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State-of-the-Art Article

Déjà vu? A decade of research on language laboratories, television and video in language learning

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The developments in the last ten years in the form of DVD, streaming video, video on demand, interactive television and digital language laboratories call for an assessment of the research into language teaching and learning making use of these technologies and the learning paradigms underpinning them. This paper surveys research on language teaching and learning using these and older technologies since 1999, and maps out some pointers for future research. The evidence suggests that research on video and language learning using DVD and other recent technologies is already well established, bringing out a number of issues for further study. In contrast, research-led implementation of the enhanced functionality of digital language laboratories is hardly in its infancy and much language laboratory use is marginal at best.

1. Introduction

While the very names TELEVISION and LANGUAGE LABORATORY sound almost quaint alongside MULTIMEDIA, SMARTBOARD and BROADBAND as tools for language teaching and learning, research and assessment, they have come through the last forty years or so surprisingly well, to the extent that in their present forms (digital, relatively cheap, relatively reliable) they look set to add value to foreign language learning and teaching for another forty years.

What makes a state-of-the-art review appropriate at this time is the fact that we have been experiencing a revolution in digital technology since the late 1990s with the steady convergence of television, language laboratory (henceforth LL) and computer technology, creating opportunities which are as exciting and as full of potential for language teachers and learners as anything seen in the 1960s for LLs in the 1980s for television and video.

The starting point for this review is around 1999 since two major changes to television and LL technology occurred in the late 1990s. Firstly, at this time, television broadcasters began to use digital technology to transmit their programmes and DVD became a viable mass medium. Secondly, the general introduction of broadband and greatly increased power of computers speeded up the development of acceptable quality sound and vision transfer via computer, making the fully networked, full-function multimedia LL a possibility. Subsequent developments have steadily increased the quality, reliability and functionality of computer-based LLs.
Inevitably, prominence has been given to some key areas of research, while a number of topics which might have seemed obvious, such as distance learning, are barely represented, as so few articles deal with broadcast or video media. Computer Assisted Language Learning (CALL) is only included when a study is described in which video is heavily involved or is in a LL setting.

1.1 The use of technology in teaching in the 2000s

As Bush (2000) says, until DVD, interactive videodisc had not really caught on in spite of its early promise from the 1970s. DVD was commercially ready from about 1997 and from 2000 it became the standard for feature film releases, steadily replacing VHS as DVD players became cheap and widely available in Asia, Europe and America. Bush describes an authoring project which exploits DVD technology for language learning through converting an existing Beta SP video master to MPEG 2 and then onto DVD. To this was added full-text Italian subtitles with English translation as well as summary subtitles of segments and sub-scenes. Bush takes the reader through the complex process with admirable clarity.

At about the same time, Lam (2000) confirmed the importance of audio-visual media in her small-scale study of 10 language teachers at school and adult levels. All were comfortable with audio-visual media and treated them as basic, but were far from convinced of the value of computers in their teaching. Lam concludes that the problem of technology lies not in the teachers being technophobes but in the institutions often being overly hasty in purchasing the latest technology without considering its pedagogical usefulness.

Not much has changed from Lam’s findings over recent years as shown by Toner et al.’s (2008) survey carried out in 2005/2006, which provides a snapshot of the technologies in the present review. They found a high level of technology use among language teachers in the UK university sector. Traditional audio-visual technologies such as cassette players and VCRs were widely used in the classroom, though satellite TV was used much less frequently. Teachers liked the simple, familiar and relatively reliable technologies with a wide range of material. In contrast, existing multimedia LLs were not being used to their full potential (for more detail, see below, section 2.2).

This apparent gap between available technology and teacher use is well illustrated by Moore’s (2006) large-scale questionnaire survey of technology in the teaching of Spanish culture in the United States. The findings from 262 Spanish teachers showed that level of education tended to influence the degree of technology used (Internet, CD-ROM, video and television): the higher the level, the greater the use. Teachers used VHS recorders for the most part. There was no mention of interactive video and teachers appeared to be using video more for diversion or enhancing other skills such as listening or speaking than for teaching Spanish culture (as MacKnight 1983 had found much earlier in the UK). Observations of classes by research assistants confirmed the findings: teachers limited their use to video and television material, mainly television commercials, making little or no use of other video material which accompanied coursebooks, although it had rich content. Familiarity and ease of use appeared to explain teachers’ preference for video and television compared to more recent technology. The author also insightfully suggests that the teacher regards the VCR as
an extension of herself as teacher, whereas this is not the case for the computer, which would require a complete shift of approach to teaching.

1.2 Issues and position papers

Several position papers on the use of the technologies under review outline key issues in theory and practice. Hoven’s (1999) claims in her much-quoted article are striking for their resemblance to those made for the advantages of the LL in its audio-active-comparative form in the 1970s. As she says, ‘[c]omputers give learners freedom to work at their own pace and level, and to receive immediate and personalized feedback’ (p. 88). The author devotes considerable space to discussing listening and viewing comprehension, yet omits the basic research literature on television and video in language teaching and learning. In the end, the article represents more of an aspirational checklist and many of the issues raised involving learner choice, flexibility of options, learner interaction, materials design and the role of the teacher are the focus of the research described in the present survey.

Another frequently cited position article is by Tschirner (2001), which sets out seven hypotheses in an attempt to apply SLA models to the use of digital media in class and the LL, arguing that new technologies can provide opportunities for enhanced input, output, situated learning, focus on form and the development of memory. Tschirner makes a valiant and sustained attempt to draw digital media into SLA models but unfortunately this produces an unbalanced position with poorly referenced assertions of what we are supposed to know about language learning and teaching and how digital media can enhance these practices. He proposes a rather inefficient and time-wasting model of digitally-enhanced language learning based on principles akin to child language acquisition rather than adult learning models. While it is true that digital media are a step forward in terms of both teacher and learner control, one does not need SLA models to see their benefits and their drawbacks in the classroom and LL.

In contrast, Hulstijn’s (2003) insightful article on connectionist approaches takes the view that the acquisition of many forms of cognition, including language, takes place in several phases: (i) the accumulation of a number of information units, (ii) the building of a network of these units with different association strengths between them, reflecting frequency and regularity effects of the input, and (iii) the eventual forming of abstract categories and combinatorial rules. This acquisition order may be at work simultaneously at different levels and domains. In Hulstijn’s view, vocabulary acquisition and the automatization of word-by-word understanding processes may be the two most crucial factors to boost L2 acquisition, and the computer may be effectively used in the acquisition of these skills. Hulstijn describes a piece of specially-designed software, called 123LISTEN, for training students intensively in word-recognition skills using short selected videotexts at an appropriate level without subtitles, with delayed subtitles and with simultaneous text display.

Salaberry (2001), in his excellent retrospective of The Modern Language Journal technology articles, argues that whereas most NEW TECHNOLOGIES (radio, television, VCR, computers) may have been revolutionary in society, it is not clear that they have achieved equal degrees of pedagogical benefit in second and foreign language teaching. Pedagogical effectiveness
of different technologies is, he claims, related to four major questions: (a) Is increased technological sophistication correlated to increased pedagogical effectiveness? (b) Which technical attributes specific to new technologies can be profitably exploited for pedagogical purposes? (c) How can new technologies be successfully integrated into the curriculum? and (d) Do new technologies provide for an efficient use of human and material resources? These questions figure highly in the present review, indeed they are central to many of the studies reported here.

2. Language laboratories: current issues and research

2.1 Some background

Roby (2004), in providing the most comprehensive review of LL research up to the present survey period, at least in the United States, takes an unequivocal position with regard to the status of LLs: ‘Within the field of education, the language laboratory must be seen as a singular phenomenon. By virtue of its unique equipment and specific pedagogy it stands alone. There is nothing quite like it in any other discipline’ (2004: 538). Roby proposes that by the 1990s LLs had been re-defined as multimedia learning centres in some universities with video and computers in evidence. However, in the UK, if not elsewhere, it was not until well into the 21st century that there were fast, reliable computer-based LLs with the same functionality as analogue LLs in terms of distribution and control. Although he suggests that the term LANGUAGE LABORATORY is obsolete, it appears to be remarkably resilient among teachers and learners as the preferred term compared with others: a view corroborated by Pérez-Paredes’s (2002) survey of LL technologies in which he argues, with some justification, for a much longer-term (30-year) view of integrating our new digital LLs.

2.2 Digital LLs in language teaching and learning: how do they fit in?

The digital or multimedia LL, which enables a teacher to monitor and control student computers in the classroom or even at remote locations, differs in several key respects in nature and functionality from older analogue LLs, and also in the demands it places on the teacher. There are several studies which throw into contrast the current favoured paradigms of student learning with technology and the realities of teacher and student expectations.

Danaher & Danaher’s (1998) questionnaire study of the benefits of LL use for students learning Japanese as a foreign language at an Australian university was among the first to focus on new technology providing random access to texts as well as all the usual features of a full function LL. The authors face the perennial issue of how to fit effective LL use into a paradigm of teaching that calls for social interaction rather than individual student control, monitoring and repeated practice of their own performances. To what extent are the advantages of the LL in facilitating students’ contact with a range of speakers’ voices and in individualising their language learning outweighed by the restrictions on interaction? Students reported benefits normally associated with LL use such as individual attention
from the teacher and the opportunity to evaluate their own performances, while some open-ended responses also pointed to the lack of communication between students inherent in LL use. Students were less positive about self-access. As they passed from first to second year, they were also progressively more aware of the LL’s pedagogical importance in relation to other components of their language course. The findings underscore the importance of the teacher’s design of appropriate pedagogical activities in order to maximize the LL’s benefits for students’ language learning while minimising its potential drawbacks. As the authors say, we either do this and exploit the useful functions of LLs or abandon them as anachronisms.

