Multimedia Literacy in EFL Teacher Training

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The convergence of telematics, mass media and computer technology is increasing the amount of information distributed and the speed and reach of distribution and information processing; it is also increasing the capacity for discriminating distribution, interactive and individualized reception, and accelerating ideological exchange, resulting in advantages for the biggest information providers. Among their primary objectives educational systems list the development of the individual's ability for self-expression and communication through writing, music, sculpture, etc., but evidently comprehension skills carry more weight in formal education. For students, success in school is based on understanding teachers' messages, and teachers' professional success, as well as the success of the educational system itself, is based on their interpretation of policy.

What do we mean by Multimedia Literacy

The concept of literacy, initially centred exclusively on alphabetic language and on the mechanical procedures of encoding and decoding texts, has evolved substantially in recent decades. Surpassing the merely utilitarian nature of reading and writing, more attention is being paid to literacy's implications both for the individual and for society, such as the ultimate finality of literacy and its influence on the transformation of social models. According to UNESCO's definition, the *functionally* illiterate person is one who cannot undertake those activities in which literacy (knowing how to read and write) is necessary to function effectively within the group or community.

With the appearance of new and sophisticated techniques for the creation of multimedia texts, combined with diverse symbolic systems, we run the risk of once again focussing our attention on the study of 'form' to the detriment of 'content'. We run the risk of dwelling on the study of the 'means' without reaching the 'ends'.

Our proposal for multimedia literacy hopes to overcome the purely mechanical skill of encoding and decoding texts in different languages in favor of concentrating on the personal and social implications of its creation, distribution, interpretation, use, etc.

Functional literacy at the least entails having at one's disposal the faculty of communication, and, to the extent that predominant forms of communication continue to change (from oral to print, from print to audiovisual, and from audiovisual to multimedia), the concept of literacy must change with them. In the multimedia society in which we coexist with an infinite number of audiovisual documents, interactive or not, it is logical to think that literacy in this environment involves the ability to confront various texts in relation to their encoding and their medium.

During this millennium multimedia literacy will be that which prepares people to utilize appropriate procedures when critically viewing different kinds of texts (different in function or system of symbolic representation), and to assess what happens in the world and improve it to the extent that they can.

In search of a comprehensive definition

Within the overall concept of *multimedia literacy* we incorporate various *literacies*, the diverse (conceptual, procedural and attitudinal) contents of which have been deemed basic and essential for the communication and representation of messages using different languages and media. Tyner (1998: 92-97) accounts for six different *multiliteracies* that cover what for us constitute the ingredients of a basic multimedia education. She lists three *tool literacies* and three other *literacies of representation*. The first three are related to basic knowledge about computers (*computer literacy*), networks (*network literacy*) and technology (*technology literacy*). The remaining three deal more with the analysis of messages and how meaning is produced, and focuses on information (*information literacy*), visual images (*visual literacy*) and the media (*media literacy*). There are clear interrelationships between these *literacies*, and the characteristics they share prevent us from discussing any one in isolation.
We consider it necessary to bring together the objectives and fundamentals of all the above-mentioned literacies under the umbrella of what we call *multimedia literacy*.

If for strictly formal reasons we were to distinguish between previous literacies (like alphabetic, audiovisual, computer, telematic, musical, artistic, etc.) and multimedia literacy, perhaps the latter would not be defined first and foremost by the fact that it is 'multimedia' in the strictest sense of the word: the integration of text, sound and image. Actually, as Lemke (1997) points out, *all literacy is multimedia literacy: you can never make meaning with language alone, there must always be a visual or vocal realization of linguistic signs that also carries non-linguistic meaning (e.g. tone of voice, or style of orthography).* According to him, therefore, for signs to function as such they have to have some

kind of material reality or medium, a 'way of being real' that opens the way to meanings encoded with more than a code. *All semiotics-he says-is multimedia semiotics, and all literacy is multimedia literacy.* Paradoxically, then, the most defining characteristic of new multimedia documents is not the fact that they are *multimedia*, but rather their hypermedia structure and their interactivity, which determine a modality of presenting information that differs from the traditional. Where alphabetic and audiovisual discourses are linear, new products present information in a *networked* structure; while alphabetically and audiovisually encoded documents offer only one trajectory to negotiate, multimedia documents present different alternatives for the *navigation* of information, all of them equally valid.

