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**Constraints on the effectiveness of the language laboratory**

W. A. Bennett, University of Cambridge

## *I General conditions on development*

Human progress is not achieved in a unitary manner, and the progress of language teaching methodology is no exception to this general condition. The development of technical means to support techniques demanded by a given stage in scientific knowledge may bear fruit at the moment when serious doubts are being raised about the associated science.

So it is with the language laboratory. There have been many discussions about the date of the earliest language laboratory, and the answer must be sought in the definition of form and function. If arguments are accepted for dating the laboratory to the early 1930's (on the evidence of work such as that described in Waltz 1930) it must be viewed essentially as a device for ear-training in phonetics, and therefore as a simple multiplication of playback devices such as the disc recorder or phonetic notation, or the naïve informant for the field linguist. Should a later launching of language laboratories be claimed, the late 1940s and early 1950s, their work must be seen as inevitably associated with at least syntactic as well as phonological analysis.

It is clear that the development of such important technical means in a discipline, language pedagogy, which had previously relied on the teacher as both informant and manager, arose from the self-confidence of the contributory disciplines of linguistics and psychology. This is equally true whatever the decade taken for the start of the language laboratory, for while on the one hand structural linguistics was well-established in the earliest decades of the 20th century, departing little from traditional techniques of analysis or from the methods used in phonological analysis, on the other hand the psychology which became methodically more secure as S—R, and then in a refined form as Behaviourism was a mere extension of ancient associationist views of human learning.

## *II Linguistics and psychology — Preliminary constraints*

The language laboratory came into service in an age of great confidence that the scientific methods so successful in the study of natural phenomena could work equally well in the study of man. I have considered elsewhere (Bennett 1972) the psychological and linguistic assumptions which distinguished audio-lingual from audio-visual methods of language teaching. The



language laboratory developed as part of the former view, and its form and function have been defined by the precepts of the proponents of audio-lingual methods, and through them of structuralism in linguistics and psychology. Because the analytical procedures of workers in linguistics and psychology were selfconsciously explicit, it is not difficult to account for the present contribution and expectation of the language laboratory through their influential philosophy. At the same time, it must be remembered that between audio-lingual and audio-visual language teaching the distinction, while certainly one of detail in technique, a difference emphasised by the devices introduced to support the teaching, was not a fundamental one of philosophy. In both U.S.A. and Europe the study of man was concerned above all with the adequacy of the classificatory schemes for describing or accounting for observed behaviour. Whatever the unit of subject-matter determined by the linguist the explanation of the human learning and use of complex subject-matter would be couched in terms of 'habits'. For this reason, the spread of the language laboratory across the Atlantic to Europe did not induce a sea-change. The language laboratory continued as a supplement to class-work, and the modesty of its role as language informant in the American structuralist sense was reinforced by its restrained part in the European teaching context.

The language laboratory now is essentially the device determined by earlier views of language and of language learning. These views represented necessary stages in the determination of the subject-matter of linguistics and of that branch of psychology concerned with the learning and use of language. But this was achieved by constraining the language data and the behaviour of experimental subjects to such an extent that the result could hardly be a sufficient model of either language or the learner.

Observation of language is most readily satisfied by an account of speech. Since so many of the world's languages are preliterate a discipline concerned with the universality of its analytical techniques would necessarily discount writing systems. The informants which the language laboratory replaced were simply utterers of speech-sounds. In this sense the language laboratory was attuned from inception to the most primitive levels of language. Moreover, in design and performance most attention was paid to the quality of sound. The devices were thus judged by standards which they shared with the domestic or, at best, professional tape recorders which were brought together into a language laboratory. There was no job-specification to suggest that facilities unique or particular to the language laboratory machine were important.

Structural linguistics characterized languages through the definition of separate levels, distinguishing between the substantive system of phonology and the formal system of morphology and syntax. Working with certain types

of full sentence ('favourite sentence') and regarding assimilation as deviation from the described 'norm', rather than as the reality, simplistic accounts could be given of the separate levels. Whether for 'ear training' or syntactic substitution exercises the language laboratory lent itself very well. But the amount of language system exposed by such practice exercises as were prompted by structural linguistics was small. And the analytical technique of substitution was undemanding on the learner in its restriction to surface structure analyses. The language laboratory thus came to be associated with little achievement and much boredom.

The strong development of scientific procedures in experimental psychology added to the continuation of the ancient view that learning proceeded by way of 'associations' which were established as a result of such factors as frequency and contiguity. Although structural linguistics made little or no detailed contribution to experimental psychology, the notions of 'stimulus' and 'response' were transferred to the design of structural exercises. It is also true, of course, that these notions are basic to any descriptive work in the determination of the smallest unit, and were therefore part of the stock-in-trade of the descriptive linguist and field linguist whose influence on the development of language laboratory materials in the 1940s was certainly as great as any from psychology. The longer tradition of good conditions for the formation of associations was well to the fore in the design of behavioural experiments, and conditions of both 'frequency' and 'contiguity' were assured for the learner by the development of the language laboratory. The importance of this individualization through technology resolved for some decades of language laboratory work an ancient uncertainty about the 'contribution of the organism' to its learning which had been differently interpreted by Gestalt psychology in Europe and by Behaviourism in U.S.A.

