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Optimizing Foreign Language Acquisition with a Holistic Approach to Technology:

Using Digital Film Production to Learn Spanish

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Introduction

Nowadays, educators have at their disposition numerous technological tools with the capability of significantly improving foreign language acquisition. However, these possibilities cannot be brought to fruition unless the conceptualization, design, development, and deployment of technologies in support of second language learning are reconsidered.

Furthermore it has become indispensable for students to comprehend and represent knowledge in a multitude of formats. Consequently, new educational approaches using digitally based tools such as audio, video, and various digital systems, are increasingly required.

Purpose and Assumptions

This literature review will explore the challenges inherent to the integration of educational technology in foreign language acquisition environments. Particularly, it will present the ways in which digital communication technologies can be used as facilitators of linguistic proficiency.

Cognitive approach. One assumption is that presenting and analyzing various tools and approaches will clarify what technology and how technology can provide quality input, opportunities for communication, meaningful feedback, and individualized content to enhance motivation.

Socio-cognitive approach. Another basic assumption is that by using a participatory approach, students immerse themselves in various cultures while producing digital documents attesting their language skills.

Statement of the problem

What and how can technology be used to optimize foreign language acquisition environments, especially with the use of digital film production in the Spanish classroom?

The intent is to demonstrate that, within the assortment of technologies available to language educators, using digital film production to learn a foreign language is a practical and theoretically sound manner to use technological tools strategically. The holistic process, encompassing the use of authentic cultural artifacts; film equipment; editing software; the Internet (just to name a few technological devices) provides an opportunity to create a long-lasting awareness of the Hispanic world as well as a way to optimize the learning of its dominant language.

Definitions

Acronyms & Terminology

1. ACTFL: American Council on the Teaching of Foreign Languages
 - Provides vision, leadership and support for quality teaching and learning of languages (<http://www.actfl.org/i4a/pages/index.cfm?pageid=3274>)
2. Calico: Computer assisted language instruction consortium
 - Recognized international clearinghouse and leader in computer assisted learning and instruction. It is a premier global association dedicated to computer-assisted language learning (<https://calico.org/page.php?id=240>)
3. CALL: Computer Assisted Language Learning
 - A form of computer-based assisted learning which carries two important features: bidirectional learning and individualized learning (http://en.wikipedia.org/wiki/Computer-assisted_language_learning)

4. CMC: Computer Mediated Communication
 - Communication between humans using the medium of the computer
(<http://www.ling.lancs.ac.uk/staff/paulb/206/cmclec.pdf>)
5. “Communication technology literacy” involves: organization, evaluation, critical thinking, and problem solving (US National Council of Teachers of English, 21st century literacies, 2007).
6. “Digitally based literacy” refers to: Computer basics; the Internet; software applications; computer security and privacy; new digital technologies: digital audio, video, and photography (Microsoft, 2009).
7. LT: Language Teaching
8. NASILP: National Association of Self-Instructional Language Programs
 - *Studies the acquisition of “less commonly taught languages” (LCTL’s)*
9. SLA: Second Language Acquisition

Selected Literature

An analysis of the ways in which digital communication technologies can be integrated into foreign language acquisition environments.

Promises & Problems: Key concepts

In his article called “*Technology and Second Language Learning: Promises and Problems*”, Zhao (2005) implies that the impact of technology resides in the functions that educators allocate to it. Second language instructors need to figure out the technical capabilities of particular technologies in order to use them optimally. The limitations they face consist in: technological tool operation constraints; educator’s view of educational outcomes and approaches; and learning environment restrictions.

Strategic limitations. For Zhao (2005), technologies are usually considered one by one instead of being regarded as an interconnected system. This lack of integrative strategy limits the interactions between various language software and programs, and also reduces the ability to explore collaborative and differentiated learning approaches. Traditionally, linguistic technology has focused on individualized learning. Language structures are emphasized rather than interaction for learning.

In an earlier article, the author (Zhao, 2003a) indicates that a review of research in computer assisted language acquisition revealed that most research for linguistic learning was conducted in higher education settings. Additionally, inquiries usually dealt with limited elements of languages learning, such as grammatical rules.

Linguistic considerations. The conditions necessary to augment the effectiveness of linguistic acquisition, posits the author, are the following: a) excellent input in the form of authentic materials; b) plenty of practice through oral communication; c) varied types of feedback; and d) personalized content pertaining to the learner's learning style and interests.

Digital film technology: an integrative model. The constant that links all these points to the use of digital film production in a Spanish course is the need for communication, which includes genuine cultural artifacts; interaction; ongoing iterations and analysis; as well as highly individualized topic exploration.

The one point on which I do not agree with the author is his view on digital technology. For him, it is a setback to let go of past technologies like audio cassettes, etc. In my view, this does not constitute a disadvantage to language learning, since the digitization of such tools has become an easy task. Hence, old and new technologies can be integrated.

The real issue resides in the amalgamation of various digital systems in order to provide the learners with a comprehensive linguistic experience centered on communication and the expansion of the “zone of proximal development” (Pennington, 1996, p. 7; as cited in Zhao, 2005).

