
An applied linguistic framework is presented within which specific applications of media technologies may be applied to language learning. The first two parts of the paper focus on the impact of media on linguistic communication and the possibilities offered by media technologies such as newspapers, radio, television, telephone/telex, computer networks, broadcast receivers, audio and video recorders, and computers. The third part of the paper considers the principal elements involved in language teaching and learning and some of the ways in which they may be influenced by media and media technologies. In the fourth part some implications for the provision and organization of language learning are discussed. It is argued in the fifth part that only if innovations are carefully monitored can their success or failure contribute systematically to subsequent developments. Finally, some practical proposals are offered for securing a more central role for media and media technologies in second and foreign language learning in Ireland. The conclusion is that small-scale research projects are appropriate approaches toward that end because they cost relatively little and can be carefully monitored and evaluated, and they can be accepted more easily by government. (Contains 8 references. (LB)
Media, media technologies, and language learning: some applied linguistic perspectives

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Introduction

Most of this seminar will be concerned with specific applications of media technologies to second and foreign language learning. It is the purpose of this paper to sketch an applied linguistic framework within which these applications may be subjected to critical examination and within which further innovation may in due course be attempted.

The first two parts of my paper are concerned respectively with the impact of media on linguistic communication and the possibilities that media technologies offer to teaching. By media I mean channels of mass and long-distance communication like newspapers, radio and television, telephone and telex, and computer networks; by media technologies I mean those technologies that enable us both to receive and reproduce media messages and to create and manipulate messages of our own - in particular, broadcast receivers, audio and video recorders, and computers. In the third part of the paper I consider the principal elements involved in language teaching and learning and some of the ways in which they may be influenced by media and media technologies. The fourth part draws out some of the general implications that my arguments have for the provision and organization of language learning. Finally, the fifth part argues that only if innovations are carefully monitored can their success or failure contribute systematically to subsequent developments, and concludes by making some practical proposals that might help to secure a more central role for media and media technologies in second and foreign language learning in Ireland.
Media and linguistic communication

For several generations language teachers have been taught that our capacity for linguistic communication comprises four skills (listening, speaking, reading, and writing) which operate via two channels (spoken and written) and in two modes (receptive and productive). These distinctions are helpful as far as they go; but more recent concern to teach language as communication has taught us also to focus on the different kinds of relationship that can exist between the producer and the receiver of the message. In particular, we have learnt to distinguish between reciprocal and non-reciprocal communication (see, e.g., Widdowson 1978). In reciprocal communication, the paradigm example of which is conversation, meaning is negotiated by two or more participants who repeatedly exchange the roles of message-producer and message-receiver. In non-reciprocal communication, the message usually has one producer, who may be separated from the receiver in space and time. Obvious examples of non-reciprocal spoken communication are speeches and lectures; while writing is almost by definition a non-reciprocal activity. Figure 1 provides a diagrammatic illustration of the distinctions between spoken and written channels, and reciprocal and non-reciprocal communication.

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<thead>
<tr>
<th>Spoken</th>
<th>Written</th>
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<tr>
<td>Reciprocal</td>
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<td>Conversation</td>
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<td>Non-reciprocal</td>
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<td>Speeches</td>
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<td>Lectures</td>
<td>Articles</td>
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<td>Drama</td>
<td>Books</td>
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The problem with diagrams of this sort is that they can seem to imply exclusive categories. That they do not is indicated by the way in which drama straddles the divide between spoken and written communication in our example. There are many kinds of spoken communication, especially in the non-reciprocal mode, that are closely related to written discourse:
speeches and lectures, for example, are often partly or wholly read from written scripts. What is more, certain kinds of non-reciprocal discourse can shift towards the reciprocal mode: effective hecklers can turn a speech into a debate, lectures can turn into seminars, a dramatic performance can be significantly shaped by the actors' sense of audience response, and letters or telexes may be components of an ongoing business conversation conducted in writing. Recent research into reading and writing has taught us that all discourse is produced and received by processes of interaction. In reciprocal modes of communication this interaction is a social phenomenon, whereas in non-reciprocal modes it is enacted as a psychological process (for an exploration of this insight in terms of the process of reading, see Widdowson 1983). In other words, when we read and write we conduct a "conversation" respectively with the writer and the reader of our text. Much of this "conversation" typically occurs below the level of consciousness, though it breaks the surface readily enough at crucial stages in the processes of reading and writing - as when we debate with ourselves as we wrestle with a particularly complex exposition of a subject we are unfamiliar with, or when we refine a written argument by deliberately trying to produce counter-arguments.