Although brought into such relief in multimedia environments, the combination of media and languages in order to produce and transmit messages is not new. Throughout history different modes of representation (text, sound, image, gesture) have been used together. Good orators convey more, and in a different way, than their written discourses would convey when read. The speaker's intonation, gesture, expression, posture, attitude, etc. combine with verbal language to produce meaning. As previously mentioned, various historical periods have witnessed technological developments that allowed us to record texts, sounds and images (writing, print, phonograph, photography, film, etc.) for later reproduction. In recent decades different media (slides, books, transparencies, audio and video cassettes) have frequently been combined in the preparation of materials destined for educational environments called *multimedia packages, and available usually in DVD formats*. Each medium possessed its own particular mode of producing, storing, transporting, structuring and reproducing contents-and they all combined after the fact to form a whole, a *multimedia package*, in which the parts are interdependent and work together with a common goal, to represent and communicate.

Digitalization could be considered as another fundamental characteristic of multimedia documents and environments. Digitalization overcomes the difficulties of mixed media and to a large degree facilitates the integration of languages. Text, graphics, sounds and images (still and moving), once digitized, can be modified, edited and easily intermixed. There are infinite possible combinations of languages that can arrange themselves in different ways, make exact copies of the original, create indices that help locate information, etc. Digitizing information also immensely facilitates its transmission via communication networks, such as the practically immediate access to a document from any part of the world (the connected world, of course), and the *navigation* through cyberspace from one information source to another.

The ability to navigate and the hyperlinked structure of information allow us to move beyond the idea of a document as a finite object that exists in one time and place. Paraphrasing the Spanish poet Antonio Machado, we could say that, in the same *way a path is created by walking*, a *document* in a network is constructed by moving through information-jumping from one space to another linked to it, and leaving behind the many other options that another user might have chosen, thereby 'constructing' a different document. In an immense information network, where each fragment is linked to others, which in turn connect with many others, we could also speak of a single document, impossible to experience in its entirety, of which each user only processes the parts of interest or those within reach of their navigation skills. This single, fragmented document has multiple locations, distributed throughout computers all over the world. It can be found in *cyberspace* and is accessed from any point of connection. Each one of the fragments could follow the linear logic of traditional alphabetic and audiovisual texts; while at the same time serves as a point of entry or exit for various hyper-documents.

The first level of multimedia literacy gives the individual the ability to construct meaning from new modes of presenting and representing the world that emerge with the development of new technologies, new communication networks and diverse symbolic systems. It naturally follows that, even considering multimedia literacy in its most limited sense of knowing how to read and write these new hyper-documents, it encompasses other literacies (alphabetic, audiovisual and computer) needed to both process and meaningfully utilize the components of multimedia: text, sound and image.

Multimedia literacy is not an addition to alphabetic or audiovisual literacy; rather it integrates them while contributing characteristics of its own derived from interactivity, namely those of interpretation and association. On one hand it produces the convergence of languages and media, and on the other it substantially changes the context and conditions of reception/absorption. This multimedia literacy should not be taken as the de-contextualized acquisition of the aforementioned skills and knowledge that, once acquired, can be used to interpret reality. Instead we might understand multimedia literacy as a process that is an integral part of the social interaction by which individuals develop their personality.

When we interpret a code or message, our interpretation is partly individual, but also partly a reflection of the place we hold in a particular society: our age group, gender, purchasing power, interests, traditions, family, etc. Multimedia literacy, like any other, will always be a social process with repercussions for the transformation of society itself. It is a literacy that Gimeno Sacristán (1999: 38) labels *enlight-*

ened: Effective literacy-he tells us-will place the subject at the gates of power, symbol of the possession of knowledge attained through a command of the language. Enlightened literacy (which thanks to Paulo Freire we would now call critical literacy) is above all the ability to participate in the reconstruction of society and culture. Its degree of development in different parts of the world will increase or diminish the differences between the *info-rich* and *info-poor*. The inability to critically face different types of texts in different situations will determine who is illiterate in the third millennium-those incapable of *participating in the reconstruction of culture and society* in their environment.