Thus a paradox has arisen in which the most potentially exciting development for the individualization of language learning is achieved only by discounting the 'contribution of the organism', by presupposing that the activity of the learner is simple in the extreme and only fully represented by the succession of surface items for learning. Those who saw the learner as necessarily making a greater contribution than could be measured by the sum of the single behavioural units had no model to propose in defence of cognition because no adequate theory of language or language learning was possible, even of the modest kind put forward by Chomsky in 1957 and 1965. The ambivalent attitude of many to the language laboratory is explained by the constraints it places on the learner while appearing to promote individual learning opportunity.

The simple view of learning tolerated the direct takeover of machines, assembled into language laboratories which offered the learner control over



record, replay and tape movement. If language learning is nothing more than the internalization of longer and longer strings of items, or their direct abstract representation (or encoding) the provision of a device for rote learning practice is adequate. But language learning may be far more complicated than that, and there may be considerable variations between learners as a consequence.

### *III Pedagogical constraints*

Those who are most dramatically aware of the differences between language learners, and the necessary participation of individuals in their language learning, are language teachers. It has been customary for the language laboratory to be arranged as a classroom. Because of the absence of a job-specification, the device was taken into the teaching situation in the best known format, with rows of student position facing a teacher's desk or console. In this way the teacher could ensure (1) eye-contact and the domination necessary to good order, (2) full behavioural information about each learner's participation in the class learning task. Since the language laboratory was an extension of classroom activity it was judged by the only possible criteria: whether it interfered with the maintenance of good order, and whether it increased the amount of appropriately directed activity.

On the first of the counts the language laboratory was of great concern to the teacher. Not only did the apparatus intervene in a way distressing for many teachers, blocking the complete view on which the classteacher relied for assurance, but the language laboratory promoted individual work when the teacher expected some unison amongst the learners composing the group. Here the conflict was made uncomfortably sharp between the tendencies of instruction, towards individualization, and the duties of the educator, encouraging social cohesion.

In the classroom, with its emphasis on chorus work, and paced written work, the differences between individuals could be covered. The language laboratory opened to the teacher's ear the considerable differences which were compounded from work in a limited time with exercises of a restricted kind. The modest nature of the language learning materials, the reasons for which have already been suggested, when combined with the serious misgivings of language teachers about the role of the apparatus could lead to an unwillingness to use the facilities for more than the minimum expected by authorities. In turn this has meant that learners accustomed for most of the time to the necessarily leisurely pace of the classroom teacher, himself concerned equally with explanation and administrative chores, stumble

heavily when faced with the relentless colloquial pace of the presentation and practice material. 'Fluency' is a term which hides the tacit knowledge of rhythm without which syntactic restructuring cannot be undertaken by a speaker (nor, in consequence, by a writer) of a given language. The absence of adequate rhythmic training from the classroom – on perfectly legitimate logistic grounds – has repercussions in the performance of levels of language other than those purely of substance. The teacher who gives most practice to learners in the classroom will find those learners in difficulties when working with exercises in the language laboratory, even though these may have been prepared in the classroom beforehand. The errors in an individual's performance, a *sine qua non* of learning anything, which can remain covert in chorus work, are amplified by the gap between the language of classroom and that of the language laboratory. It would be natural for a teacher to assume that the major part of his activity, backed by a long tradition, was less culpable in the matter of language learning shortfall than the inconvenient newcomer in which the performance of learners appeared to deteriorate. Hearts were hardened against the language laboratory, which consequently continued to be no more than a small supplement to the 'teaching' activities. And as a result, no increase in investment of time or money has been available to demonstrate in practice the value which could be shown on paper.

Sometimes the work of the language laboratory has been held to be necessarily so elementary and so repetitive that responsibility for teaching in it has been separated from high-status language and literature work and given to temporary assistants or the youngest lecturers. The result has been to confirm the irrelevance of the language laboratory and to ensure that no fundamental rethinking of the format would take place. It is fortunately increasingly a matter of the past that those teachers who began their careers as language laboratory monitors felt it imperative to add more traditional 'academic' pursuits to their *curriculum vitae.* But the effects linger on, not only in the lack of research effort directed at fundamental questions of language laboratory use but in the ready assumption that the language laboratory is best suited to elementary language learning.

The unquestioning acceptance of the apparatus as it evolved for the structuralist has resulted in the 'blind' language laboratory. Centrally, the U.S. tradition in field linguistics restricted its data to the consideration of the form of language alone, and this was inevitably a concern with speech sounds and their systematic use since the languages of study were for the most part preliterate. Neither the field linguist nor the linguist as learner or teacher of language sought information about the visual concomitants of spoken utterances. The informant, and then the tape player, was required only to make available the data of speech. The audio-lingual course in its extreme



form had little need for written text, apart from notes to learners and perhaps some morale-boosting 'grammatical summary' for those students, veteran learners, who expected some indication of the course constructor's academic knowledge.