These are important issues for the applied linguistics of language teaching and language learning, not least because they cast doubt on the validity of hard-and-fast distinctions between listening, speaking, reading and writing. But they are also useful in helping us come to an understanding of the impact that media, especially broadcast media, have had on linguistic communication within and between societies. For our present purposes it is possible to divide the history and development of linguistic communication into three periods:

1 Until the closing years of the nineteenth century, spoken communication was always face-to-face, whether it was reciprocal (conversations) or non-reciprocal (e.g., political speeches), and writing provided the only really effective means of communicating across distances of space and time. This no doubt helps to explain the dominance of the grammar-translation approach in the teaching of foreign languages. Its emphasis on written and especially literary models and its tendency to neglect the spoken language were in part a response to reality: literary and academic texts were almost the only products of target-language communication available to language learners, relatively few of whom would
ever travel to a country where the language was spoken.

2 The invention of the telephone inaugurated the second of our three historical periods by removing the face-to-face constraint from conversation. Somewhat later the advent of radio greatly increased the potential range and impact of non-reciprocal spoken communication (politicians were quick to grasp that whereas they might harangue a crowd of thousands, they must talk to the individual voter listening to them in the comfort of his or her home). Radio also generated new relations between speech and writing. For example, the reading aloud of novels and short stories required adaptations that took account of basic differences between listening and silent reading; and the need to combine the illusion of spontaneity with the requirements of strict timing extended the dramatist’s art across a wide range of script types. To begin with, television merely continued these processes, adding certain requirements of its own - for instance, scripts must be delivered in such a way as to look as well as sound spontaneous.

3 Our third period is characterized by an upsurge of interactivity made possible partly by the “democratization” of broadcast media (phone-ins and other modes of audience participation) and partly by the arrival of computers. The determining characteristic of this third period is a proliferation of new types of reciprocal communication. As the period is still in its infancy it is difficult to predict with confidence precisely how it will develop; but it is safe to say that by the end of this century a number of new modes and channels of linguistic communication will be in everyday use - the videophone, for example, which will make long-distance reciprocal communication “face-to-face” and give facial expression and gesture the same central role in telephone as in other conversations; or “live” interactive television systems, which will allow viewers to contribute in various ways to the development of the broadcast message; or desk-top interactive multi-media systems, which will combine text, graphics, moving images and sound in infinitely flexible permutations.

The media have become the indispensable carriers of popular culture; as such they provide the inhabitants of the developed world with a large, varied and inescapable diet of non-reciprocal communication. Much of this communication belongs to genres that the media themselves have
created, and is couched in language that is somewhere between conversa-
tional and formal written norms as regards syntax and lexis. In the coming
decades, with the proliferation of interactive systems, the media will im-
pinge more rather than less on our lives. I say more about the implications
of this situation for second and foreign language teaching and learning in
the fourth part of this paper. For the moment it is enough to observe that
the traditional concern of language teaching with speaking and listening
(mostly in face-to-face encounters), and with reading and writing, overlaps
with only a small corner of communicative reality in developed societies in
the late 20th century.

The teaching potential of media and media technologies
The initial effect of radio and television was, as I have argued, to extend
greatly the range and outreach of non-reciprocal communication. Broad-
casting has always been a channel for the rapid and effective dissemination
of popular culture, but we should not forget the strongly didactic intentions
of Lord Reith and his contemporaries. The early days of broadcasting, at
least in Britain, were characterized by a determination to “improve” the
audience, the assumption being that those in control of the media knew
what was best for the nation.

In their communicative rhetoric early experiments in educational broad-
casting differed from the generality of informational programmes only to
the extent that they were aimed at an adolescent audience and their content
was constrained by the school curriculum. Lessons by radio or television
have always enjoyed the advantage of being able to use documentary
sources and techniques of dramatic reconstruction that are not readily
available to the teacher in the classroom. But as vehicles of learning they
suffer from the same disadvantage as all wholly non-reciprocal discourse:
there is no opportunity for learners to accommodate new material to what
they already know by seeking amplifications and clarifications as that ma-
terial is presented to them. Study notes published for use with radio or
television courses are designed to compensate for this disadvantage in a
variety of ways - by encouraging the teacher in the classroom to provide
additional explanations, for example, or by offering suggestions for vari-
ous kinds of activity which will enable the learners to process the material
of the broadcast after the event. But the fact remains that the initial
reception of the message is inescapably non-reciprocal.
Pre-recorded audio and video messages are no more reciprocal than traditionally structured “live” broadcasts. But the fact that the teacher or learner can stop and start them at will significantly improves their pedagogical potential, since small segments of non-reciprocal recorded discourse can be embedded in the reciprocal discourse of teacher and learners. Broadcasters have been quick to recognize this. With the advent of relatively inexpensive video recording facilities, for instance, television language courses have lost much of the character of magisterial lessons and tend increasingly to provide examples of language in use interspersed with explicit learning opportunities.