Objectives of multimedia literacy as a means of teacher training

Both the integration of alphabetic language in multimedia contexts and the appearance of new technologies for processing information oblige us to modify the minimum competency requirements for functional literacy. The complexity of current communications systems could reduce those minimum requirements to those of information management and its corresponding technology skills without fostering knowledge or interpersonal communication. To this effect, Gutiérrez Martín (1997: 12) refers to *multimedia education as that which, making use of prevailing technologies of the day, allows students to achieve those skills, knowledge and attitudes needed to*:

- *communicate (interpret and produce messages) utilizing different languages and media;*
- *develop personal autonomy and a critical spirit, which gives them the ability to*
- *form a just and multicultural society in which to live side by side with the technological innovations of the day.*

This goal prescribed to *multimedia education* (which could just as easily be the goal of any kind of education) of *forming a just and multicultural society of critical people* can only be achieved if we consider as literacy the ability to transform information into knowledge and use that knowledge as a tool to contribute to and transform society.

More immediate objectives of multimedia literacy include:

- To provide knowledge of the languages that shape interactive multimedia documents and the way they are constructed.
- To provide knowledge and use of the most prevalent devices and techniques for processing information.
- To provide knowledge and facilitate the assessment of the social and cultural implications of new multimedia technologies.
- To foster an attitude of critical media reception and re sponsible behavior in the public sphere.

Although they may be too general and broad, with these objectives we hope to avoid the risk of falling into an approach to multimedia literacy that reduces its purpose to the acquisition of a purely utilitarian skill set for wielding multimedia devices and documents. We find it interesting to note that when *multimedia literacy* is mentioned, the creation of applications and documents tends to be considered a priority objective-unlike the case in audiovisual and media literacy, which usually center on critical media reception. If this creation paved the way for something more than learning to operate computer-based tools, we would be in a position to say that there is a large qualitative jump from reception to emission, from alleged passivity, typical of large-scale mass media, to the active creation made possible by interpersonal media.

The huge gap between the number of messages we receive and the number we send via communication networks will probably increase in the future. Even if focussed on the creation of messages and documents, multimedia literacy should not leave out teaching critical reception, while at the same time enabling creation and expression, active participation in the processes of communication, and the appropriation of media by the user. Nevertheless, anyone capable of handling text, sounds and graphics in order to create a presentation-enough to be considered *multimedia literate* according to some publications-exhibits nothing more than the equivalent of mechanical reading and writing in traditional literacy.

Multimedia Creation as a basic principle of literacy for teachers and students

Multimedia literacy can better meet its objectives if both teacher training and student learning are formulated around the creation of documents, authoring and distributing messages. Multimedia literacy will contribute to cultivating free citizens if students overcome the bounds of simple reception and move on to creation, if we teach them critical reception by way of authoring their own multimedia documents. Our proposal for a multimedia literacy that gives the ability to participate freely in the society of the third millennium, and ultimately to transform it, stems from students and teachers authoring multimedia.

The predominance of alphabetic literacy will supposedly last for some time, and its predominance in formal education is unquestionable. It occupies an irrefutable and privileged place in formal education. Nevertheless, the systematic learning of reading and writing does not take into account the relation between alphabetic language (oral and written) with other types of representations and/or symbologies, an omission by which alphabetic language is still studied in the contexts and according to the presentation modes predominant in the time of Gutenberg, which are

changing day by day. In school environments the medium of the printed page and book continues to be the most customary, and its linearity and structuring into successive paragraphs and pages is still clearly predominant. When text is accompanied by images, they usually function to provide secondary and merely illustrative meaning.

What we would consider computer literacy, for its part, usually consists of a collection of knowledge and skills for using the most common general-purpose programs. It is necessary to point out how curricula for this purely tool-based computer literacy are dictated by commercial interests. It is evident, for example, that Microsoft has imposed the Windows environment as an essential requirement of computer training and is following the same policy with programs like *Word, Access, Power Point, Excel* and all the components of the *Office suite*, just as with its web browser *Internet Explorer,* all of which it intends to establish as standards while at the same time suppressing competition.

Regarding the objectives of computer literacy, we can safely confirm that they are in line with the curriculum we outlined for this literacy, and center on training teachers and students to critically use new technologies. Training is viewed as purely practical and essential for competing professionally in the job market. We propose a multimedia technology education approach based on students and teachers as multimedia authors and consumers as an alternative to the norm, which is to think of learners as users of general-purpose programs. Our approach relates computers to alphabetic and audiovisual languages and is more congruent with the world of multimedia communication in which the modern day individual will have to perform. The basic teacher training we propose logically includes learning the operation of equipment and general-purpose software, such as word processors, graphics editors, databases, etc., however these subjects must be approached with predetermined objectives, with the intent of using them as tools, and with an idea of what we want to do with those tools. In this way will we prevent the means becoming the ends.