A rare, comparative study by Barr, Leakey & Ranchoux (2005) unfortunately fails to set up a fair comparison between CALL materials in a multimedia LL and classroom conversation classes in improving oral production. With such design weaknesses, it is not surprising that so many research studies of CALL find that CALL and multimedia do NO WORSE than class-based teaching, substantially weakening the claims made by advocates of technology in language learning, a situation reminiscent of Savignon’s (1972) notorious comparative study of audio-lingual methodology in a LL and communicative teaching. Barr et al. report a short pilot project for first-year French students at a UK university, the aim of which was to deliver a blend of collaborative and individual learning through a combination of CALL programs and online activities alongside traditional face-to-face conversation classes. While progress was made by both groups, those NOT using technology made significantly greater progress than students using technology. The authors suggest the need for developing pedagogy to ensure that CALL-based teaching goes beyond rehearsal activity to achieve message-orientated communication, something LL-based teaching may not be best suited for in the end.

On the face of it, technology failed to produce faster, better, or more satisfying learning. However, the design of the study was clearly flawed, failing to play to the strengths of technology-based learning, though it certainly followed the well-trodden path of those who have bought into CALL package solutions. In addition, the authors appear to have based their approach on 1990s constructivist learning theories which are not necessarily grounded in the realities of language learning and teaching. Learners want expert teaching and well selected, graded and structured learning rather than having the teacher as ‘facilitator and the learner free to make his or her own interpretations’ (2005: 57). However, the greatest weakness lay in the use of the TellMeMore software for the treatment groups as if it could be a substitute for or equivalent to class contact with an experienced teacher. TellMeMore is used best as enhancement or supplementary material for ‘traditional’ classes rather than a stand-alone package. In the end, it is the tutors in this study who show the most sense, preferring to use technology only when it makes a difference to the learning process.

Two relatively recent surveys have also contributed to our understanding of how digital LLs are being used, at least in the context of higher education in the UK. In the on-line questionnaire survey by Toner et al. (2008), mentioned above in section 1.1, teachers were asked whether they had digital LLs and/or analogue LLs, together with their views on CALL and the effectiveness of digital LLs. A total of 147 responses were received, 87 from teachers working in UK universities representing 62 UK higher education establishments. While the respondents were a self-selecting sample, which may have served to exaggerate the level and diversity of IT use in higher education, the general trends and internal comparisons remain valid.
They found that language teachers were technologically very literate and institutions were well provided with a range of technologies including multimedia LLs. Over 70% of UK institutions surveyed had at least one digital LL. However, existing multimedia LLs were not being used to their full potential as state-of-the-art teaching facilities. In some cases, LLs were being used simply as ordinary classrooms with little or no use being made of the technology; in other cases, they were used for supervised study rather than for teaching. A little over half of those who used digital LLs used them for less than 20% of their teaching time, a quarter for more than 40% of their time. There was a very high use of CALL software in LLs, possibly for individual study, and respondents reported concerns that LLs inhibited social interaction between peers and with teachers. The authors signal a danger that digital LLs are being used for what is most easily done in them and that, as a result, their functionality is under-exploited and locked into primarily text-driven exercises, all of which sounds reminiscent of LL studies in the 1960s and 1970s.

Staff development, training and support emerged as major issues and there was some reluctance among teachers to abandon trusted audio- and video-resources. Much to the surprise of the authors, only a third of respondents agreed that LLs provided them with facilities for effective monitoring or supervision of students. Having distributed materials via the central system, some teachers, it seems, prefer to walk round the room to observe how students are performing.

While the Toner et al. survey was based on individual responses, Vanderplank’s (forthcoming) survey gathered data by questionnaire on LL use on an institutional basis. Vanderplank gathered data from 36 universities in the UK, nine of which had no LLs as defined by the questionnaire. In the 27 institutions which had labs, they were used for a very wide variety of purposes, though listening comprehension was the most common use (13). Other uses included interpreting (6), pair/group conversation work (4), telephone simulations (4), speaking practice (4), watching videos (3), examining (2), and subtitling (2). Most institutions had classes scheduled in the LL once a week (14), 5 twice a week and 5 had daily use. Reliability and staff training were by far the biggest issues, with setting-up also being mentioned. Access to materials and flexibility were seen as the most useful features. Most (15) thought their LLs earned their keep. The responses from those institutions which used their LLs for interpreting practice or intensive training underlined the need not only for good staff training but also for very regular use by students and their teachers if the functionality offered by digital LLs was to be exploited fully. This point is missing from the Toner et al. (2008) survey, yet, as Vanderplank’s (1985) research into the effective use of LLs found, anything less than several times a week is insufficient for students to develop a facility of use which will allow them to exploit the functions offered such as self-monitoring of performance, a finding corroborated by Danaher & Danaher’s (1998) study. Similarly, as with any sophisticated piece of equipment, teachers need to have very regular use in order to develop their skills in using the LL flexibly for the learners’ benefit. Occasional use for listening could be equally easily done with much cheaper equipment. From the findings of both surveys, it looks as if digital LLs are being set up to fail in many institutions just as analogue LLs were in the past.

While there are numerous studies of computer-based laboratories within the more general field of LEARNING ENVIRONMENTS, there are few that are concerned with language learning. Okan (2008) provides a useful study of the computer LL environment using What’s Happening...
in this Class? (WIHIC) and Attitude to Computers and Computing Courses (ACCC) questionnaires at a Turkish university, which confirms the findings of the two surveys reported above. Students reported that they did not receive enough support from teachers, could not stay on task long enough to feel involved in the teaching/learning process, and were less cooperative when computers were used. For their part, teachers were overburdened with planning and preparation for using websites and CD-ROMs as supplementary material, managing 25 computers, and lacked training in how to incorporate technology into their instruction in order to create a positive language leaning environment. On a more positive note, students also enjoyed computer-based classes and materials and felt they were useful, possibly because they only received 2 hours per week in the class or because these classes were highly controlled and structured by the teacher.

The two themes of underuse of digital LLs and students’ need for support and guidance are highlighted in Wagener’s (2006) small pilot study, which also emphasized how the move to a digital environment requires immense input from staff to develop new digital materials and learning methods. Her study investigated the impact of video materials within the context of German courses in a British university and in particular how these materials were used in new digital LLs on a self-access basis as a means of developing independent learning skills. In one course, short news reports in German were made available on the LL network each week, together with worksheets, with the idea of fostering intensive listening. In the other, higher-level course, short news items had to be translated into English on a second track and then submitted. All felt some benefit to listening skills as well as developing an awareness of German culture and vocabulary development, but there was less awareness of improving independent learning skills. Although the reports were mostly only one or two minutes long, students found the programmes very time consuming and some were not able to finish each week. The implications suggest that students might have gained more benefit from a scheduled LL class rather than leaving them to carry out the tasks in self-access mode.

The potential for integrating and exploiting LLs together with other technologies in a variety of activities is well illustrated by Barge’s (2009) report of a project at Queen Mary, University of London, in which 15 hours of classes in English for Academic Purposes, French and German were prepared and taught under observation within a multimedia LL setting. The observations confirm that experienced (and enthusiastic) teachers, willing to put in the additional preparation time, can successfully integrate LLs, other technologies (e.g. Smartboards) and course books in a wide range of activities, often seamlessly moving between modes of delivery and practice. As Barge reminds us, the crucial thing is that in order to accomplish effective integration of new technology into established teaching practices, teachers have to acquire a new set of technical skills.

2.3 New developments: forms of help and guidance in digital LLs

Some of the most interesting recent empirical work which combines video with LL settings has been on the use of the HELP option. This could equally easily fall under strategies or video research but is included under LLs as it fits in with the need for teachers to provide
students with guidance and training in their use of help options in LL and multimedia settings. Pujolá (2002), for example, investigated how 22 adult Spanish EFL learners navigated through multimedia material, drawing on TV, radio and newspaper texts as sources of English language input. Pujolá was interested in looking at variations in strategy use, in particular the use of help facilities, in terms of the level of perceived learning strategy use. Help options were divided into Assistance and Guidance. Assistance included captions (in the present article, CAPTIONS is the term used for same language subtitles and SUBTITLES is used for translation or native language subtitles; see section 4 below) along with a dictionary, transcripts, replay and rewind controls, cultural notes and feedback with explanations. Guidance help included information on how to make appropriate use of transcripts and captions.

The most common help facilities used were play, pause and rewind but students also made use of the extra help from captions or transcripts. It was expected that those subjects who were poorer decoders (according to a listening test) would rely more on visual decoding help, such as the transcript and/or captions, when doing a task, and that higher decoders would use those facilities less often because they were more able to follow the authentic aural input. In fact, students at each level behaved in varied, idiosyncratic ways regarding which decoding help was used most often. In each group, with the exception of the higher-level decoders, there were students who were used to the visual support and without the transcript or the captions they were at a loss. Pujolá suggests that the difference between the decoding levels lay in their perceptions of the purpose of the transcript and the captions. In the two higher-level groups, students tended, in general, to perceive and use them more as a backup to their listening activity, whereas the other two groups considered them as a more necessary tool in their understanding of the authentic aural input. In the majority of cases the transcript was reserved for more particular aspects, for example, to check the spelling of a particular word in order to look it up in the dictionary.

In similar vein, Grgurovic & Hegelheimer (2007) looked at navigational patterns and the effect of proficiency on the use of the help option in the performance of 18 ESL (English as a second language) college students watching short video segments. The authors compared captions and transcripts as help options for frequency of use and time of use, using questionnaires and interviews. The captions and the transcript could be accessed only after students had viewed the video segments and answered the comprehension question INCORRECTLY. For the second viewing, participants could choose either to open the page with the captioned video or the page with the lecture transcript alongside the video. In the case of listening comprehension breakdowns, subjects used captions more frequently than transcripts and for longer periods of time. They were also the preferred help options before and after the study, so it appeared that participants chose the help they were most used to using. Those with a higher-level of proficiency used captions more frequently and for longer periods than the lower-level subjects, although all students exhibited very similar uses of the transcript. It was also found that subjects spent less time on the help options than the researchers anticipated, something they put down to task characteristics such as degree of control and time pressure.

This section on LLs ends with an ‘anti-lab’ article which stresses the necessity of re-thinking LL exploitation. Arteaga (2000) writes with some passion about the need to bring phonetics training back into the classroom and not leave it to the LL manual. She argues
that communicative approaches have tended to leave pronunciation aside, largely ignoring the problem of intelligibility, and, as she says, many textbooks are weak or inaccurate with regard to phonetics and pronunciation. In earlier approaches, explicit classroom instruction would have been followed up by intensive, closely monitored practice in the LL, with students learning to assess their own performances under guidance from the teacher. This was and still is a unique feature of a LL, which, in the past, was generally a noisy place with a class of students all speaking at the same time. Compare this with the usually quiet clicking of many multimedia self-access LLs nowadays.