With the addition of a microphone and a camera, the facility to receive and record radio and television broadcasts can easily be converted into a primitive facility to record our own audio and video messages. We can of course use this facility to create pre-recorded, and therefore non-reciprocal, materials that are tailored to the specific needs of our learners. But we can also involve the learners in the process of reciprocal communication required for the production of a non-reciprocal message. In other words, a microphone and a video camera enable us, on a very small scale, to bring the productive potential of the media into the classroom.

By contrast with audio and video technologies, computers first arrived in the classroom not as receivers of broadcast messages but as stand-alone facilities. Although computers are interactive in their operation, many of the learning programmes devised for them are only minimally reciprocal: the learner contributes to the completion of the message but not to its shape. Indeed, working through many instructional computer programmes is scarcely more reciprocal than filling in an income tax form. At the same time, just as learners can be involved in the processes of reciprocal communication that lead to the production of a non-reciprocal audio or video message, so they can be involved as it were on the other side of the computer, writing programs or using the capacity of the computer to store and sift information as an underpinning for some other activity. Also, when they are linked into telephone and other networks, computers become highly efficient instruments of long-distance reciprocal communication.
The media in relation to the principal elements in language teaching/learning: an applied linguistic approach

The celebrated Canadian study, *The Good Language Learner* (Naiman et al. 1978; see also Skehan 1989, pp.3ff.), distinguishes five principal elements in language teaching/learning, each of which provides a number of focuses for applied linguistic research:

1. **The learner**, whose performance of the learning task will be influenced by such factors as age, intelligence, aptitude, motivation, attitude, personality, and cognitive style.

2. **The context of learning**, which concerns factors like the organizational framework within which learning is taking place, whether or not the learners are living in the target language community, and if they are not, what opportunities they have to use their target language.

3. **Teaching**, which embraces syllabus definition, materials development, classroom methodology, and the provision and exploitation of resources.

4. **The learning process**, which involves not only the conscious strategies that learners employ but also the unconscious processes that underpin all language acquisition, like generalization, transfer and simplification.

5. **The outcome of learning** - in other words, the proficiency that learners achieve in listening, speaking, reading and writing - which is typically studied with reference to learners' errors, their interlanguage (that is, their internalized approximation to the target language system), and their affective reactions to learning.

I want now to enlarge on each of these elements in terms of what I have said about media and media technologies. First, as far as the learner is concerned, we need to recognize just how much of his or her communicative experience is likely to come from the media and to be shaped by them. It is probably fair to say that most inhabitants of western Europe derive the greater part of their world knowledge from broadcast media. Some information is communicated to them more or less directly, by telling and showing, as in news bulletins, current affairs programmes, and features of all kinds (it may well be partial or biased information, but that is another matter); other information is mediated more or less indirectly, embedded (for instance) in the lyrics of a pop song or the attitudes and as-
sumptions that determine the structure of a chat show or a quiz programme. If it is true that pupils at school often seem alienated from the educational process in which they are meant to be involved, that may be partly because our educational system still depends to such a large extent on the modes of communication that characterized the first of our three historical ages. As far as foreign languages are concerned, it should be clear (as I have already suggested) that a learning experience which seeks to develop the skills of listening, speaking, reading and writing independently of target language media will not necessarily strike learners as being strongly rooted in everyday reality. Of course, conversation remains the central communicative activity for all of us. But the conversations that learners have each day in their mother tongue take place in a communicative environment significantly shaped by the media, which provide them with themes to talk about and attitudes to express and respond to. Thus the question arises, if we want to teach foreign languages for communication, how realistic is it to attempt to do so without using the media?

Because the media are so central to the communicative experience of developed societies, they are inevitably an important part of the wider learning environment that such societies provide for visitors whose purpose is to learn their language. Not only are the media readily available; to some extent they can be left to do their work independently of formal instruction, in the learners' spare time. Of course, when a language is being learned at a distance from the target language community, the situation is quite different. We must then make special arrangements to bring target language media into the immediate learning environment of the classroom. The Authentik newspapers and cassettes offer a solution to this problem based on printed journalism and, to a limited extent, radio; satellite television offers another solution.