Film project in the Spanish classroom. In my experience, students speak in the target language during all the various phases of a digital production made in Spanish, hence actively and meaningfully developing their linguistic proficiency. Furthermore, much freedom can be given with the choice of film, theme and characters they can select, providing them with the motivation to learn.

Points to ponder. While the author stresses the use of CMCs (computer mediated communication), including audio, visual and interactive applications, he does not present communication technologies such as digital film, which provide an even greater creative palette for the learner, as well as an opportunity to project the final result through distribution technologies such as YouTube.

Where I agree with the author is the importance of investigating the needs of younger foreign language learners.

Computer assisted language learning

In “*The Advantages and Disadvantages of Computer Technology in Second Language Acquisition*”, Lai & Kritsonis (2006) concur with Zhao and argue that computer assisted language learning [CALL] can offer more independence to learners. On the one hand, it gives them greater confidence in their abilities by awarding constructive feedback. On the other hand it breaks the dependence on fixed sources of information.

The authors also touch on the disruption of the linear aspect of language learning, stating that the arbitrariness of Web searches (including synchronous and asynchronous communication) relieve students from the predictability inherent to artificially structured language learning environments (Warchauer, 2004; as cited in Lai & Kritsonis, 2006). Furthermore, they stress the value of experiential learning (Lee, 2000; as cited in Lai & Kristonis, 2006).

Link to digital film communication: the need for creativity and involvement. From the aforementioned perspectives, digital film communication in the language classroom seems to suit the need for creativity as well as the interest in empirical approaches to second language learning.

However, the article fails to make the point that linguistic software is not the only way of using computerized technology. In fact, the use of digital film equipment in the language classroom offers a wide variety of technological experiences, such as: the editing software; the cameras; and the Web for distribution of the final media production.

Calico: Computer Assisted Language Instruction Consortium

In their PowerPoint slides called “*Developing Technology-mediated Language Awareness through Bridging Activities*” presented for Calico, Rheinhardt & Thorne (2009) list technology mediated activities such as: CMC, blogs, texting, social networking and gaming. They note the recent societal shift, with its emphasis on the access to computers and the move from direct (face to face) communication to computer mediate interaction. This change, they contend, has an effect on schooling in general and language learning, in particular.

Their intention is to bridge the gap developed by the popular use of communication tools on-line and the need for meaningful in-class linguistic activities.

They propose a pedagogical model incorporating:

1. ACTFL standards (American Council on the Teaching of Foreign Languages):
 - a. Preparation; comprehension; interpretation (Shrum & Glisan, 2005; as cited in Rheinhardt & Thorne, 2009)
2. Cultural experience:
 - a. Know how; know why; know oneself (Moran, 2001; as cited in Rheinhardt & Thorne, 2009)
3. Linguistic awareness:
 - a. Contrasting; inferring (McCarthy & Carte, 1994; van Lier, 1995; as cited in Rheinhardt & Thorne, 2009)
4. Multiliteracies:
 - a. Situated practice (experiencing); overt instruction (conceptualizing); critical framing (analyzing); transformed practice (applying) (New London Group, 1996; Cope & Kalantzis, 2000; Kern, 2000; as cited in Rheinhardt & Thorne, 2009)

Digital film production in the language classroom: a didactic framework. The abovementioned characteristics combine well with digital film production in the language classroom. The choice of a Hispanic film as a model, for instance, offers students an entertaining way to prepare, comprehend and interpret the language as well as the culture associated to it. The hands-on approach caters to the know-how, know-why and know-oneself concepts. The interpretation that they make of the film, by remaking their own version is a way of contrasting cultures and linguistic structures as well as making their own inferences from that experience. Finally, the experiencing, conceptualizing, analyzing and applying, sum up the whole process of digital filmmaking for language acquisition.

Points of agreement and disagreement. While the authors mention the use of portfolios, they do not stress the importance of student-created digital films. This omission is situated in a discourse concentrated on Net safety and text-based activities. While on-line written communication is valuable for second language learners, it is challenging due to their level of proficiency in the language. In college, foreign language learners may be fluent enough to communicate a clear message spontaneously. However, at a high school level, many would experience difficulties with this type of written-based instantaneous communication, hence the attractive quality of digital film making.

Digital film production in the language classroom offers a way to bridge the gap between on-line written-based messaging and in-class experimental and practical linguistic activities. What is more, it can become an integrate part of student on-line portfolios. With subtitles in Spanish as well as the film being spoken in the target language, such a document can have invaluable positive emotional impact for the language learners and can be shared with other students.

A review of the research: second language acquisition [SLA]

Similar to other articles scrutinized for this paper, in Leloup, Ponterio & Cortland (2003), “*Second Language Acquisition and Technology: A Review of the Research*”, the main theoretical framework is built on interactionist (Ellis, 1994; Larsen-Freeman & Long, 1991; in Leloup et al, 2003) and sociocultural (Vygotsky; Lantolf & Appel, 1994; Warschauer, 1997; as cited in Leloup et al, 2003) positions.

Their focal point is the constructive aspects of computer assisted language learning. However, they make sure to mention that the reason why the results seem so positive stems from

the fact that most researchers have focused on qualitative data collection rather than quantitative studies concentrated on the actual improvements in linguistic proficiency levels.