3. Television, video and language learning

3.1 A complex, passive medium

The heyday of developments in the use of television and video for language learning was undoubtedly the 1980s and into the early 1990s, following the availability of cheap and reliable video recorders as well as agreements with broadcasters for the use of off-air recordings for educational use. During this period, the paradox of television as a medium of language learning was well expressed by Cooper, Lavery & Rinvolucri (1991: 11): ‘Video is a supercharged medium of communication and a powerful vehicle of information. It is packed with messages, images and ambiguities’. In other words, the language of broadcast programmes comes too quickly for learners and there is too much of it. It is all too often culturally bound or bound in contexts which may be unfamiliar to foreign language learners. As Vanderplank (1993) wrote in his article stressing that television is essentially a verbal medium, while video made popular television programmes available for use in the language classroom, it failed to make programmes accessible to language learners.

Several continuing themes are evident in research on television, video and language learning during the past ten years and are reported below. Among them are language and cultural learning; the continuing fascination with captions and subtitles in both L2 and L1 development; incidental language learning from broadcast TV; the use of so-called advance organizers to help learners access programmes; the need to train learners in media literacy or strategies; developments in the technology itself; global and satellite broadcasting; and video in listening assessment.

3.2 Learning language and culture from video

Many authors have promoted television and video as ideal means of showing not only authentic language but also the culture of the language being taught, both high culture (sometimes called big C culture or cultural products) and low culture (daily customs and practices, lifestyles, sometimes referred to as little c culture). Within the survey period, Kramsch & Andersen (1999) provide a very useful analysis of how multimedia technology (audio-visual essentially) can be used to teach language in its authentic cultural context. They argue that this represents a double challenge for language learners and teachers. On the
one hand, the computer gives learners access to authentic video footage and other cultural materials that can help them get a sense of the socio-cultural context in which the language is used. On the other hand, CD-ROM and DVD multimedia textualize this context in ways that need to be ‘read’ and interpreted. They provide an insightful analysis of the interaction of text and context in a multimedia Quechua language program, and make some practical suggestions for teaching foreign languages through multimedia technology.

The need to guide students is reinforced in Weyers’ (1999) well-designed longitudinal study conducted in two university Spanish classes, which indicated that television programmes can provide valuable language input when it forms part of a structured class activity. Intact control and experimental classes met daily for 60 minutes, for a total of eight weeks. The control group followed the established curriculum for second-semester Spanish, without alteration. The experimental group watched two episodes per week of the Mexican telenovela, *María Mercedes*. Before viewing, the experimental group received a list of 10 questions, written in Spanish, to answer while watching the program. All participants took two pre- and post-tests in listening comprehension and oral production. An ANOVA indicated a significant difference in favour of the experimental group in listening comprehension. In oral production, the experimental group outperformed the control group in the number of words they used in discourse, in their confidence in generating output and the scope and breadth of their discourse. The results also threw up some interesting differences between learners, especially with regard to the transfer of native-speaker language skills.

Herron and her colleagues have reported several studies which investigated whether learners at low levels would be overwhelmed by the language and images or whether they could actually gain cultural knowledge from viewing. Herron et al. (1999a) looked at how much cultural knowledge students would gain during a semester from viewing the ten videos as part of the *French in Action* beginning French multimedia course. Scores on both little c culture and big C culture increased significantly from pre-test to post-test, though there were also differences which showed that students were better at recalling the social patterns of daily living, such as that the French eat pigs’ feet, than the achievements and institutions of French culture. One of the most interesting findings was that the video series levelled differences in cultural knowledge between those who had been to France (about 36%) and those who had not (about 64%). The authors consider, too, that the higher scores for social pattern and behaviour reflect the students’ practical concerns and functional priorities. They cared more about shopping, visiting friends and eating in restaurants than visiting museums or knowing about historical events.

A similar study (Herron et al. 2000) involving students in their first semester but with an additional oral testing component found some differences between the first semester and the second semester studies, such as no difference between the big C and little c quiz scores with first semester students. Not surprisingly, the authors suggest that growing familiarity with both language and culture accounted for the difference between the scores of the first and second semester groups. As in Herron et al. (1999a), students perceived that they had learned more about daily life in France than about the achievements and institutions. A weakness of both studies, acknowledged by the authors, is that they were using specially-designed instructional materials with videos which were explicitly intended to teach both language and culture in a structured way. In this sense, the studies were not so much a test of the learners but of the
materials themselves, a situation far removed from learners trying to gain cultural knowledge from watching authentic broadcast programmes.

This point is emphasized by the findings of Herron et al.’s (2002) later study into the role of background knowledge in developing cultural knowledge in which intermediate-level learners of French watched eight videos of 5–6-minute-long segments consisting mainly of interviews with French-speaking people from France, Canada, and the French Antilles. As before, post-test scores were significantly higher than pre-test scores. The increase in scores, however, was associated with the level of French background. The difficulty of the video clips seemed to prevent those with less background knowledge from benefiting as much as those who had background knowledge on which they could build.

Markham (2000–2001) also investigated background cultural knowledge in a study involving advanced ESL students with mixed religious backgrounds watching two ten-minute excerpts, one on Islam and the other on Buddhism, from a series of public television broadcasts. Students watched each excerpt once either in a captions or no-captions group and wrote summaries after viewing. Both religious background knowledge and captions contributed substantially to their comprehension. The Muslim and Buddhist students performed at a higher level after viewing videotapes concerning their respective religions. However, the smaller sample of Buddhist students (only 9) performed somewhat more erratically than the Muslim group (16). Conversely, the religion-neutral students (54) performed at a higher level with the captioned versions of the videos concerning either religion.

Using video to broaden learners’ perspectives as well as their language skills is also the theme of Chapple & Curtis’s (2000) informative study of how they used films in an ESL environment in Hong Kong for developing language and other transferable skills such as analytical and critical thinking. Thirty-one Cantonese tertiary-level students were asked to rate their own English language skills development in relation to 6 specific areas after watching 8 films in English or with English subtitles. The films were followed up in discussion and analysis sessions. The students reported that their English language skills had improved in all areas, particularly their speaking and listening skills, and that their confidence in using English had increased together with improved analytical and critical thinking, content and technical knowledge and a broader perspective.

3.3 Comparing different approaches to exploiting video

The many reports on learners making video programmes and teachers exploiting video materials have been omitted from this survey since they are almost invariably anecdotal (nonetheless often worth reading for teaching ideas). An exception is made for Bufe & Viallon’s (2001) paper which compared two separate studies in which video was used for language learning, one carried out in Germany with German learners of French, the other in France with foreign learners of French. The roles of video, both as a mass medium and as personal camcorder, are discussed and analysed in communicative terms. While the authors find video an invaluable resource for both linguistic and socio-cultural familiarization and for contact with the world outside the classroom, they contend that there are important
differences between video materials produced by professionals, which place students in the role of passive consumers, and materials produced by the learners themselves, in which they enter into active communication with one another and the subject. For example, placing the camcorder in the learners’ hands legitimates and authenticates activities such as stopping native speakers and interviewing them in the street.

As Herron et al. (2006) say, even though over twenty years have passed since the publication of the first complete video-based foreign language program, there are few experimental classroom studies with a comparison group on the effectiveness of these instructional packages to improve students’ language skills. The key question with comparative studies is always whether one of the approaches has to be hobbled in order for there to be a comparison. Herron et al. (2006) compared a story-based video instructional package with a feature-length film as its focus to a text-based course with supplementary video material, aiming to assess the effectiveness of each approach in improving the listening and grammar performances of intermediate-level college French students. The main difference (beside content) between the courses was that a tourist video supplemented the text with enrichment material while the feature film was the vehicle by which students were introduced to all new and review structures. Students in the film-based course significantly improved their listening skills and grammar knowledge, while for the text-based group, students did not significantly improve in listening, but they significantly improved in grammar. For grammar only, the increase in mean scores for the film-based group was significantly higher than the increase in mean scores for the text-based group. Of course, it could be argued that using the DVD as the listening test rather biased the test in favour of the video-based course group, but this would not explain away their better performance on the grammar test.

4. Opening the box: captions, subtitles and language learning

4.1 The case for captions and subtitles

Vanderplank (1999) puts the case for captions, arguing that English language broadcasters and educators have yet to develop the full potential of English language television as a global resource for language learning and teaching. Drawing on the substantial research into the difficulties of using television as an educational resource by the UK Open University (e.g. Gallagher 1978; Thompson 1979; Laurillard 1991) and others (e.g. Salomon & Leigh 1984; Robinson & Levy 1986; Vanderplank 1994) into the ways in which native-speaker viewers watch and use television programmes, he suggests that the causes of this lack of development lie in the nature of television as a dynamic visual and verbal medium, in the ‘leisure’ mental sets of viewers towards television watching and in the pedagogical approaches used to exploit authentic broadcast programmes. He outlines a large body of research in the 1980s and 1990s which showed that captions (called TELETEXT SUBTITLES in the UK, CLOSED CAPTIONS in North America and elsewhere, and SAME LANGUAGE SUBTITLES in India and other countries) intended for the deaf and hearing-impaired are also a valuable aid to opening up a wide variety of TV programmes to non-native viewers (and native viewers in some cases) and turning them into resources for language learning and teaching (e.g. Price 1983;

Danan (2004) also provides a comprehensive summary of the advantages and disadvantages of captioned and subtitled programmes identified by research such as improvement in productive skills, development of word recognition and vocabulary building, comprehension of details, and reducing learner-viewer anxiety. On the downside, captioning may not be suitable for lower-level learners or those with poor reading skills. Danan summarizes the complementary explanations for how captions provide benefits rather than overloading the learner-viewer’s faculties, the most commonly quoted being the notion of bimodal reinforcement of sound + text (e.g. Holobow, Lambert & Sayegh 1984; Lambert & Holobow 1984), provided the learner has a high enough reading ability in the L2, and Paivio’s (1986) dual-coding theory, which would suggest the verbal system and the imagery system, comprised of non-verbal objects and events, are functionally independent but linked by referential connections. A further explanation was offered by Vanderplank (1993), drawing on Halliday (1989: 97), who suggested that the caption text provides a synopsis of the dynamic speech of a programme which might otherwise be lost in the processing. In terms of learning benefits, however, the central issue over the years has remained: whether captions merely provide access and enjoyment for learner-viewers to otherwise incomprehensible programmes via reading, or whether they can help learners ‘tune in’ to the language spoken on programmes and assist the development of listening skills over the longer term through frequent viewing.