It is unnecessary to warn that teacher training in ICTs goes beyond what we consider basic knowledge in multimedia literacy. This basic knowledge is part of teachers' *scientific training*, in which they learn about technological developments, their characteristics and influence (especially in education). In addition to this *scientific training* common to other professionals, the educator needs *educational training* about ICTs, to analyse their potential as educational resources, and the advantages and disadvantages of new media in teaching. In Gutiérrez Martín (1998), we saw how teachers in the third millennium will need training not only in *the educational potential of ICTs*, but also in their *educative influence* (the ability of new media to influence how citizens learn), and in school and social contexts as spheres of influence of ICTs.

A critical approach to the educative influence and social context of new multimedia technologies and communication networks becomes that much more necessary as the technological discourse offered by new media as a panacea becomes increasingly more oppressive. This dominant technological discourse, which influences us all as individuals and education professionals, implicitly assumes an educational model centred on the operation and use of equipment as the main concern, a model we reject in our proposal for multimedia literacy and teacher training.

Although literacy is usually considered as part of the first years of life and within formal educational contexts, when social groups began to recognize the basic knowledge to which we all have a right and achieved its inclusion in curricula throughout organized education, its usefulness was already under question as obsolete. This is more evident in an information society, whose rapid evolution precludes the notion that education occupies the first stage of life and prepares you for all the rest. Instead, the only realistic option is to think of education in a pluralistic society as an ongoing process that helps the individual develop fully throughout every stage of life. Out of necessity, we need to be life-long learners.

When reading and writing began to spread and as it was understood as both necessary and useful, plans were developed to deal with adult literacy. The same thing is happening now with multimedia literacy, which leads us to the current discussion of *teacher literacy*. Multimedia education, therefore, cannot be limited to *formal* education, of which it is a primary objective throughout. We must equip *informal* educational environments to give meaning and structure, analyse, assign value and broaden the knowledge acquired by living in constant contact with continually evolving multimedia messages and systems.

Despite the currently dominant neo-liberal trend against government intervention, we would like to conclude by emphasizing that those responsible for the social order have an obligation to guarantee critical literacy for all, literacy that will allow us to live with dignity in the Information Age as free and responsible citizens.

References:

GIMENO, J. (1999) La educación que tenemos, la educación que queremos, in Imbernón, F. (coord.) (1999) La educación en el siglo XXI. Los retos del futuro inmediato. Barcelona. Graó. Biblioteca de Aula.

GUTIÉRREZ, A. (1997) Educación multimedia y nuevas tecnologías. Madrid. Ediciones de la Torre.

GUTIÉRREZ, A. (coord.) (1998) Formación del profesorado en la sociedad de la Información. Segovia. E.U. Magisterio de Segovia (UVA).

LEMKE, J.L. (1997) Metamedia literacy: transforming meanings and media, in D. Reinking et al. (Eds.) Literacy for the 21st Century: Technological Transformation in a Post-typographic World. New York. Erlbaum.

TYNER, Kathleen (1998): Literacy in a digital world. Teaching and learning in the age of information. New Jersey / London. LEA. Mahwah.

OHANA LEARNING SOLUTIONS:
DEVELOPING BEGINNER EFL LANGUAGE SKILLS THROUGH MULTIMEDIA

Role of visual and verbal information in language learning

The integrated dual-code hypothesis (Mayer and Anderson 1991: 486) suggested "learners can build both visual and verbal modes of mental representation as we well as connections between them". Mayer (1997) drew on

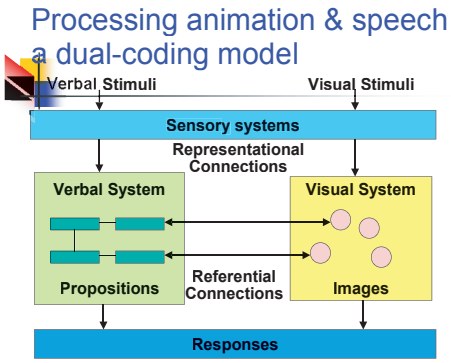

Figure 1 adapted from Mayer, R.E. and Anderson, R. B. (1991). Animations Need Narrations: An experimental test of a dual-coding hypothesis. Journal of Educational Psychology, 83(4), 486.