True to this tradition, the earliest language laboratories had no room for books on the desk of student or teacher. Whatever modifications have generally been made to accommodate books, to present slides and filmstrips individually, the visual material has been secondary to the spoken. The strong tendency of the apparatus to promote spoken language at the expense of written has served to constrain still further the contribution to language learning expected of the language laboratory, and has therefore limited investment of time and money in its development. Advanced courses are by tradition those which give attention almost exclusively to the written language, and libraries have provided the opportunity for individualized work. There is, of course, no comparable tradition in which the individual's speech has been recorded, enabling spoken language to be treated in other than group work. In languages begun at school individual learners arrive at the advanced class with very different spoken language deficiencies and strengths. The development of tape recording is even now too recent to overcome easily assumed difficulties in promoting spoken language within the advanced course. The language laboratory has not widely been asked to exert itself for the advanced learner, for two reasons. The first lies in the general uncertainty about what should constitute the advanced language course, in the conflict between the practical and the esoteric. The second has already been touched on in considering the attitude of teachers generally, but can also be seen as a confusion between 'teaching' and 'learning'. As long as the language laboratory is regarded as a 'teaching aid' the assumption is that it will add further to the demands on highly-qualified personnel, and in ways inappropriate to their qualifications. The only resolution of this quandary will be the appreciation of the verb 'teach' in a sense of 'provision of arrangements for learning', alongside the more traditional meaning, in which the guardianship role has been stressed, of 'constant intervention in the learning activity'. The dominance upon which this tutorship activity hung was based on the tutor's being the only source of information and the major source of therapy. The very advantage of the language laboratory prized above all else, the individualization of study, has severely conflicted with the teacher's tutorship. Not only has the laboratory clarified the performance of the individual, and the gap between model and reality, but the teacher has been faced with the almost total ineffectiveness of immediate correction in a way quite unknown in the unison work of the classroom. The natural reaction is to blame the huge apparatus for the errors of performance which were

previously covert, in much simpler, less costly circumstances. The response of teachers to this diminution of their authority, often represented as the loss of 'contact' with students, has ranged over the whole spectrum from outright rejection of the apparatus, through the use of language laboratory rooms for group work, to enthusiastic use of the apparatus quite separately from the classroom sessions.

Whatever the precise position taken by teachers towards the language laboratory the tension which it created in language teaching, not least by suggesting that all was not well with the subject, blocked any fundamental rethinking about the appropriate form and goals of the language laboratory. One of the factors inhibiting this review was the unaccustomed scale of the investment and the necessity of discounting the costs against an effectiveness which could be shown neither by evaluative studies (for reasons discussed in detail in Bennett 1974) nor by comparison with the traditional aims of language courses. For, while the language laboratory promoted spoken language with the resilience to sustain a direct method, language courses were attuned not only to what was valuable in language but to what was practicable in presentation and practice. In academic terms, demands grew for the effectiveness of this costly and seemingly counter-educational apparatus to be proved.

There were two reasons why demands could not be satisfied. The first lay in the general inexplicitness of language teaching. Its history has led to its fulfilling many tasks, not all of them by any means purely linguistic. While an interesting debate might arise amongst language teachers called on to describe the purposes of their activity it could hardly be expected that there would be much unity in their descriptions. A language course is generally defined by the tasks which compose it, and these may vary greatly from place to place. There is no adequate basis for comparison.

A more serious lack underlay the other reason and this was the inadequacy of the model of language and of language learning presupposed by the work of the language laboratory.

### *IV. Theoretical linguistic considerations*

The changes in linguistics described in Chomsky (1957) and (1965 and elsewhere), and especially the modifications in the cause of 'explanatory adequacy' which took place between those years, offered not only a characterization of the complexity of language learning but a justification for the inclusion of a theory of language to supplement the observation of verbal behaviour. A theory of language, which of course must be close to what has been observed, can be assessed both on metatheoretical grounds, as a properly



constituted theory with explanatory and descriptive power, and on grounds internal to it, namely on its adequacy in accounting for a precisely delineated kind of data. Such a theory of language could supply the lack referred to earlier, but only if the goals of language teaching are unequivocably the provision of opportunities for the acquisition of tacit knowledge of the language. The reasons given earlier for the singular failure of attempts to prove or disprove the effectiveness of the language laboratory are seen to be interrelated: on the one hand, no testable theory of language was available, on the other, the tests would have been as confused as the purposes of language teaching. It is not entirely clear that there is a unified and enlightened view amongst language teachers of their purposes, even now. But the language laboratory is judged subjectively by every teacher on the performance of his students during and after laboratory sessions. For this reason, a consideration of language laboratory use and effectiveness may escape the pedantry of discussions amongst language teachers to claim that the goals of language teaching must be the provision of facilities for the acquisition of language knowledge.

### *V Applied linguistic conditions*

I have argued at length elsewhere (Bennett 1974(b)) for the recognition of three components in an adequate approach to language teaching:

1) *learning strategy:* A theoretical model of the activity in which the learner by definition tacitly engages, and the tacit knowledge of the language which he necessarily acquires;
2) *teaching strategy:* A set of procedures for ensuring the activity in which the learner engages, and the knowledge which he by definition acquires;
3) *logistics:* A specification of the conditions in which the activity and knowledge may be ensured, and the selection of means to provide these conditions.