### 4.2 With or without captions

In the last ten years, several issues involving captions and subtitles have continued to be explored in research studies. A number of these compare viewing with and without captions or at different levels or showing different programmes. While it might be argued that little new has been learnt since Price’s (1983) study which found that learners understood more when watching a video with captions than without, a number of the studies reported below have added to our understanding of how and when to use captions to best effect.

A much-cited study by Huang & Eskey (1999–2000) investigated the effects of captions on the listening comprehension of 30 intermediate English language students who watched the programme *Family Album, USA*, a series designed for ESL students. Students were randomly placed into two groups, one with captions the other without. The group that viewed the programme with captions scored significantly higher on a post-programme assessment involving vocabulary/phrase acquisition and comprehension.

In a well-designed and insightful study also using *Family Album, USA*, Chung (1999) compared listening comprehension rates for video texts using advance organizers, closed captions, a combination of both and none of them with 183 randomly-selected low-level learners. Four different treatments were used for four video segments in a ‘Latin Square’ arrangement. The advance organizers consisted of the teacher reading aloud in Chinese six to eight sentences about the segment they were about to watch.

Learners in the combined treatment of advance organizer and captions scored significantly higher than the advance organizer only treatment and no support treatment. The treatment
with captions only scored higher than that with advance organizer only. There was no significant difference between the captions only treatment and the combined treatment or between the advance organizer treatment and no treatments. Simply playing videos as a means of developing language skills was not enough and some form of help was needed to enhance access for students to benefit. The great majority thought that L2 (English) captions would be more useful than L1 (Chinese) subtitles and that one form of support would be enough for students with higher proficiency levels, while both might be needed for lower levels.

Much less convincing is Taylor’s (2005) study of low-level learners to assess whether they could understand a video in Spanish better with or without captions, what processing strategies they used and whether these varied according to the length of time they had been studying Spanish. Students in the captions group with 3 years of Spanish study significantly outscored those in their first year of study on free recall. However, there was no difference in the no-captions group. When the two groups of first-year students were compared, the no-captions group had significantly outscored the captions group, suggesting that the captions may have had a detrimental effect. Captions neither helped nor hindered the third-year students. Regarding strategy use, six out of the 17 first-year students found captions distracting or confusing or that they could not use the three channels simultaneously. Not surprisingly, half of the third-year students reported that they did not find this a problem and several stated that they would have understood nothing without the captions, many finding them helpful. The research, perhaps unwittingly, appears to confirm that unless video material is carefully selected and graded, together with judicious editing of captions, attempting to use captioned videos with low-level learners is likely to be a waste of time and may well produce a negative response from students.

Another study with design weaknesses is Yuksel & Tanriverdi’s (2009) on learning incidental vocabulary from watching a video clip with and without captions, using Wesche & Paribakht’s (1996) five-level Vocabulary Knowledge Scale (VKS) as a measure of development. 120 intermediate-level EFL students were tested using the VKS two weeks before the treatment, then randomly assigned to the captions or no-captions group and shown a nine-minute clip of a single episode of *Seinfeld*. 10 target words were chosen, validated by pilot tests. Both groups made significant gains from pre-test to post-test. While the captions group improved a little more than the no-captions group, the difference was not significant. The authors question the validity of the self-report scale in capturing differences between groups. In addition, the subjects had been primed for these words in the pre-test, making it difficult to assess to what extent the video clip was the only source of knowledge of the meaning of these words and the number of words was so small that differences were less likely to be significant.

Further insights into procedures for class use of captions, training in their autonomous use by learners and also the need to select videos with captions carefully are offered by Caimi’s (2006) informal study in Italy in which 15 pre-intermediate university students of English attended captioned video sessions. Students were tested on lexical, semantic and visual recognition memory after viewing these videos. Positive results were achieved only if the subtitles were faithful to the source dialogue and appropriately tailored to the semantic and pragmatic markedness of the plot, speed of images and scenes. Students confirmed that their concentration on listening comprehension was second to reading comprehension.
Some students were disturbed during the screening of the video because they were unable to combine viewing, listening, and reading at the same time. In order to follow the storyline, they had to give priority to the skill they felt more familiar with.

4.3 Captions and the development of listening comprehension

It has been frequently argued that even if captioning allows for language gains and improved comprehension, students are not being truly trained to develop their listening skills without written support. The two studies reported below attempted to tease out this issue. Markham (1999) looked at the effects of captioned video on advanced-level ESL students’ aural word recognition, attempting to establish a link between using captions to improve learners’ listening word recognition skills with subsequently presented audio material without textual or pictorial support. In other words, does the dual input of reading and listening contribute to subsequent improved listening performance?

One hundred and eighteen university-level students grouped according to their ability range in terms of TOEFL scores were shown two 12–13 minute excerpts from educational television programmes, one about whales, the other about the civil rights movement in the United States. The main difference between the two videos was that the ‘whales’ video had a high correlation of audio track and video, with pictures corresponding closely to the soundtrack, while the opposite was the case for the ‘civil rights’ video, as pictures accompanying the latter provided little support for the sound or text.

Markham attempted to isolate the listening variable by relying solely on a 50-item multiple-choice listening test without printed material for each video. Each class saw each video once only, with or without captions, in alternating order then completed the relevant multiple-choice test. Roughly equal numbers watched captioned or non-captioned videos (so forming treatment and control conditions) by alternating the presence or absence of captions in each of the five classroom groups. Classes which watched captioned versions recognized more words from the passages in the listening test than those which watched un-captioned versions. Effects of captioning were consistent for both passages, a finding which was unexpected as it had been predicted that the students would score higher on the ‘whales’ passage, with or without captions, than they would on the ‘civil rights’ passage, whereas the opposite turned out to be the case. Markham contends that the findings extend the value of captioned video material beyond improvement of L2 reading and listening comprehension to L2 listening word recognition. Exposure to captions can improve ESL students’ listening-based recognition of words that are also present in subsequent listening material without captions.

To test how captioning affected listening ability regardless of semantic information, so as to assess recognition memory in relation to sound alone, Bird & Williams (2002), in a much-quoted study, focused on the implicit and explicit learning of spoken words and non-words. They used auditory word recognition to measure implicit learning while explicit learning was operationalized as the intentional recollection and conscious retention of aural stimuli. A first experiment with 16 English native speakers and 16 advanced-level non-native speakers demonstrated that subjects in the captioned condition were better able to retain the phonological information they had just processed implicitly. When asked to aurally identify
words that had been presented in a previous phase, they also showed better explicit recognition memory. A second experiment with 24 advanced EFL students found that captioning had a beneficial effect on word recognition and implicit learning of non-word targets paired with two rhyming and two non-rhyming aural cues, especially in the rhyme condition. For example, the subject might first be presented with a non-word cue such as glemp, followed by the target fremp and would have to decide as quickly as possible whether the target rhymed with the cue. In both experiments, prior bimodal presentation improved recognition memory for spoken words and non-words compared to single modality presentation.

Bird & Williams conclude from their tests that the captions of video materials may have a significant facilitatory impact on the long-term implicit and explicit learning of spoken word forms. Perhaps more importantly for captioning/subtitling research and practical questions about teaching listening comprehension, the important outcome of their study is, as the authors say, that the bimodal condition created no apparent interference with auditory processing and learning. Any fears that dividing attention between sound and text might interfere with listening comprehension were not borne out in their study.

4.4 Captions and literacy development

Several studies in the past have highlighted the possible benefits in the development of reading skills in both the L1 and the L2 that the presence of captions may bring (e.g. Bean & Wilson 1989; Neuman & Koskinen 1990). Within the survey period, the most interesting studies are certainly those undertaken by Kothari and his colleagues in the context of Indian illiteracy and sub-literacy.

After the positive results of a small scale study (Kothari et al. 2002) in an Indian school setting which showed that captioned songs improved decoding ability in elementary school students, Kothari, Pandey & Chudgar (2004) report a fascinating study on the incremental effect of viewing programmes with subtitles in a context far removed from the classrooms of Europe and North America. The authors describe the implementation of what they call SLS, same language subtitles (captions) on a programme of film songs, specifically for first language literacy. Chitagreet, a weekly 30-minute TV programme of Gujarati film songs was broadcast across Gujarat state in India with the song words captioned in Gujarati over a ten-month period. Kothari (1999) had already made a well-argued case for the captioning of songs in the context of group and family viewing in India, arguing that the passion for film songs and the enormous interest in knowing and memorizing song lyrics would provide strong instrumental motivation for viewers to ‘take out’ some lyrics from the captions.

Two groups were formed, an experimental group who watched the programme regularly and who could just about manage to read the text, and a control group, unfamiliar with the programmes, who were ‘early literates’. 25 episodes were shown with 20 minutes of captions per 30-minute broadcast. Both groups took pre- and post-reading tests. Subjects were drawn from villages and slums in the state of Gujarat and the city of Ahmedabad, 358 people in the Experimental Group (EG), and 121 in the Control Group (CG), which was formed from people in a different district who could receive the programme but who reported very low or practically no viewing of it. The EG significantly improved more than the CG on two out of
the three post-tests. Those who had a higher education level appeared to improve more than those who had little or no education. Those with some skills in reading the subtitles benefited more than those who did not.

To gauge reactions, viewers were offered a printed copy of the lyrics of the most recent programme if they sent in a postcard or letter. 2,060 postcards were received, most from rural areas. Many wrote with their opinions of the subtitles and indirect and direct expressions of support for the educational perspective totalled about one-third of responses. Many of the comments on subtitling made the link with literacy though this was never expressly stated during the programmes.