What I have said about the learner and the context of learning amounts to the claim that because the media are so central to the learner's communicative experience in his mother tongue, to the extent that they have the same centrality for members of the target language community, they should also be central to the learner's experience of the target language. The third of the five elements in the language learning/teaching process is teaching, which (as we saw) is concerned with such issues as syllabus definition, materials development, classroom method, and resources for learning. At the level of syllabus definition we can specify the kinds of media communication that successful learners should be able to cope with
as part of their target language repertoire. What we say about media and media technologies in relation to materials development, classroom method and resources for learning, however, will depend on our view of the learning process.

Research into first and "naturalistic" second language acquisition has shown that although learners progress at different rates, they all follow much the same route as regards the internalization of many crucial syntactic and morphological features of the language in question. "Natural orders of acquisition" have also been found to apply in the case of classroom learners, though formal instruction can help them to compensate for gaps in their internalized knowledge, especially when they are engaged on communicative tasks that allow time for planning and revision. These findings suggest that language teaching will be successful to the extent that it promotes unconscious acquisition processes; and research has also shown that acquisition processes are more likely to be stimulated by a focus on meaning than by a preoccupation with linguistic form. (For brief reviews of language acquisition research in relation to second and foreign language teaching, see Little et al. 1988, Little (ed.) 1989.)

Traditionally, language teaching carried on at a distance from the target language community (which, of course, is most language teaching) has attempted to teach the language now in the hope that the learners may be able to put it to some communicative use in the future. By contrast, communicative approaches to language teaching insist on using the target language as a medium of communication from the very beginning. It is often argued that this makes it much easier for learners to find a purpose for learning. This is certainly the case; but equally important is the point that all learning, including language learning, can take place only through communication.

In my discussion of media I distinguished between reciprocal and non-reciprocal modes of communication, but suggested that all communication is interactive, either in a social or in an internalized psychological sense. Formal instruction typically mediates non-reciprocal texts - the course book, teacher talk - within a framework of reciprocal communication between teacher and learners. The role of the teacher is to help the learners to engage in the crucial internal, psychological interaction between new material and what they already know. Recent work on the role of communication in education (Barnes 1976 is a locus classicus) has emphasized the importance of allowing learners a fair share of initiatives in the negotiation
of meaning that makes up a lesson; for only in this way will they have the best possible chance of integrating new information with what they already know. Clearly, this is as important for foreign languages as for any other subject. But in the foreign language classroom, what should "new knowledge" consist of? Traditionally this question has been answered in terms of target language grammar; and, as Devitt (1989) has shown, this continues to be the answer in many would-be communicative classrooms. But what we now know about the importance of unconscious acquisition processes demands a different kind of answer. Language learning requires content that can be described in non-linguistic terms: content like newspaper and magazine articles, books about almost anything, short stories, novels, poems; but also content such as can be provided by the electronic media, especially radio and television broadcasts.

If the media can supply significant content materials for language learning, media technologies can help to drive the interactive processes by which learners digest the content. As we have seen, an audio or video recorder enables the teacher or learner to receive extended audio or video texts in small doses; and those small doses can be embedded in reciprocal communication between teacher and learners. The process of digesting content material involves a great deal more, of course, than comprehension, however thorough. If learners are to derive maximum benefit from content materials they must also exploit them in a variety of productive activities. Like newspaper articles, radio and television broadcasts can provide the raw materials for a wide variety of spoken and written activities - informal discussions, debates, role-plays, sketches, etc., on the one hand; letters, classroom surveys, written reports, etc., on the other. (For a systematic treatment of techniques for the exploitation of authentic texts, see Little et. al. 1988, Chapter 3.)

All of these activities can be given an extra stimulus by putting media technologies directly in the hands of the learners. For example, a classroom survey can be given added interest by recording interviews on an audio cassette recorder; while a role-play or sketch will be much more thoroughly prepared and realized if it is to be the subject of a video recording. Making recordings of the learners using the target language (the outcome of learning) also offers a means of helping them to develop techniques of self-monitoring and self-assessment.