### *VI Learning strategy conditions and constraints*

The language laboratory developed at a pre-theoretical stage. Moreover, no specification of the separate components of language teaching would have been worthwhile or possible. The simplicistic view of language learning called for little contribution from the presentation and practice constituent of the teaching procedure. With the complication of the model and the necessary

recognition of three components of some import it becomes essential to insist that decisions about language teaching should proceed in the given order, with questions of logistics being settled only when teaching strategy has been defined, and *that* only when an adequate model of learning strategy has been established.

'Competence' as defined in Chomsky (1965) is identified with the tacit knowledge that a speaker has. The theory proposed by Chomsky becomes of much more use to the study of language learning and use if 'competence' is taken as the 'capacity for' tacit knowledge of a language. Among the advantages which derive from such a modification of the central concept are such notions as differential language knowledge, different dialects and different languages. A theory which takes account of such variety is more attractive to a theory of second language learning than is a theory of language as a monolith.

It is not the place to enter upon a consideration of the nature of the 'competence/performance' distinction, or an explanation for the inadequate treatment given by theoretical linguists to 'performance'. Perhaps it is for applied linguistics to bring together psychology, sociology and linguistics in a model of the learning and use of language. In what follows a brief sketch must be given of those factors which would contribute to an account of 'performance' (cf. Bennett 1974(b)) and by thus complementing 'competence', as modified, establish a model of the learner (and his strategy) as a preliminary to the specification of the necessary teaching strategy and logistics.

The activity of the learner is conditioned in part by physiological capacities and in part by psychological capacities. In both cases there is a constraint on both the *quantity* and the *quality* of data for internalization. The intake of data through the eye or the ear is severely limited, as is the amount of data which may be stored transitorily or stored for early recall. The data for the language learner are almost entirely restricted to sound and vision. Long-term storage, essentially the topic of Chomsky's 'competence' model, is unbounded as to quantity of data. However, the *form* of the data for long term storage is unquestionably not visual or sound in any essential respect, and therefore involves abstraction. The complete change which data undergo between sensory store and long-term storage, and which enable a characterization of the relationship between speech and writing, defines the capacity for generalization. The traditional distinction between induction and deduction is a useful one, for it captures the contrast between the learner involved in generating sentences from a base and one testing hypotheses about the structure of sentences. The focus shifts from the arrangement of the teaching material to a consideration of the different requirements of



learners. The dispute between grammar-translation and direct method has been concerned with the nature of the language and not of the learner. Taking as a focal point the subject-matter of learning and not the activity of learning, while at the same time holding views of both which enabled them to be considered separately, the language teacher has swung from one method to another. The language laboratory developed in response to the logistic requirements of one variety of direct method, that form of early audio-lingual work known as 'mim-mem'. The language laboratory was thus prejudiced from the beginning by the externalities of one competing methodology. The neutrality of the language laboratory as a device for learning can only be assured through an adequate model of the learner, of the kind that has been suggested above.

In that account no mention was made of motivation, and little need be said here on this subject, much discussed by language teaching specialists, except to throw light on some areas of confusion. It must be taken as a *sine qua non* of any learning that the learner is predisposed to the subject-matter as he perceives and understands it. The question is complicated in language learning because the subject-matter is itself symbolic. The learner must be positively disposed not only to the language but also to the community that use it and to the activity in which they engage by means of it. But the maintenance or modification of these predispositions depends on the success of the learner's undertaking. Whatever the tacit reasons for successful learning on the first place (and a study at Cambridge (Bennett 1972(b)) demonstrated a complex motivational picture amongst university language laboratory users), the continuation of learning is entirely dependent on success in learning.

### *VII Teaching strategy conditions*

The matching of provision to learning is aimed at ensuring the motivation of success, and the first stage has been outlined above: the statement of performance factors which would contribute to a model of performance incorporating a model of competence. The next stage is to suggest the teaching strategy which is entailed.

To come to terms with the limit on channel capacity, data for learning must be graded to ensure a development in complexity. The question which has been hotly debated is which parameter should determine language complexity: the semantic or notional, or the purely formal. Fortunately, an answer is not required here, although it is difficult to see how the structural relationships of language can be overlooked, or why universals such as notions

should not determine the ordering of items when structural considerations are even. A scheme for structural grading has been proposed in Bennett (1974(b)).

The principal channels for the intake of data are the eye and ear. While language is primarily an acoustic phenomenon, carefully designed or selected visual material can support the vocal/aural data-processing. Similarly, the learning of visual aspects of language can be aided by audio material, which must be integrated with the other.

The time constraints on storage may be overcome by repetition. It is on this score above all that the tape player and language laboratory have been most successful even when their use has been distorted in other ways. At worst, the tape player may well repeat the utterance once more than a teacher would have done, and the repetition will be consistent. Limitations on intake and storage must be overcome if data is to be learned in any important sense. As was seen, the capturing of data for long term storage may proceed in one of two ways: in general equivalent to the traditional categories of induction and deduction. Adequate teaching requires the provision of appropriate data for either of these procedures to operate successfully.