As the authors state, while the study showed an improvement in decoding ability, far more integration of captions with popular entertainment programmes would be needed to see any really meaningful improvement such as being able to read a newspaper. Nonetheless, the study is important as a rare example of incremental effects over a reasonably long period in experimental terms and the testimonies provide a useful measure of evidence of captions to provide benefits in literacy development.

4.5 Subtitling and captioning as language training

While translation has always been a fundamental part of language learning and teaching, there have been few reports of the value of captioning or subtitling of programmes as an aid to developing language knowledge and skills, so Williams & Thorne’s (2000) report on the use of subtitling as a means of developing language proficiency is particularly welcome. The study should be seen in the context of the very live issue of training skilled subtitlers to work in a sophisticated technology-driven environment, unrecognizable from that of ten years ago.

The authors describe a course in Welsh/English subtitling at Saint David’s University College, Lampeter. Students, who had to have a thorough knowledge of spoken and written Welsh and English, were required to subtitle and synchronise a series of ten 4–5-minute excerpts of various types of television programmes. Although the course was aimed at practical and vocational training, it became apparent to trainers that there were added language acquisition benefits to be gained simultaneously. Several problems were identified such as difficulties in understanding the spoken register in dramas, soap operas and comedies, as students were more used to literary linguistic forms in Welsh. At the end of the course, students reported a considerable improvement in listening skills with increased confidence in dealing with accents and dialects. They could even mimic characters successfully and reported being able to repeat long passages of speech, word for word. The authors suggest that subtitling training may provide a motivating form of study for students which will encourage them to invest long hours in mastering a foreign language while simultaneously gaining other valuable transferable skills.

4.6 Learning and understanding using different modes of subtitling/captioning

What combination of subtitles/captions and sound is most beneficial to learners? A strand of closed caption/subtitle research has followed up work by Holobow et al. (1984) which looked
at learners’ comprehension using a combination of dialogues in learners’ L1 with printed scripts, which they referred to as ‘reversed’ subtitling, and L2 audio input with L2 printed scripts (bimodal input). Earlier studies by Danan (1995) and d’Ydewalle & Pavakanun (1996) suggested that at different levels of proficiency, different effects of learning and understanding may be found according to the mode of subtitling.

Baltova (1999) explored whether authentic L2 video with L2 subtitles (captions) or with L2 subtitles and L1 audio could enhance the understanding and learning of French by low-level school learners who watched a short scientific documentary designed for native-speaker viewers. L2 subtitles were edited leaving in important content and ‘key words’ in complete sentences so that about one-half of the script was subtitled.

Students watched in several conditions:

1. Reversed condition: English audio and French subtitles first (reversed format) and then with French audio and French subtitles (bimodal/caption format), and finally with French audio and no subtitles (traditional format).
2. Bimodal condition: the same video in bimodal format twice followed by a traditional format.
3. Traditional condition: the same video three times in traditional format.

Students were given a short-answer comprehension post-test to measure learning and retention of the video context while vocabulary learning and retention were checked with a C-test. The tests were given again two weeks later. Students’ learning of the video context under the Reversed and Bimodal subtitled conditions was significantly superior to that in the Traditional condition, but there was no significant difference between students’ performance under the two subtitled conditions. French vocabulary learning in the Bimodal group was found to be significantly higher than in the other two groups, which had similar outcomes. After two weeks, retention was higher in the two subtitled conditions, with no significant difference between them. Vocabulary retention was significantly higher in the Bimodal group than in the Reversed group, and there was no significant difference between the Reversed and the Traditional groups. Students in the first two conditions commented that subtitles enhanced their ability to notice, comprehend, spell and recall new L2 material. Baltova suggests that under similar circumstances, students who are learning both vocabulary and content in an L2 will benefit more from watching French videos subtitled in French than from watching English videos subtitled in French. This might be a not altogether surprising outcome were it not for the fact that Baltova is working with lower-level learners here, though we are given no details of precisely how low their level is in international terms.

Markham, Peter & McCarthy (2001) and Markham & Peter (2003) also take advantage of the multi-lingual flexibility of DVDs in their studies comparing Spanish captions, English subtitles and no captions with a Spanish-speaking soundtrack on the comprehension of intermediate-level students of Spanish. In both studies, students watched a short clip about the Apollo 13 mission to the moon and viewed in one of the three treatment conditions. After taking a Spanish pre-test in reading, writing, listening, vocabulary and grammar, they viewed the clip once only in their normal class time. In the 2001 study, immediately after viewing,
students had 10 minutes to write a summary of their viewing in English followed by a 10-item English multiple choice test with words taken from the DVD. In the second (2003) study, the Spanish language dependent measure consisted of a 20-item multiple-choice listening comprehension test. Students watching the video without captions did significantly worse than the other groups in both tests. The English-language subtitle group significantly outperformed the Spanish captions group in both studies. Number of years of previous Spanish study was shown to be an advantage in all groups. Based on their findings, the authors suggest that it might be reasonable with lower-level learners to begin with L1 subtitles on a challenging L2 video, then progress to L2 captions and then finally no captions.

Stewart & Pertusa (2004) obtained different findings when they compared vocabulary recognition gains of intermediate-level students watching a Spanish film with English subtitles or Spanish captions. Unfortunately, this study lacked rigour so its findings must be viewed with some caution. Seven intact classes watched two full-length Spanish films, 53 with Spanish captions and 42 with English subtitles. Pre-testing was rather haphazard and produced varied results. They viewed the film in three segments and a short multiple-choice vocabulary test in Spanish was given to all seven classes before and after each segment. Differences in improvement were found to be slight and no statistics on the significance of differences are given. In general, the group watching with Spanish captions tended to do better. The length of the segments shown appeared to have an effect as the shorter the segment, the greater the improvement, suggesting a short-term memory effect. Students liked the Spanish captions and felt they would benefit in future from watching with these. Those watching with English subtitles were much less positive.

In the study by Bianchi & Ciabattoni (2008), not only was subtitle/caption form considered but also the interaction of variables such as video type, topic familiarity, complexity of language, language level of viewer and familiarity with subtitling, with very mixed results. English learners at different levels of proficiency at an Italian university watched clips from two films (Harry Potter and the Philosopher’s Stone and Fantasia) either with English captions, Italian subtitles or no captions/subtitles. The 85 students were randomly divided into three treatment groups on the basis of their language ability and watched the clips on a computer. At the end of each clip, they answered questions on content, vocabulary and use of lexico-grammatical phrases, as used in the film clips. They could replay each clip and review the questions twice. A further delayed post-test was given one week after viewing.

The findings varied according to question type, level, film clip and treatment condition. For example, in content comprehension tasks, the subtitle and caption treatment groups obtained the best results regardless of level and type of film. Captions proved more useful for beginners and advanced students than no subtitles. This was not the case for intermediate students, where the no subtitles group outperformed the captions group. Where there was a semantic match between the audio and video input content, comprehension was constantly higher regardless of proficiency level and type of support, and differences between experimental and control groups were less marked. The small number of students in each group and the lack of incremental development in such a short study make the findings of limited value, although this is partly compensated for by the presence of a delayed post-test. With such varied findings, participant feedback on strategies and the use of subtitles would have been particularly valuable.
Another study attempting to capture the interplay of subtitles, captions and other variables, in this case, background knowledge, is reported by Chang (not dated) who investigated the effects of schemata/background knowledge and captions/subtitles on second language (L2) listening comprehension of two 13-minute-long video films, one with familiar content, *Valentine’s Day*, and one with unfamiliar content, *Business Bargain*.

Chang works within the framework of Vanderplank’s (1990: 228) model which inserts attention, adaptation and adoption as three essential factors between INPUT and INTAKE. 97 university students at intermediate level, divided into three treatment groups, watched the programmes in one of three modes: Chinese translation subtitling (Class 1), captions (English sound and captions) (Class 2), and dual subtitling/captioning (Chinese translation + English) (Class 3). Comprehension tests consisted of three sets of 10-item multiple-choice tests to check word recognition, factual understanding and inductive inference. Levels of background knowledge were checked with a background questionnaire prior to viewing.

Class 3, using the dual captions/subtitles, outperformed Class 1, with translation subtitles, and Class 2, with captions. Class 2 outperformed Class 1. This was the case for both films. Dual captioning/subtitling appeared to provide more contextual support than the other two treatments. Chang suggests that the combined subtitling/captioning complement one another, the one bridging difficult concepts and meaning, the other compensating for poor listening and aural word recognition. Students did not feel overwhelmed by the tri-modal input. Only a weak relationship between the subjects’ background knowledge scores and their listening comprehension tests was found. In contrast to what both Markham (2000–2001), above, and Herron et al. (2002), also above, had found, schemata did not appear to demonstrate a strong facilitating effect on their understanding, though, in their questionnaires, students indicated that they had used their background knowledge more when watching the familiar film than when watching the unfamiliar film.

4.7 Subtitles and incidental language learning from television

One of the best designed studies of subtitle or caption use in the past ten years is undoubtedly that conducted by Koolstra & Beentjes (1999) into whether children in two primary school grades in The Netherlands would learn English words through watching a television programme with an English soundtrack and Dutch subtitles. Two hundred and forty-six Dutch children in Grades 4 and 6 (aged 9+ and 11+) watched a 15-minute documentary having been assigned to one of three experimental conditions: (i) programme about grizzly bears with an English soundtrack with Dutch subtitles, (ii) the same programme with an English soundtrack but without subtitles, and (iii) a Dutch language television programme about prairie dogs (a control condition to establish a baseline of English vocabulary knowledge). These grades were chosen as English classes start in Grade 5, so in Grade 4, they would have had no formal English lessons, while in Grade 6, they would have already had English on a regular basis.

Vocabulary scores for those watching with subtitles were higher than for those watching without subtitles, and scores in this latter group were higher than those in the control group. Grade 6 children performed better than those in Grade 4. More words were recognized
after watching the subtitled documentary than the non-subtitled version, and, again, Grade 6 children outperformed Grade 4. Children with a high frequency of watching subtitled programmes at home had significantly higher English vocabulary scores than children with a low frequency and medium frequency of watching subtitled programmes. The findings confirm the many anecdotal accounts that children can acquire elements of a foreign language through watching subtitled television programmes. Vocabulary acquisition was also found in children who watched the condition without Dutch subtitles. The findings provided further evidence that the subtitles do not distract from hearing the words. Viewers were able to switch easily from one mode to another and word recognition was better in the subtitled condition, suggesting that word recognition on the basis of two-channel processing (reading and listening) may be easier than through one channel (listening).