Finally, the computer can be used both to present and to process content materials. There is always a strong temptation to think of the
computer as a surrogate teacher; and it is true that many of the computer programs developed for use in the language classroom are closely modelled on the discourse structure of the "frontal" classroom, where the teacher asks a question, the learners answer, and the teacher evaluates the answer and then asks another question. The essential difference between the computer and the teacher is, of course, that the computer is incapable of tuning its evaluations to the needs of the individual learner. Much more interesting are computer applications that present and process texts in such a way as to focus on meaning, or on form, or on their interdependence (the Autotutor interactive video system is a special case of this kind; see Hélène Conway-Mouret's contribution to this volume). Finally, non-educational computer applications, like databases and word-processing programs, can be used to help learners through the succession of interactive processes that lead to the production of written or printed text.

Implications for language learning in Ireland

My argument so far can be summarized as follows:

1 Media are central to our communicative experience in the real world.

2 In second and foreign language learning, media are principal sources of the content, or input, on which unconscious language acquisition processes feed.

3 We need media technologies in the language classroom not only because they are the means by which we present certain media texts (content or input) to our learners, but also because in their own right they can stimulate the processes of social and psychological interaction on which learning depends.

But how central are media and media technologies to present language teaching practice in Ireland? Certainly there is by now very widespread use of the Authentik newspapers and cassettes in French, German and Spanish. But Authentik apart, media and media technologies seem not to play a central role. Until recently many language classrooms remained in the first of my three ages of communication, dependent on printed texts and "live" talk between teacher and pupils. Although language laboratories have been around for almost thirty years, one mostly hears them referred to as white elephants, dusty and unused. The advent of listening comprehension in the public examinations has apparently not led to their resurgence,
though it has made the audio cassette recorder a familiar item of equipment in most language classrooms, which thus find themselves in my second age of communication. The number of language teachers using pre-recorded video or broadcast television materials remains quite small, though there are signs of a breakthrough here and there, especially in French and Irish (see the contributions of Helen Ó Murchú and Tony Weymes to this volume). As for computers, their use in the language classroom remains very much in its infancy. In other words, most classrooms remain a long way removed from the communicative realities of the world outside.

In order to make significant progress towards those realities we need syllabuses in which coping with media is part of the communicative repertoire learners are expected to develop. We also need significant investment in both teacher education and technical facilities. And we need to look closely at the physical arrangements that we make for language teaching. Most schools distinguish between subjects that are taught in special rooms because they have special requirements, and subjects that can be taught anywhere. Second and foreign languages usually fall into the latter category - the physical and methodological separation of the language laboratory from other language classrooms helps to explain its neglect. But second and foreign language learning needs a dedicated environment just as much as Chemistry or Metalwork or Home Economics. Language learning would be a much more exciting prospect, and arguably a much more effective process, if it went on in rooms where the different media technologies were all available together. Obviously, language learning that belongs to my third age of communication can only go on in such a multi-media environment.

Classroom research as a way forward

Raising the necessary funds for large-scale educational innovation requires so much effort that there is a tendency to equate the eventual securing of funds with innovation itself. This helps to explain why so few educational innovations are properly monitored and evaluated. However, I do not believe that the best way forward in our particular instance is to bombard the government with demands for a computer network in every language classroom, a satellite dish on every school roof, and block-release arrangements to enable all language teachers to attend regular in-service seminars during school hours. For one thing, we know what the answer would be;
for another, innovation on this scale would be immensely difficult to moni-
tor and evaluate.

The findings of research into language acquisition, language processing
and language use convince me that our ultimate goal should be the kind of
multi-media language learning environment I have sketched in this presen-
tation. But I am equally convinced that we need to proceed gradually, by
devising and monitoring small-scale classroom projects that permit us to
test and refine aspects of the theoretical model we are seeking to imple-
ment. Projects focussed on the use of media and media technologies in
second and foreign language teaching would have much to tell us, not only
about problems of pedagogical implementation but also about how lan-
guage learners psychologically interact with media, in other words, how
they learn from them. Small-scale projects have two notable advantages:
they cost relatively little, and they can be carefully monitored and evalu-
ated; and of course, success on a small scale, especially when it can be
substantiated by careful evaluation, immediately becomes an argument for
implementation on a larger scale. It is easy for a government to reject
requests for funding when they are based entirely on theory, but much less
easy when theory is supported by research that has been conducted locally.
This seminar owes its existence to the conviction that systematic and long-
term progress in second and foreign language teaching depends on a strong
alliance between applied linguists and teachers. Here in Ireland the
challenge of media and media technologies - the need to bring language
teaching into the third of my ages of communication - might provide the
initial focus for just such an alliance.

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