### *VIII Logistic considerations*

This overview of language teaching strategy immediately suggests the best conditions for learning. Time limits are inimical to successful learning. Presentation and practice material should be an open access. The library is customarily available as a study centre, and it requires only a simple logistic modification to extend the range of media which are equally accessible. It follows that the learning activities normally associated with library or with language laboratory would change and widen considerably. Much of the activity which is at present thought to require direct teaching could become a matter for private study. The teacher would then be concerned with the analysis of materials and the exploitation of learning with individual learners, not necessarily with groups.

While programmed material, including by definition some element of grading, has long been an aim of language laboratory specialists, less attention has been given to the role of cognition in work in the language laboratory. The most fervent behaviourist might occasionally wonder *how* the form of a given sentence is generalized by a learner to produce syntactically analogous sentences. Information about the structure of data is important for some learners, or all learners at some time, while data built on certain structural principles are essential to other learners or at other times. For exactly the



same reasons, information to the learner about his performance, and the nature of the distance between it and the goal performance, is as important as ear-training combined with the accurate replay of deviant and model responses.

The learner's need for information about his own and the model activity increases the value of providing an integrated audio-visual access to data. The term audio-visual has been restricted to a particular form of direct method, opposed to audio-lingual in both its views of associationist units of learning and its conception of the appropriate basis for describing language. For obvious reasons, it has fitted not at all easily into the language laboratory, and has diverted attention from the need to give equal status to written language and spoken language for the languages of culture. To reinstate audio-visual as the dual provision of data for learning is to call attention to the possibility of the language laboratory for learning and using the written language, with audio support, as much as it has been for learning and using the spoken language.

### *IX A developmental and 'teaching' laboratory*

The multi-programme audio-visual learning/language laboratory is rare, and it is safe to say that none has ever been designed to meet a specification of the kind I have suggested. Although the language laboratories of Cambridge University were not so designed they offer an interesting comparison between an audio-active-comparative language laboratory which has developed as an audio-visual-active laboratory (with comparative on audio alone until recently). When the private study language laboratory opened in January 1966 it was neither possible nor desirable to expect classes to form. The 2000 or so users each year come from anywhere in the university, and although audio-lingual course material is available in some 40 languages, the great majority work at French or German. Wherever possible, alternative kinds of course are provided in any language, to match the differences between learners in preferred style of study. Because the users are from every part of the university, the differences could be expected to be wide. However, a study carried out between January and September 1972 (Bennett 1972(b)) found a high degree of similarity in the motivation and study pattern of language laboratory users. It was particularly striking that private study sessions usually lasted between 50 and 100 minutes, going beyond the length of time usually recommended for language laboratory use. During these sessions, it was found, users had the machine switched to 'record student', for 69.6 % of the time, and to 'playback' for 21.3 %, a total of 89 % operating

time. There were on average 80 recapitulations at each session, being the equivalent of one exercise revised for every 3 or 4 exercises worked through. This is a staggering picture of enthusiasm in private study. On the one hand such zealousness deserves more appropriately designed material, on the other hand it suggests the vast compound differences which emerge from the different starting-points of learners and which, threatening havoc in the language laboratory class, are damped down by the framework of teaching.

From the structural diagram it can be seen how the essentially servicing work of the private study language laboratory is related to the research and development which proceeds along lines argued in the earlier part of this paper, and which makes use of an A—A—C laboratory equipped with a TV monitor in each student booth.

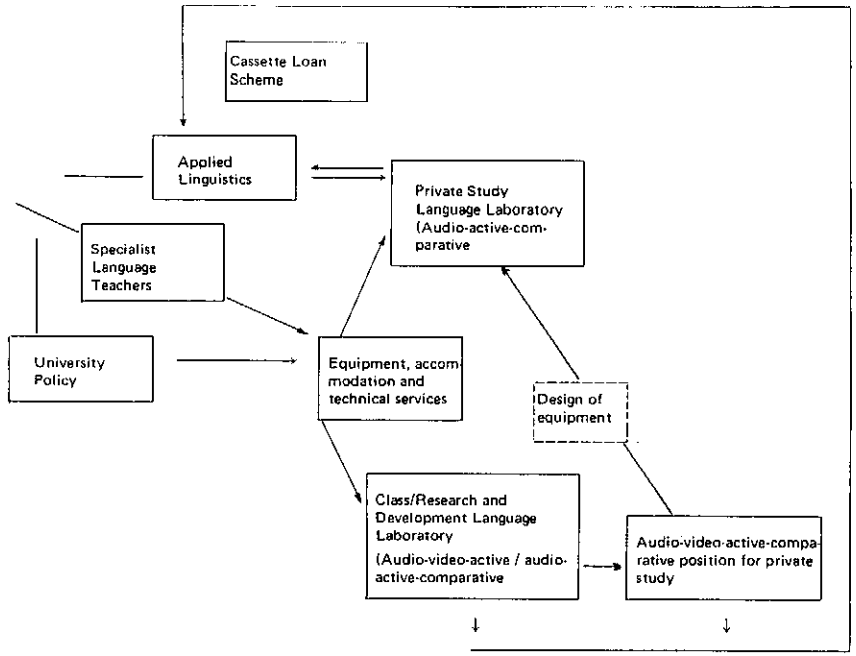
Closed-Circuit television was included in the laboratory from the start to ensure the provision of a wide range of visual material.