Koolstra & Beentjes suggest that the absence of any interaction effect between condition and age is explained by the fact that both age groups were above the threshold of English competence at which subtitled television constituted comprehensible input through which new vocabulary could be acquired. The Dutch Grade 4 children appeared to have picked up English knowledge before they began it formally in school, perhaps through regular watching of subtitled English TV programmes at home. The authors rightly caution that the experimental conditions may have encouraged the children to pay more attention to the language of the programmes than they might otherwise have done. On the other hand, the authors argue, since children may select programmes at home themselves, they may pay even more attention (see Uchikoshi 2006, below). Most tellingly, the authors confirm Vanderplank's (1988, 1990) contention that the effect of watching subtitled television programmes regularly over long periods is strong and cumulative.

d'Ydewalle & Pavakanun also carried out some pioneering work on incidental foreign language acquisition resulting from watching television with normal subtitles (dialogue in the foreign language and text in the first language) in non-instructional settings during the 1990s (e.g. Pavakanun & d'Ydewalle 1992; d'Ydewalle & Pavakanun 1996, 1997). Within the time-frame of this survey, d'Ydewalle & Van de Poel (1999) followed up the earlier studies by extending their scope of enquiry to children aged 8–12 years, testing for vocabulary, morphology and syntax with a study of 327 children in Grades 3, 4, 5 and 6 in Dutch-speaking Belgium. The languages tested were French, which is formally taught in this part of Belgium from Grade 5, and Danish, which is not taught but is a Germanic language similar to Dutch. Children were shown a 10-minute video with successive static pictures entitled Young Deer. The findings, in summary, showed that in both the visual and auditory parts of the vocabulary test, acquisition effects emerged when Danish was available in the sound track. In the French vocabulary test, no acquisition was apparent, except in the auditory test when the sound track contained the French language. Using an ingenious acquisition index, the authors found that more Danish than French was acquired (with one exception). As Danish is more like Dutch than French is to Dutch, the similarity between the L1 and the L2 appeared to affect acquisition scores.

From the results, the authors conclude that stronger effects are to be found with adults than adolescents and younger children. In general, they suggest, younger children perform better in the auditory presentation mode, whereas adults seem to perform better with visual
presentation of the foreign language. This may be linked to a shift in preference for channel processing or a shift in their relative efficiency of information processing, or both. In other words, as d’Ydewalle & Van Rensbergen (1989) found, younger children preferred dubbed films, whereas older children and adults preferred the original film with subtitles in their native language. An obvious weakness in this study was the shortness of the video watched. Compared to Koolstra & Beentjes’ (1999) study, its design lacks a sense of the authentic, of not capturing viewing behaviour and therefore of having fewer implications for formal and informal language learning.

Within the same paradigm of learning from interlingual subtitles, Van Lommel, Laenen & d’Ydewalle (2006) conducted two experiments on primary and secondary school children in order to investigate whether they were able to acquire grammatical rules from watching a foreign language cartoon (in Esperanto) subtitled in their native language, Dutch. In both experiments watching the film did not in itself produce acquisition. Inserting a film between the presentation of rules and the test appeared to cause some interference leading to forgetting. In both experiments, advance rule presentation led to correct choices on items which had appeared in the film and on new items, indicating that they had been acquired at a level allowing for application in new cases. Younger children did not show a better performance in the incidental conditions, which had not been predicted. The authors suggest that grammar, unlike vocabulary, may be too complicated to acquire from a rather short film. If grammar acquisition is a gradual process of extracting regularities from memorized vocabulary and phrases (i.e. that language consists largely of grammaticalized lexis rather than lexicalized grammar), a sequence of several films, spread over a longer period of time, might provide evidence that vocabulary acquisition from subtitled TV programmes could be supplemented with grammar acquisition.

4.8 Children learning from television without captions or subtitles

While there has been a great deal of research on young monolingual children learning from television, especially vocabulary, over the past 20 or 30 years (see the excellent survey by Seels et al. (2004) for a largely American perspective), there has been little research conducted on whether young bilinguals may benefit in terms of language acquisition from watching educational programmes. Patterson (2002) found that the frequency of watching television in young bilinguals (21–27 months) was not significantly related to their vocabulary size in either language. Uchikoshi’s (2006) insightful study, investigating growth rates in 150 early primary school (kindergarten) Latino English language learners in the United States who watched two series of programmes, *Arthur* and *Between the Lions*, confirms the general findings of earlier television and adult learning studies (e.g. Thompson 1979; Vanderplank 1990) that there is little learning without conscious attention and direction. About one third watched *Arthur* in school, another third *Between the Lions*, and the remaining third neither. Home watching was also controlled for. Classroom viewing effects in terms of vocabulary growth were not seen while home viewing was found to be a predictor of vocabulary growth. The author suggests that this might have been due to the fact that no reinforcement followed viewing sessions and that children who watched at home had supportive, literacy-rich environments.
5. Strategies in learning from television and video

There is still relatively little research on looking at how learners actually use captions/subtitles. Danan (2004) discusses the role of learner strategies in maximizing language learning benefits from captions or subtitles and highlights the fact there has been surprisingly little emphasis placed on the learner’s use of strategies in benefiting from the presence of captions/subtitles. The most comprehensive descriptions of strategy use remain those reported in Vanderplank’s studies (1988, 1990), both of which were longitudinal and qualitative. The studies reported below are something of a mixed bag but what they all indicate is the need to draw learners’ attention to the flexibility of the available technology in order to vary forms of support.

5.1 Using advance organizers

Herron and her colleagues carried out a number of studies using so-called ADVANCE ORGANIZERS to test the value of providing background information before listening or viewing in the foreign language. Herron et al. (1999b) is a follow-up to Herron et al. (1998) on the effects of French interrogative versus declarative advance organizers in understanding a French video. The studies are valuable as an exercise in how changing the data collection instrument can profoundly affect the outcome. The students watched 12 videos in two classes in a counterbalanced design so that each class watched six videos in the declarative treatment and six in the interrogative treatment. Tests were given immediately after viewing. Questions and answers were in English. The results of this study in terms of comprehension were quite different from the earlier study. In this case, the students who received interrogative advance organizers scored significantly higher in the comprehension tests than those who watched with declarative advance organizers. The authors argue that asking questions promotes greater attention and deeper information processing than making statements and encouraging the viewer to search actively for answers, leading to better recall.

Chung’s (1999) work comparing the effects of captions and advance organizers on video comprehension has already been mentioned (section 4.2). Chung (2002) reported further research on the effects of two advance organizers, question previewing and vocabulary pre-teaching, on Taiwanese college students’ listening comprehension of English language videos. The group given a combined treatment of vocabulary pre-teaching and question viewing between two video viewings outperformed the groups who received vocabulary pre-teaching only or no treatment on both multiple-choice and open-ended tests. As with Herron et al. (1999), and as might be expected, asking questions before showing a video clip appeared to help focus students’ attention.

5.2 Providing guidance and direction

Mills, Herron & Cole’s (2004) study comparing teacher-assisted and individual viewing of foreign language videos underlines the value of training learners in how to use videos in
self-access mode. We may think that because our learners have watched us hone our video skills in the classroom: pausing, rewinding, re-playing, freeze-framing, they have absorbed strategies for their own exploitation. As the Mills et al. study shows, learners can be quite lost without guidance and feel much less effective than when supported by a teacher. They compared 53 beginning French university students’ comprehension of a French video in a teacher-assisted viewing classroom environment (TAV) and an independent computer-based setting (IV). All students watched four videos in the TAV condition and four in the IV condition in the language laboratory followed by tests with recall and interpretation questions.

Students performed equally well on comprehension measures in the both the TAV and IV conditions. With regard to self-efficacy, however, students felt significantly more confident in their ability to comprehend video in the TAV than in the IV condition. Levels of engagement significantly predicted students’ comprehension performance while working independently but were not a significant predictor of comprehension in the TAV condition. There were considerable individual differences. The authors suggest that there is a need for increased exposure to self-directed learning tasks in beginning foreign language classrooms to improve self-efficacy toward independent activities and also a need for student exploration during TAV tasks to improve engagement.

Already in the 1990s, Brett’s (1997, 1998) studies involving CALL programs were indicating a possible overloading of media options for students, later confirmed in Brett (2001). Shea (2000), on the other hand, reports how a well-designed interactive video application, fully integrated with the cooperation of teachers, could motivate, save time, and help address learner weaknesses, especially for students most in need of assistance. In addition to increasing both student motivation and learning efficiency over time, the program helped the least able students with the means to better understand and respond to foreign language discourse. Weaker students in the experimental group performed beyond their apparent ability levels and the experimental group was able to complete tasks more quickly without sacrificing accuracy. Additionally, both the teachers and the students were positive about working with the technology.

Herbert’s (2004) small-scale investigation of the strategies used by language learners when using a target-language DVD to complete meaning-focused and form-focused tasks is one of the highlights of the survey period. Herbert hypothesized that her subjects, seven proficient French students who had recently spent nine months in French university, would show a greater propensity to use subtitles when faced with meaning-focused tasks and would use both captions and subtitles when using form-focused tasks such as remembering specific words and phrases. They watched two three-minute-long segments from a French film, *le Diner de Cons*, followed by meaning- or form-focused tasks. The students were also interviewed about their strategies. Students were able to view each segment three times, pausing and replaying as they went through.