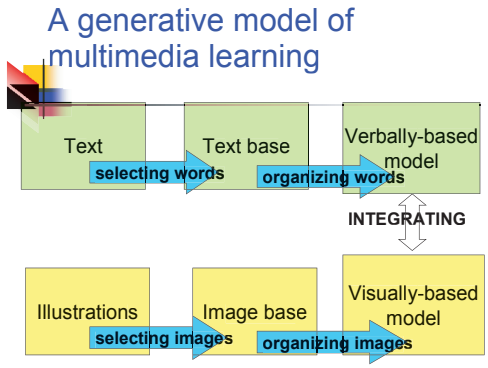

Figure 2 adapted from Mayer, R.E. (1997). Multimedia Learning: Are we asking the right questions? Educational Psychologist, 32(1), 5.

this in developing a generative theory of multimedia learning, that has influenced Ohana product design since their inception. And, given this natural and learned capacity to decipher multimodal communications, Ohana Foundation EFL and ESL products incorporate interactive multimedia to help foster the accelerated acquisition of the English language. Plass et. Al. (1998) reported that results of their study on the role of visual and verbal information in learning were "consistent with a generative theory of multimedia learning that assumes that learners actively select relevant verbal and visual information, organize the information into coherent mental representations, and integrate these newly constructed visual and verbal representations with one another." Therefore, for beginners who lack verbal language skills, the availability of visual and auditory (or multimedia) input may have a contributory influence on their second language development. Burt (1999) concurred that multimedia, and, in particular video, "is accessible to those who have not yet learned to read and write well, and provides context for learning." Harben (1999) pointed out that visual context provided by elements such as setting, body language and facial expressions can aid comprehension as well as activate learners' prior knowledge of the social and cultural aspects of language. Further to this, the simultaneous availability of different modes of information is believed to contribute to improved comprehension of the language input. Based on the results of his study, Brett (1997) suggested that the greater efficiency and focus of using one interface makes it more likely for learners to have greater success rates with comprehension tasks while using multimedia.

Multimedia video is the most appropriate medium for beginners because they can draw on both the auditory and visual support in their learning. It is particularly helpful for them to observe the situations of authentic everyday language use as complete communication events in context. As Canning-Wilson (2000) pointed out, video segments should be short enough for the visual stimuli not to detract from the auditory component. Teachers can fully exploit the audio component to develop both macro and micro listening skills by using video segments of not more than one minute long. In the same vein, Balatova (1994) reported that distraction sets in after the first minute of watching. As the target learners are beginners, teachers may find it more helpful to further break down each scenario into shorter segments.

The use of Ohana multimedia solutions can make language learning more accessible to EFL beginners by:

- making it easier to integrate and contextualize listening, speaking and pronunciation, reading and writing activities
- motivating learners and helping them in their efforts to use the language naturally in their own lives by seeing

how the characters succeed in communicating with native speakers and getting things done in their everyday activi ties
- bringing native speakers into the classroom (using mul timedia assets), providing additional models for pronun ciation, intonation, and rhythm besides that of the teacher
- raising learners' awareness of non-verbal aspects of communication
- increasing listening comprehension: paralinguistic features (facial expression, body language, context, setting…) help learners comprehend more than from listening to audio tape only
- stimulating learner interaction and communication with co-learners as they discuss the video itself or ways in which it relates to their lives and experiences
- raising cross-cultural awareness: learners enjoy observing similarities and differences between the behavior of the characters in a video clip and that of their own families and friends

Helping EFL beginners learn with video

Watching television and video can motivate learning because most learners find it entertaining. However, it is important to ensure that learners are actively engaged in their learning rather than just sitting back and passively relaxing. Viewing activities should give learners a purpose in watching a sequence and help them focus on aspects of the video that can benefit their language-learning capabilities. This is the strategy of active viewing described by Lonergan (1984). As a lot of information on videos is non-linguistic, it is also important to assure learners that they need not understand ALL the information. The activities aim to encourage viewing and participation to increase understanding, not to test it. Learners can also be encouraged to predict/discuss in their first language group and collaboratively generate answers in English. On the other hand, transfer activities such as using scenarios as models for role-plays can prepare learners for real-life English use. As well, teachers can create excellent practice opportunities in authentic language use by organizing class excursions and visits where learners can draw on peer support.