The visual channel has been used to give information about situational context, to propose symbolic representations for syntax and phonology, and to present and practice the writing system of a given language. The teacher in this laboratory is primarily a producer of learning materials, whether the learners are present in the laboratory outside the control room or not. He can compose his teaching programme from a large number of media sources and can, by videotaping the programme, supplement his own teaching.

The audio-visual laboratory, which in 1966 could not promote individualized study, is now able to offer videorecordings from a small but growing library which will eventually overtake in importance the audio library which is already presenting problems of storage space. The next increase in space will come with the complete change-over to cassettes. A cassette loan scheme has extended the use of the private study materials even further in the university. The audio-visual materials developed through research will eventually be included in the scheme.

There is no shortage of material. The problem is to make best use of it. At some time in the future it will be necessary to reconsider the design of the language laboratory, and then it will be important for questions of compatibility to be resolved not only for equipment but for procedures and methodology. And it is impossible to see how this can be done without a proper theory of second language learning, or how this reconsideration can be of value if the discussions are limited to the work of one university or even of one country.






*UNIVERSITY OF CAMBRIDGE-LANGUAGE LABORATORIES*

Scheme showing the organization for the use and development of the University language laboratories

*N.B.* ------ Future development
——— Information flow from tests and other probes

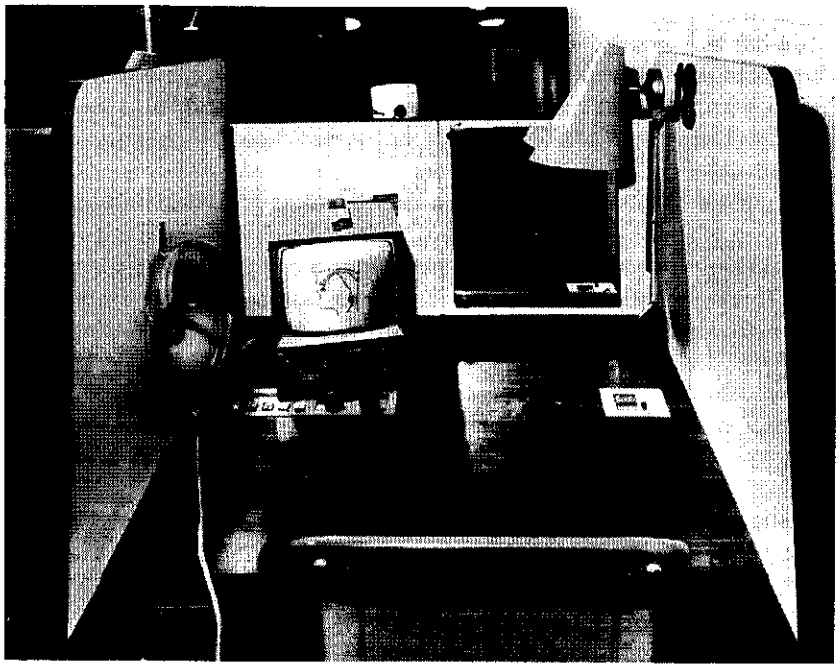


*Figure 1:* A student position in the development and 'teaching' laboratory



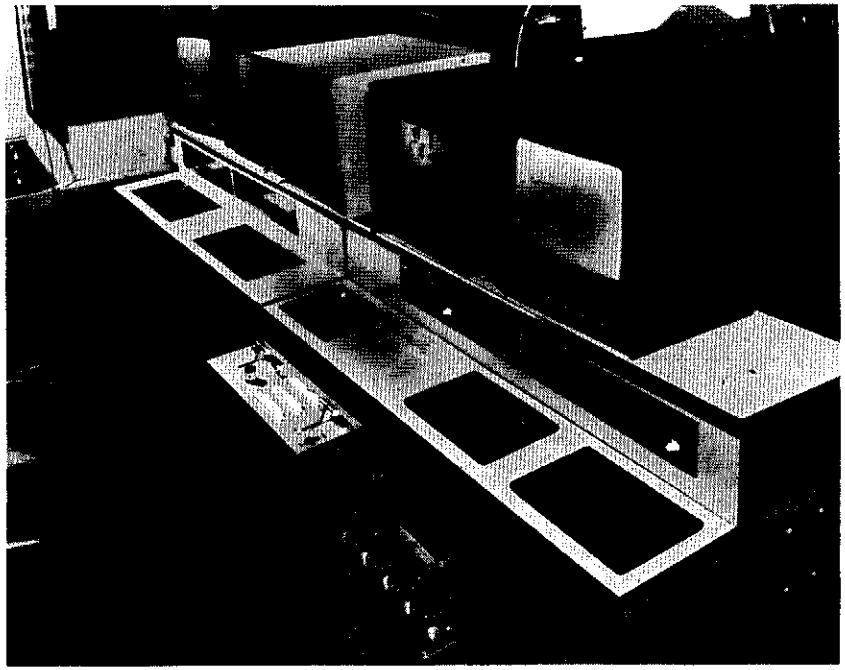


*Figure 2:* A wide range of visual material can be brought together and mixed into a programme