In summary, Herbert’s findings, both qualitative and quantitative, suggested that learners use systematic caption/subtitle-viewing strategies and that they are influenced in their patterns of use by the purpose in viewing. There were clear differences in caption/subtitle use between the two groups. For example, the form-focused group did four times as much rewinding as the other group. They also used captions much more and subtitles much less. Those in the form-focused group found the captions helpful in associating written words
with speech and that this helped their understanding of the rapid speech. One of the subjects made the useful comment that she found the subtitles helped her understand what was said and she then used French subtitles to discover the actual words used. Students also varied subtitles/captions, pause and rewind when confronted with an unfamiliar phrase. This was common to both groups, but more so in the form-focused group. Herbert suggests that in terms of teaching, for meaning-focused tasks, learners with reasonably good proficiency should only use subtitles as a last resort, as captions appear to produce much better recall and use of the language of the DVD. For beginners, on the other hand, an opposite strategy might be appropriate, using subtitles to gain an understanding of what is going on followed by captions, as Danan (1995) had earlier suggested.

Bird’s (2005) description of how he developed a hybrid mixture of an entertainment DVD (Lord of the Rings) with educational tools in Brunei reinforces Vanderplank’s (1999) concerns about learners bringing leisure habits to watching video programmes, with associated strategies. Bird’s approach is to begin with highly entertaining core materials and then to build generic language learning software and content around the core, using the captions of the DVD as the bridge from the movie to the learning system. Several key issues emerged from the student feedback in his study. There were two distinct groups, those that used DVDs for learning and those that did not, and the two groups showed significantly different interaction preferences when presented with the EDUTAINMENT system. While both the ‘for learning’ (FL) and ‘not for learning’ (NFL) groups reported that the system would be useful for learning, NFL users tend to prefer features that allowed learning to be deferred until after viewing, that is, they wanted to ‘do the learning’ later. The author concludes that an EDUTAINMENT system attempting to enforce simultaneous viewing and learning effort will be more likely to create a negative impression on such users and hence the danger of reduced use and less learning generally. By contrast, the FL group were learners who reported liking to study and attempting to learn at the time of entertainment viewing. Considering that both groups had the same English proficiency level, it appeared that those in NFL group were not simply less interested in or able to learn per se, but that they had a different learning strategy which drove their preferred interaction with the system.

Cross (2009) provides us with a rare empirical study looking at whether listening strategy instruction can improve learners’ ability to understand news videotexts. In his study, seven adult, advanced-level EFL learners formed an experimental group (EG) and were given strategy instruction as part of a 10-week, three-hour-a-week Current Affairs course, while a comparison group (CG) of eight participants followed the same course but without strategy instruction. The groups were self-selected convenience groups. For eight of the 10 weeks, they watched a 2–3-minute news clip from the BBC’s internet news service. Both groups received 30 minutes of pre-listening using website material, then the EG received 90 minutes of strategy instruction in such areas as prediction, self-monitoring and selective attention, while the CG did a 60-minute listening task with the same news clip. Both then carried out a 30-minute post-listening task.

Predictably, both groups made significant gains over the period of the study as measured by pre- and post-tests. Variation between participants in both groups was very large and there was no significant difference between the final test scores of the two groups, which the author puts down to individual differences in the small groups, especially with regard to
pre-existing preferences for top–down processing in the CG, and that the cycle of viewing and tasks may have been enough to ensure significant gains for both groups. Learners were probably able to adjust their own strategies as they went along. He also considers that fewer strategies and more input and practice might have been preferable, especially as the low mean scores suggested that the news clips and tasks were rather challenging for the learners, suggesting that gains from strategy use may have been negated through lack of linguistic proficiency.

6. Media literacy

Continuing the media literacy theme, which tends to be based on the notion that language learners need help in decoding media texts before they are able to gain much from them, a theme developed at length by Meinhof (1998), Gruba (2004, 2006) provides two studies which illustrate how learners attend to the different audio, textual and visual elements making up a videotext.

Gruba (2004) argues that little is known about how learners attend to dynamic visual elements in comprehension and this holds up the development of computer-based listening skills. Framing his arguments within a constructivist framework of specific video decoding strategies, he describes what 12 upper-intermediate learners of Japanese at an Australian university reported doing as they watched three Japanese news clips. Japanese news broadcasts (like news broadcast everywhere) contain a substantial amount of on-screen text in the form of headlines, captions or embedded written text (e.g. road signs). Learners could pause but could not rewind the clips. After viewing, they summarized the news clips and then were interviewed. Gruba uses a seven-category framework of learner understanding to analyse the verbal reports with categories such as ‘Listeners may utilize visual elements to generate a number of tentative hypotheses’ and ‘Visual elements may confuse or hinder interpretation’. The findings, not surprisingly, indicate that visual elements work in a number of ways that go beyond verbal elements and are better thought of as integral resources to comprehension whose influence shifts from primary to secondary importance as a listener develops a mature understanding of the videotext. Sometimes, visual resources can be as much of a hindrance as a help and lead uncertain viewers down false alleys of understanding.

In a subsequent article, Gruba (2006) argued that a media literacy perspective offers a basis on which to see learner interactions with videotexts as a form of ‘play’ (in Mackey’s (2002: 188) sense of the word as a verb for text processing activities which include audio and video texts) and in so doing enhances work in L2 listening strategies. In this case study, variations in play were grounded in a media literacy perspective as a way to frame student work with authentic videotext. 18 Australian upper-intermediate students of Japanese talked aloud about their understanding as they watched three short news clips. They then summarized their understanding. In the second stage, they were given a set of questions on three news clips, navigated freely as they completed their answers and were then interviewed. The findings were very mixed; some students found the exercise a burden and a bore and appeared to fool about while others concentrated hard, replayed a great deal and engaged fully with the tasks and the news clips.
While Chen & Oller (2005) argue on the basis of their detailed analysis of sections of a film script that to unlock the full power of films as learning tools requires a better, more detailed understanding of the special role of indexical signs, that is, the relations between what is being observed in a programme and the observer in terms of objective, subjective and symbolic indexical relations, in more practical terms, Webb & Rogers (2009a, b) ask how much vocabulary a learner needs to follow and understand a film or TV programme in the second or foreign language. In their fascinating studies, they analyse the scripts of 318 American and British feature films (2009a) and 84 British and American TV programmes (2009b) to determine the vocabulary size necessary to understand 95% and 98% of the words in these films and programmes. Unfortunately, neither article properly covers research on captioning and language learning, in spite of the numerous references to reading and listening comprehension. Nonetheless, their studies point the way to potentially insightful research combining captioning and coverage.

Films analysed were in action, animation, comedy, suspense/crime, drama, horror, romance, science fiction, war, western, and classic genres. Both American and British films reached 95% coverage at the 3,000 word level. However, American films reached 98% coverage at the 6,000 word level while British films reached 98% coverage at the 7,000 word level. The vocabulary size necessary to reach 95% coverage of the different genres ranged from 3,000 to 4,000 word families plus proper nouns and marginal words, and 5,000 to 10,000 word families plus proper nouns and marginal words to reach 98% coverage. There were some interesting findings for specific genres. Horror and drama were the easiest in terms of vocabulary level needed, though there were wide differences between individual films. Shrek, for example, needed a higher level (4,000 and 7,000 to reach 95% and 98%). Similar findings were obtained for television programmes classified according to equivalent genres. Again, there were great variations between different genres and even between episodes.

They suggest several strategies for increasing the uptake of incidental vocabulary including pre-teaching vocabulary, using subtitles or English language captions, and increasing the frequency of encountering new words through more frequent viewing of films.

7. Assessing comprehension using video

Many have fallen into the trap of thinking that they can switch from audio to video for testing listening comprehension with relative ease and have come to regret it. Feak & Salehzadeh (2001) present a detailed account of developing Video Language Assessment (VLA) for listening in English for academic purposes. As the authors say, video in any kind of listening assessment remains largely unexplored and is not well understood. After reading this article, the reader may feel that it is not worth the effort over preparing traditional listening tests. They divided the VLA into four parts, a monologue, some discussions, and two sets of dialogues, all connected with a Film Studies course. Large-scale trials were carried out with over 500 students, primarily non-native speakers, but also 50 native speakers. Unfortunately, the results were not available at the time of the paper. Students were asked to provide feedback which was generally positive and provided a measure of the test’s face validity. However, students also reported that they did not know whether to watch the video or close their eyes and
concentrate on listening; that they were worried that they would miss something important if they looked away from the video for only a moment; and that they would have preferred an audio-only test since that is what they were accustomed to. No data were available on its validity as a test of academic listening ability.

In contrast to the above study, Coniam’s (2001) comparison of video and audio assessment methods ranks as a classic. He describes an investigation into the type of listening test that might serve as an assessment instrument of English language teachers as part of a teacher certification test, the *Hong Kong English Language Benchmark Test*. One hundred and four pre-service and in-service English language teachers, divided into audio and video groups, were given audio and video versions of the same test, after which a survey was conducted of their opinion of the audio/video mode of assessing listening. Scores on the two test modes (as well as on a baseline test) indicated no significant differences between the two scores of the two groups. Most interestingly, although some of the test takers from the audio test-taking group said they would have preferred to have taken the test via video, the video test-taking group felt that they gained no advantage from the video mode and might have done better had they not been distracted by the visual images, and by having to look up and down from question paper to screen. Coniam concludes that in such a high-stakes test, the listening comprehension test should be implemented via audio, and not video, mode. Furthermore, the video used took the form of a talk show discussion of a current hot educational issue. According to Coniam, the lack of ‘advantage’ achieved by the video test-taking group might in part have been due to the nature of the video. For a videotext to be advantageous, they need to contain more clues than purely paralinguistic ones: the video clues themselves need to be exploitable.

The omission of Coniam (2001) from Wagner’s (2007) literature review considerably weakens the discussion of the pros and cons of using video for testing listening. Wagner videotaped 36 test takers while taking a 40-item listening test composed of six separate video texts, three dialogues and three lecturettes, and the amount of time test-takers made eye contact with the video monitor was computed. Test-takers orientated to the video monitor an average of 69% of the time while the video text was played, though there were very wide variations by subjects and by video clip. They watched the three dialogue texts more (72%) than they did the three lecturette texts (67%). Unfortunately, no correlation between the individual test-takers orientating rate and their test scores is given as test takers were not identified for ethical reasons.

