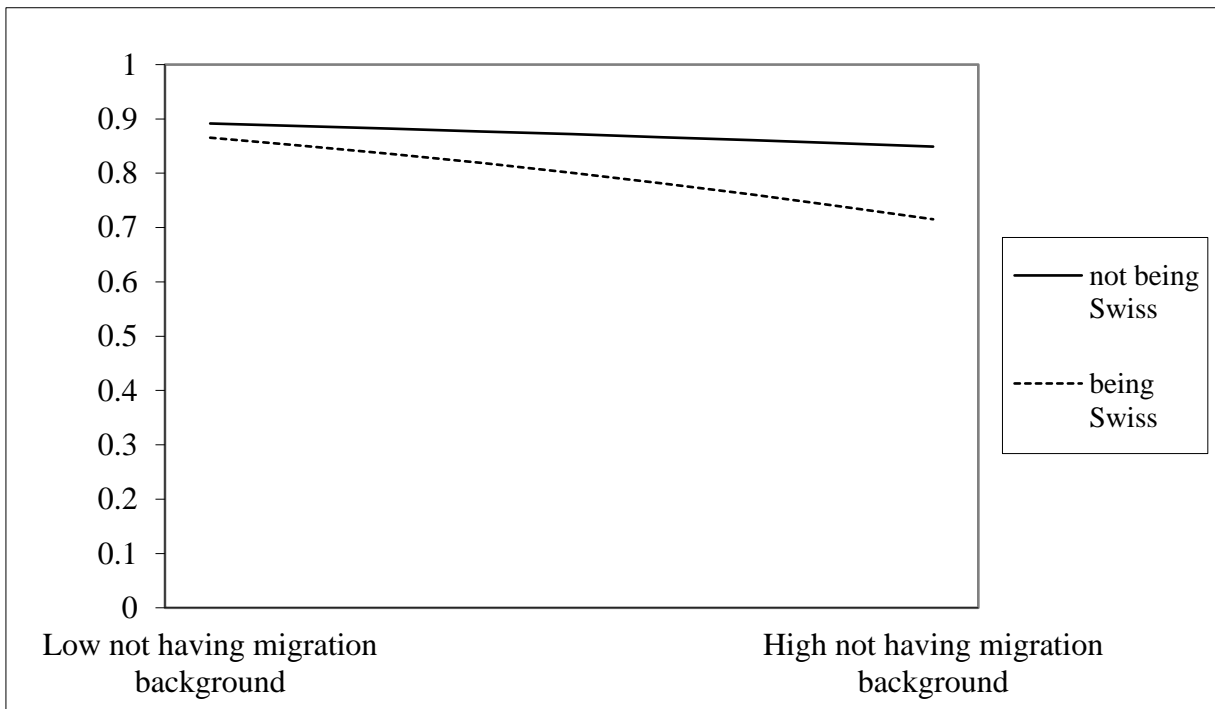


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1135 **Figure 8A**

1136 *Interaction Self-identification Being Swiss * Not Having Migration Background*

1137 *Cultural Distance vs. Mutual Integration*



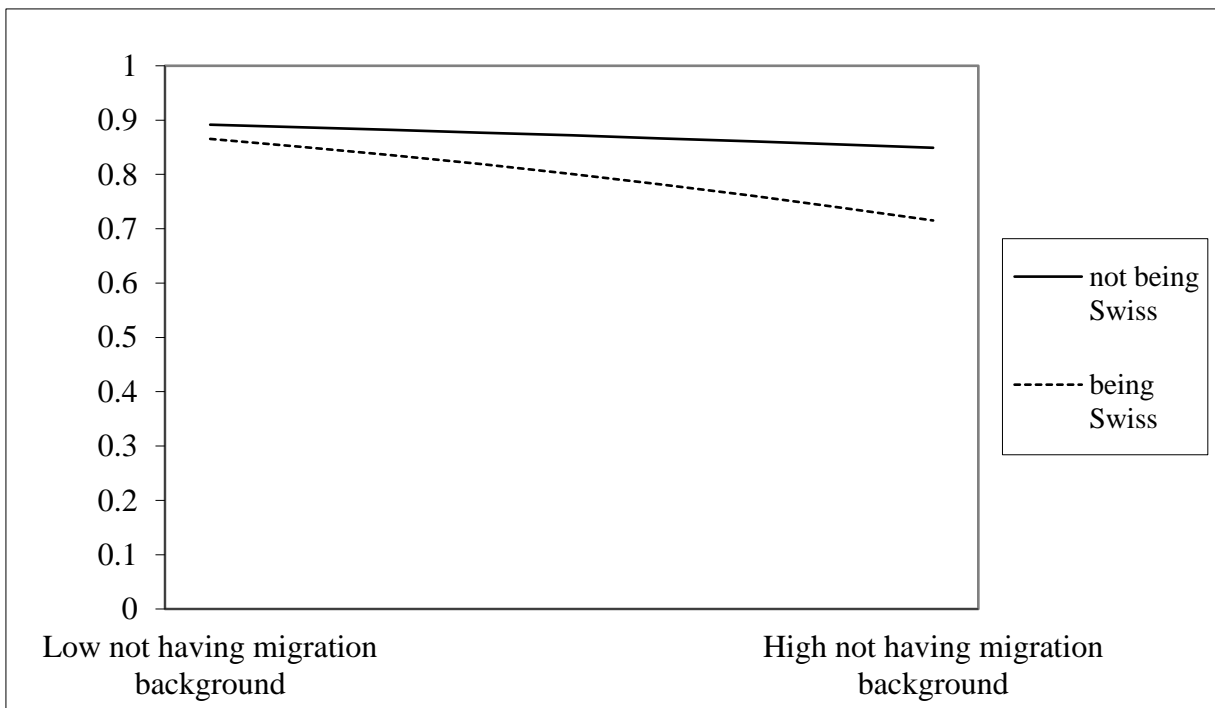
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1140 **Figure 9A**

1141 *Interaction Self-identification Being Swiss * Not Having Migration Background*

1142 *Multiculturalism vs. Cultural Distance*



1143