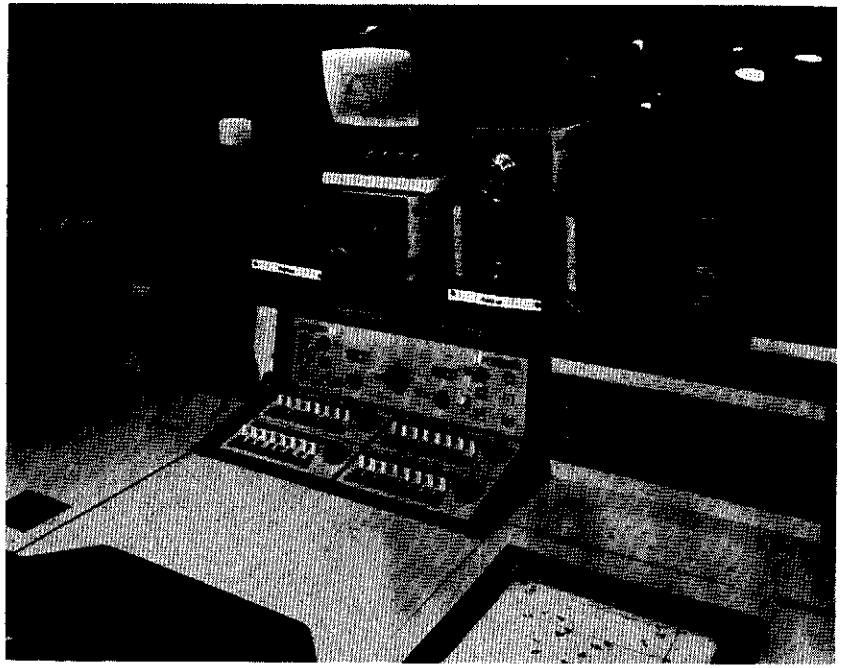


*Figure 3:* The teacher controls the broadcast recorded material, and can supplement it with live instruction

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Commentary by T. J. A. Bennett, Hochschule St. Gallen

I found the paper "Constraints on the Effectiveness of the Language Laboratory" stimulating and informative. For several years, one has been hearing nasty rumours that LLs have failed to live up to what was expected of them, and, in America, at least, have been falling out of favour and even out of use. There rarely being smoke without some kind of fire, one has often been led to speculate on the reasons for such a trend, and Mr. Bennett's paper points to some of the most potent forces involved in the questioning of the efficacity of the LL.

Initially, one suspects, too much was hoped for from the language teachers's "new toy", as some called it. Through simplistic calculations such as: one class of 30 children in the LL for 30 minutes does 15 student hours of work, so they must progress proportionally faster than in the classroom, over-optimistic expectations arose. Also, to justify the capital expenditure, it is clear that teachers had – and still have! – to exaggerate the merits of the LL.

Colleagues' comments in 1964, when I was teaching with the LL at Southgate Technical College in London, indicated clearly that, for many teachers, the LL was a device which was fashionable, which it was prestigious and therefore essential to have, but it was also a bewildering piece of hardware for which it was difficult to get software. Here, I suspect, lies an aspect of the question that Mr. Bennett, doubtless for reasons of space, and because he was concerned to establish clearly the theoretical vacuum surrounding the LL, does not emphasise as having the profound effect it almost certainly had. In England, at least, the LLs were almost thrown at teachers totally unprepared for them mentally, and untrained in their manipulation, let alone aware of the profound change such an instrument implied for teaching methods.

Teachers are not particularly technically-minded, and I have little doubt that many felt very unsure before the console of a LL, so that, in many cases, there was no likelihood of the lab. ever being correctly used or given a chance to show its possibilities. This attitude is certainly a contributing factor in the unwillingness to use the lab. that Mr. Bennett mentions on p. 6. Furthermore, the early LLs were quite complicated to operate, and gruesome things could go wrong, so it is little wonder that teachers who were scarcely at ease with a slide projector shied away from the new monster bristling with switches and buttons whose incorrect operation could lead to the direst consequences.

Much more important than the unease engendered by the mechanical operation of the LL was, in my opinion – and I feel that Mr. Bennett could have pointed this out more clearly – the unease caused by the fact that

practising teachers and, for a long time, those emerging from University Departments of Education and Colleges of Education, had no professional training directly relevant to the LL. In 1964, I was practically unique in that I had been trained on the LL installed at the Oxford University Department of Education. Consequently, for the first five or six years following the arrival in Britain of the first LL, it was used by people more-or-less unaware of its correct application to the teaching process, let alone of any theoretical framework in the realms of general linguistics. (It is precisely to avoid such a situation that we at CILA organise regular courses in all aspects of the LL.) It is therefore little wonder that results were disappointing, and the effect of this unfortunate experience clearly cannot be eliminated overnight.