8. Distance and lifelong language learning

In the past, especially in the 1970s, the BBC carried out a number of large-scale surveys evaluating BBC radio and television language courses, for example, Rybak’s seminal study (1980), which highlighted learner-viewer isolation. Sadly, nothing appears to have been published by the BBC since Vanderplank & Dyson’s (1999) study. Although there are studies of distance language learning (e.g. White 1999, 2003; Garrison 2000; Hurd, Beaven & Ortega 2001), there is little which includes broadcast TV programmes in spite of the massive output. Several studies in the survey period have provided useful profiles of who watches broadcast programmes for language learning, how they watch them and what
their expectations are. Learner-viewers continue to hold expectations of incidental language learning from foreign language programmes, whether pedagogically orientated or designed purely for leisure viewing. Structure and regularity rather than flexibility and choice also emerge as important factors.

Vanderplank & Dyson (1999) report an audience survey of viewing behaviour and attitudes to *Italia 2000*, a topic-based Italian video series (intended for students in higher education) centred around news broadcasts by RAI and Teletna (Sicily), broadcast as 1/2 hour programmes on the BBC’s *The Learning Zone* at night. From the responses, the changes in delivery taking place in 1996/1997 are evident, as viewers became familiar with technologies such as computers and the Internet.

Four hundred and eleven questionnaires were returned from viewers. There were an almost equal number of men and women respondents and three main categories of respondents: teachers: 106 (26.4% of the total), of whom 68 (71.6%) were women; retired: 165 (41.1% of the total), of whom 96 (60.4%) were men; non-retired/non-teachers: 140 (32.5% of the total), with very wide variations of gender for different occupations.

The profile of the typical teacher-viewer was a woman in her mid-forties, possibly Italian, generally interested in language learning, with a computer, who received the transcripts on disk and used *Italia 2000* as part of a serious attempt to learn Italian. In the retired group, the typical viewer was a man over 55, quite possibly a retired teacher, who had learnt languages before, perhaps even a very long time ago. While he had a computer, he asked for photocopies of the transcripts, preferred more explanations in English, did not want additional paid-for support, and saw himself as a leisure viewer of *Italia 2000*. There was no clear profile for the third group. Most had a computer and some received transcripts via the internet. Their reasons were usually connected with travel and business. Certification was popular idea but they would have liked the format of programmes to be closer to their normal viewing experiences.

The majority liked the all-Italian format, ‘austere’ nature of the programmes, its appropriateness for advanced-level learners, though more arts and culture topic were wanted. Respondents tended to know at least one other foreign language, to be interested in programmes focusing on socio-cultural aspects of Italy, and to want more support materials. The Italian teachers (n = 44) used the programmes as a teaching resource. Open-ended comments indicated that the programmes were used at a wide variety of levels, not just advanced. The timing of *Italia 2000* programmes meant VCR recording had to be assumed. However, a substantial minority would have preferred *Italia 2000* programmes to be more orientated towards general and cultural interest and less explicitly designed for language learning.

Published in the same year, Umino’s (1999) well-designed study provides a valuable review of previous work on self-instructional broadcast (SIB) materials for language learning and stresses the importance of selection and structure for many distance learners. The author reports a questionnaire study of 138 university students (mainly women) in Japan, most of whom made use of broadcast language instructional programmes. The subjects hardly represent the general viewing population but the findings of the study are nonetheless insightful. 125 (91%) of the respondents used SIB materials spread across eight languages. 61% watched English series but 54% studied two or more languages with SIB materials.
SIB materials were highly valued for the exposure to native speakers since there were limited opportunities for practice in many of the languages in their learning environment. Respondents’ answers also clustered around the length and organization of programmes. They could easily watch a 20-minute programme broken down into well-structured chunks while a 90-minute classroom session was a burden. They liked songs, skits, stories and dramas and the serial seemed to be one way of reducing drop-out. Interestingly enough, many also liked the broadcast, fixed time of programmes and did not record them. This external determination of timing and pace provided welcome regular study for learners. The relaxed context of home-viewing, ease of access and low cost were also important factors. The ‘materials-centred’ nature of this form of self-instruction was perceived by many informants to be advantageous, enabling them to persevere with learning; experts had already taken the key decisions. On the other hand, the same limitations on users’ control over learning could cause problems such as the time not being convenient, potentially leading to non-completion of courses. The advantage of easy access to programmes also could become a downside. Just as it is easy to start SIB materials, so it is easy to stop since there is no pressure to study. However, informants reported using various strategies to overcome such limitations such as establishing routines and buying the textbook. These results on how learners use SIB materials suggested that they were not necessarily as passive or directed as might have been expected and they used them in ways not expected by the designers.

More recently, Fallahkhair, Masthoff & Pemberton (2004) and Pemberton, Fallahkhair & Masthoff (2005) have reported a number of studies on interactive TV (iTV), a relatively new media technology which clearly has potential for supporting L2 learning, particularly for independent adult learners, offering on-demand programmes together with enhanced features such as subtitles or captions and other supporting information. Although the authors reveal a somewhat naïve position with regard to the potential of television (interactive or otherwise) to provide comprehensible input and motivation and thus lead to language acquisition, the value of their work lies in the way in which, from the results of a focus group, they are able to identify the wide range of media used by adult learners, both formal and informal, the issues they face, such as their lack of L1 grammatical knowledge, the fact that they like highly structured learning with set times, and the important role of captions and subtitles when watching programmes in the L2 (English or foreign). Participants liked being able to fit learning into odd moments of their day, for instance when travelling. TV was not seen as a medium for formal learning, but as a form of entertainment that may have the side effect of incidental learning. However, the up-to-date authentic material broadcast on TV was very attractive to them and they perceived it as bringing many valuable learning opportunities. From the feedback, the authors constructed a realistic scenario of a working adult language learner with two children, interested in keeping up her French, and discuss what media would enable her to do this effectively.

Strikingly, none of the participants had used interactive TV for language learning, nor were they particularly impressed with the current state of iTV technology and services. The authors conclude that rather than creating interactive TV programmes specifically for language learning, the strategy should be to add interactive enhancements to existing programmes, supporting informal rather than formal learning, via programmes the viewer might watch spontaneously even without language learning opportunities.
9. Survey outcomes and directions for the future

This review of research in the last ten years, from a much wider range of journals than Zhao’s meta-analysis (2003) drew on, paints a similar picture of rather fragmented and isolated research with relatively few examples of fully integrated and effectively implemented technology or well-designed systematic studies, but certainly the settings are broader and the topics move us forward, especially in terms of exploiting DVD video and digital LL flexibility.

Returning to Salaberry’s (2001) questions raised in section 1.2, there is certainly evidence (e.g. Danaher & Danaher 1998; Shea 2000; Pujolá 2002; Barge 2009; Vanderplank forthcoming) that the technological sophistication of digital LLs is correlated with increased pedagogical effectiveness, but only when teachers are also sophisticated in using the technology and are able to integrate and exploit it, making use of digital LLs’ functionality on a regular and systematic basis for clearly identified tasks with well-trained learners.

With regard to his second question, a number of studies (e.g. Baltova 1999; Bush 2000; Shea 2000; Markham et al. 2001; Markham & Peter 2003; Herbert 2004; Caimi 2006; Grgurovic & Hegelheimer 2007) have shown that the technical attributes of captions and/or subtitles offered by help options in digital LLs and on DVD video can be profitably exploited for pedagogical purposes. Turning to his third question, several studies (e.g. Danaher & Danaher 1998; Weyers 1999; Herron et al. 2006) have indicated how DVD video and digital LLs can be successfully integrated into the curriculum, and research evidence points in the direction of providing more teacher guidance and support in its use by learners, especially in self-access learning, though, thus far, there is little detail from research outlining optimum support.

Lastly, are video media and digital LLs providing for an efficient use of human and material resources? Is there evidence that they are earning their keep and helping learners learn faster, better or in a more satisfying way? The evidence from the past ten years for television and video is pretty solid with regard to many of the themes covered in this review: they are valuable for developing cultural knowledge as well as language, provided their use is structured, well-prepared, selected and graded; engaging serials, in particular, work well; there is evidence of incidental language learning but only over relatively long periods; there is little evidence of the benefits of strategy training, though informal guidance and training by teachers as part of routine teaching clearly helps, especially as there is so much individual variation in approaches to using video by learners, who also appear to be able to develop strategies for maximizing the benefits of captions or subtitles in terms of purpose of viewing; bi-modal input of captions and/or subtitles together with sound does not overwhelm learners or cause significant distraction where learners are used to them and/or where they can process the captions/subtitles as they watch (i.e. they have a high enough L1 or L2 reading ability); captions help not only in terms of access to FL programmes but also in terms of developing listening skills under certain conditions such as a threshold of reading comprehension ability in the FL; teachers need to be aware of the large amount of vocabulary knowledge needed for learners to be able to watch films and TV programmes with understanding; testing using video may offer disadvantages compared to audio; the problem of leisure associations with television programmes remains strong and may limit potential language learning benefits; distance learners/SIB learners prefer well-structured, intrinsically interesting, serial programmes at regular, convenient viewing times. For digital
LLs, the evidence suggests that many are not earning their keep and that they are often expensive, marginal resources adding relatively little value in language learning terms in spite of their enormous potential.

For the future, the studies reported here show that the focus in caption/subtitle research has already moved to their flexible use with DVDs, both in classroom, LL and self-access mode. What is clear is that we cannot take effective learner use for granted and principled teacher guidance is needed, though what this should be has not been fully specified. Has the question of whether captions merely provide access to TV programmes in the L2 or actually help learners to ‘tune in’ with long-term benefits been answered? In spite of some well-controlled studies providing quite convincing evidence, in the absence of longitudinal studies, the question is still open to some extent. No doubt we shall see more research on iTV and TV programmes on demand in the next ten years as we digest their impact.

Regarding the digital LL, the fulfilment of its promise is still a long way off and there is clearly a great deal to be done regarding integration and training. The evidence reported above from both learners and teachers suggests that the LL has a valuable role to play as we move back to appreciating the value of repeated rehearsal and practice combined with interaction, and, of course, the LL is ideally suited to individual and collaborative tasks under teacher monitoring. If we are not to see a re-run of the bad old days of LL studies which failed to exploit the unique features and functionality, pedagogically-sound research on LL use, grounded in appropriate methodology and contexts of use, is urgently needed.

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