Some considerations for selecting videos for EFL beginners

- length – maximum of around 3-5 minute per segment
- contexts – authentic everyday language use
- actions/visual cues – not just talking heads
- option of subtitles – English subtitle for pronunciation practice and reading skill development
- number of characters – not so many in one segment that learners are confused about who's who

Some techniques for teaching with Ohana multimedia

As Allan (1985:66) pointed out that there is no single 'right way' to use video or multimedia, only "as many right ways as there are effective uses", the following are just suggestions for teachers in their exploration of using video and multimedia DVDs in language teaching.

Silent viewing

For silent viewing, teachers can set the volume control to its lowest so that the soundtrack is inaudible. Watching a video sequence without the soundtrack does more than activating learners' schema and prior experience in interpreting what they see. Without the 'distraction' of the spoken word, learners can focus on the essence of communication among people: body language, gestures, facial expressions and the setting. Learners are more motivated to use English by visualizing this common need to communicate irrespective of the language spoken. By only taking in the content and context visually, learners are not as anxious as when they have to deal with the language at the same time. In their second viewing with the sound on, they are better able to fit the language they hear into the context they have built in their silent viewing.

Sound only

For sound only activities, teachers can either adjust the brightness control to yield a completely darkened screen or use the audio of the video. Learners can listen to background noises and the accompanying dialogues to predict what is happening: where the characters are and what they are doing. This is most effective when sound effects directly indicate particular locations or activities, e.g. the sound of an approaching train and the ringing of a telephone. Learners can confirm their guesses by viewing the video straight after listening.

Jigsaw viewing/listening

Jigsaw viewing/listening aims to create a situation in which learners have to collaborate in working out what is actually happening on the video. Besides generating a lot interaction among learners, this can also help learners appreciate the value of peer support in the learning process. Jigsaw viewing/listening can be set up by making half of the class do silent viewing while the other half only listen to the soundtrack of the same segment in another room. Teachers can provide viewing and listening task sheets to help learners record information. When the class reunites, viewers and listeners then work in pairs to arrive at the original 'story' by sharing the information they have each got.

A variation to the above technique is sitting half of the class with their backs to the television screen. These learners can only listen while those facing the television can

watch the video with the sound on. When the sequence is finished, the viewers have to describe what is happening in response to the listeners' questions.

Freeze frame

Teachers can press the *Pause* or *Still* button that "freezes" the picture on the screen. This is useful for introducing new vocabulary, e.g. naming unfamiliar items in English. Teachers can also set up prediction exercises by freezing the frame at the point when a character is about to respond to an utterance and inviting learners to guess the response. Learners can compare their answers immediately by releasing the Pause button. This can also be used for pronunciation practice where repeated speaking and listening of an utterance is necessary.

Summary

As noted above, video is a particularly effective learning medium for beginners, especially in developing listening, speaking and pronunciation skills. Rather than being too difficult for beginners, as often claimed by some teachers, multimedia can make language more accessible to beginners when segments are selected appropriately, the strategy of active viewing is adopted and mutual support among learners is generated.

References

ALLAN, M. (1985). *Teaching English with video*. Harlow: Longman.

BALTOVA, I. (1994). Impact of video on the comprehension skills of core French students. *Canadian Modern Language Review*, 50(3), 506-531.

BRETT, P. (1997). A comparative study of the effects of the use of multimedia on listening comprehension. *System*, 25(1), 39-53.

BURT, M. (1999). Using Video with adult English Language Learners. *ERIC Digest*. National Center for ESL Literacy Education. August 1999.
Available: http://www.cal.org/ncle/DIGESTS/Video.htm Accessed: 26 August 2005

CANNING-WILSON, C. (2000). Practical aspects of using video in the foreign language classroom. *The Internet TESL Journal*. Vol. VI, No. 11, November 2000.

HARBEN, P. (1999). An exercise in applying pedagogical principles to multimedia CALL materials design. *ReCALL*, 11(3), 25-33.

LONERGAN, J. (1984). *Video language teaching*. Cambridge: Cambridge University Press.

MAYER, R.E. and Anderson, R. B. (1991). Animations Need Narrations: An experimental test of a dual-coding hypothesis. *Journal of Educational Psychology*, 83(4), 484-490.

MAYER, R.E. (1997). Multimedia Learning: Are we asking the right questions? *Educational Psychologist,* 32(1), 1-19.

PLASS, J.L., Chun, D.M., Mayer, R.E. and Leutner, D. (1998). Supporting visual and verbal learning preferences in a second language multimedia learning environment. *Journal of Educational Psychology*, 90(1), 25-36.