Teachers, given the apparatus, not unnaturally decided it was to be used as a sort of intensive drilling machine, giving individual attention to each student. Often, this drilling was totally divorced from the themes and vocabulary of material currently being studied by the students, especially if the teachers used LL materials bought because they had neither the time nor the facilities to produce their own. Of course, this tended to become the sterile kind of manipulation of syntactic structures that Mr. Bennett refers to, with the result that the LL became "associated with little achievement and much boredom". This arose firstly because of teachers' unpreparedness for the LL and hence their unwillingness and inability to rethink their teaching programmes and methods and secondly because the bought drills, etc. were ill-adapted to producing maximum performance and were often extremely boring in the "over-kill" approach to drilling; this latter characteristic can, of course, be attributed to the behaviourist ideas which were the theoretical background to the drills, etc. used by the teachers. I have suffered, myself, from some commercial audio-lingual materials produced in America, so I speak from personal experience.

Even in the hands of the averagely unwilling and untrained teacher, though, I doubt whether the LL was generally seen as the "device for rote learning" that Mr. Bennett refers to on p. 5, or used as one. It was more likely viewed as something that would take over some of the oral drilling of grammatical structures. But drilling does not mean rote learning; it means practice. Furthermore, one finds it difficult to imagine that, even in the worst situations, structures are manipulated by students totally unaware of the meaning of what they are saying into the LL microphone.

In the section on pedagogical restraints, Mr. Bennett has rightly pointed out how the LL, with its much clearer, and merciless, indication of student errors as compared with chorus work in the classroom, could create uneasiness in teachers, who readily drew the wrong conclusions. I also heartily endorse his remarks on training students in the rhythms of a



language, but I am not sure that he is totally right in ascribing the lack of space for writing in early LLs to the influence of the traditional audio-lingual framework. I suspect that purely mechanical considerations must have intervened, in the sense that tape recorders were large in those days, and necessarily occupied all the room in the booth. Also, remote control or control by relays was not usual in machines of the period, so, initially, it was surely a case of "force majeure" if there was little or no room for writing. Certainly, the omission of a visual element revealed the theoretical underpinning of such a LL, but, again, it would surely be wrong to ascribe this solely to theoretical considerations, and not to bear in mind that what is now called educational technology was not so advanced in former times. If it is more advanced now, the cost has soared exponentially, which explains in part the slowness to provide individual visual material in the LL.

I found Mr. Bennett's remarks about the clash between the individualisation of study made possible by the LL and the teacher's tutorship over his students most interesting. In a way, as he points out, teaching really logically with the LL involves a weakening of this tutorial relationship between teacher and student. Whether this is a bad thing is another question.

If LLs have been associated with the elementary stages of language learning this need not suprise us nor need it primarily be a result of orthodoxy. Clearly, it is easier to devise and construct elementary exercises than advanced exercises – and this is a potent factor in the situation; we all know the phenomenon of the language course that starts well, reaches the intermediate stage, and then either stops or degenerates into a mere shadow of its former self. I would suggest that much of the uncertainty about the construction of advanced exercises for the LL springs not from a lack of theoretical background, or from an uncertainty about what to teach, but from an inability to devise suitable exercises due to the complexity of the data that have to be handled, and, perhaps partly to the single input channel (aural) being used.

The lack of a closer connection of the LL with the written language is also fairly easy to explain, for it surely rests on a variety of factors, e.g. the simple fact that the equipment is so clearly for recording and playing-back speech that it does not necessarily occur to the teacher to use it for any other purpose; also with the emphasis that has been placed on spoken language over the last decade, one suspects that many teachers are afraid of being thought old-fashioned if they introduce writing into the LL – the noise of passing bandwagons can be hard to resist!

While I endorse Mr. Bennett's view of the goal of language teaching (stated on p. 143) as "the provision of facilities for the acquisition of language knowledge", I cannot help feeling that he is thinking more of tertiary than

secondary education; in the latter context, I find the statement a little too passive, although I may be interpreting it in an ungenerously narrow fashion.

I would agree in general with the principle of the three components of an adequate approach to language-teaching set out on p. 143, but I must say that, to my mind, firstly, it is a statement of what every good, trained language teacher has been trained to do and has been doing for over a decade, and, one would not have thought that it was still really open to much discussion, except perhaps with regard to the establishment of "a theoretical model of the activity in which the learner by definition tacitly engages"; in connection with this I would say that, secondly, I am convinced neither that such a model is indispensible nor that Chomsky's theories, about which many linguists have important reservations, are the deus ex machina which provides the language teacher with the key that he has been lacking up till now.

The case for library-type access to the LL, without undue constraints of time is clear, and Mr. Bennett's statistics about the use made of the LL by students at Cambridge are most interesting, particularly with relation to the duration of a single session (whether this is the most efficient use of time is, of course another question). The cassette loan system has already been used (in a modified form by myself, for example), and is a logical and productive extension of LL work.

Equally clear is the case for an audio-visual LL, and one must hope that Mr. Bennett's advocacy will speed things along on this front. However, here I suspect certain logistic difficulties may arise, not necessarily in large universities, but in schools for example, because the audio-visual LL will obviously be vastly more expensive than the audio-lingual variety. The mind-boggling cost of the CCTV system and its maintenance makes such a system beyond the reach of many educational institutions. The audio-visual LL is certainly an exciting, and logical development of current methodology, and should yield good results. I am sure that we all look forward to hearing about Mr. Bennett's experience with it in the near future.