The authors confirm, like others in this literature review, that most research concentrates on writing and that more investigation is required for the listening and speaking aspects of language learning.

Digital film production: emphasize listening and speaking. It is clear that in an exercise involving digital film making in Spanish, students would speak in Spanish and also listen to the film they seek to reproduce in the target language. Additionally, the number of times students will repeat a sequence of the film in order to listen to it for the purpose of reproducing it or interpreting it would never occur in a traditional language activity. When making a film, the iteration process demands constant repetitions, which provides invaluable language practice for students. Again, this type of repetitive activity would be perceived as boring in conventional types of language exercises.

Technology needs assistance. The authors warn against the automatic link between technology and improved quality of education. They caution educators not to depend on the use of technological tools to create a quality experience. Rather, they suggest the creation of sound practices integrating technology to optimize the worth of the language learning experience.

Getting the message

In “*iPod in Education: The Potential for Language Acquisition*”, McQuillan (2006) presents an optimistic look at current technology, such as the iPod. He contends that this type of technology offers essential elements for language learning by:

- “Slowing the rate of speech
- Providing contextual support for language

- Using vocabulary appropriate to the student's level
- Building on the student's existing background knowledge
- Fostering a comfortable environment
- Encouraging identification with people who speak the target language
- Creating a topic-driven rather than a grammar driven syllabus".

(McQuillan, 2006, p. 4)

He goes on to explain that the newest iPods can use pictures and even video. Citing Zhao (1997), the author describes how a prototype Spanish class's oral and speaking skills augmented with the use of video programming in the classroom.

A simple version of digital filmmaking. Obviously, this article touches directly on the topic of the production of digital films. Here, however, the author highlights the use of a simple tool, the iPod. One must also note that the article is sponsored by Apple Computer, Inc.

Nevertheless, McQuillan makes a good case for the use of this device. He suggests sound didactic approaches and advises teachers to select their tool with care among all the available options.

Although the iPod seems ideal for the elementary school child, it is somewhat less intriguing for secondary level students. In contrast with digital film production, which demands a scripted and long term view, the iPod offers a spontaneous approach to communication.

Video technology in the classroom: video for LT (language teaching)

An article written in 1989 is a good way of comparing how technological trends and pedagogical methodologies have changed. In "*Issues in the Use of video Technology in the Language Classroom*", Ruane (1989) describes four major ways of using videos in the classroom:

“Video materials specially designed for language teaching [LT];
 semi-pedagogic LT video materials;
 authentic off-air documents edited for LT;
 and authentic off air documents unedited for LT.” (Ruane, 1989, p. 1)

First and foremost, the emphasis on “language teaching” rather than language “learning” is striking. There is no mention of computers; only software. The television was the technology of the time. The author actually excludes the use of interactivity right from the start, without any particular rationale behind this exclusion. She mentions that “television screens compel attention”. We would venture to say that this has not changed. However, computer screens have definitely taken priority at home and at school.

Despite the lack of technological interactivity prescribed in this dated article, the author does stress the importance of an active process while watching the videos and even suggests the use of software to access materials needed for face-to-face interaction before, during and after the presentation of the video.

Her categorization of the various types of video formats is still valuable today. However, the central point that she misses is the possibility for the students to create their own genuine documents. Presumably, in 1989, the technology available for video production would have made the process overly cumbersome for the educators and the language students.

Video: digital film technology’s predecessor. What this article puts in relief is the value of using video for the purpose of experiencing a context relevant to the target language’s cultural environment. In spite of the author concentrating on the role of the teacher as well as taking a centralized pedagogical approach, the article does put forward the idea that an exposure to videos is valuable to trigger communication.

Self-instruction & language technology: National Association of Self-Instructional Language Programs [NASILP]

On the other side of the pedagogical spectrum, Dunkel, Brill & Kohl (2002) present the “*Impact of Self-instructional Technology on Language Learning: A View of NASILP*”. To the difference of the previous article, this one is solely focused on the learner.

NASILP studies the acquisition of “*less commonly taught languages*” [LCTL’s]. The article describes the organization’s mandate, as well as the resources it offers. It also analyses a project called “The Critical Languages Series”, especially concentrating on the audio and visual aspects of their CD-ROM.

From the findings of an inquiry made in 2001, with 32 students (twenty-four Turkish and eight Korean pupils) videos were helpful tools to learn the target language and students accessed them frequently. Students also used applications for the improvement of pronunciation; as well as audio flashcards. In contrast, dictations and fill in the blank vocabulary exercises were not popular.

This article underlines the challenges intrinsic to non-English speakers as well as students from less economically privileged countries. Although digital filmmaking may be much more affordable and accessible in North America and Europe, it is not necessarily the case in many other parts of the world.

Furthermore the Internet is still dominated by English. Even though Mandarin users, for example, may be larger in number, their interactivity with the world is still closely monitored and limited compared to Anglo-Saxons.

Cooperation between linguists and computer programmers. Dunkel et al. (2002) mention that NASILP’s “Critical Language Series” was the result of the cooperation between linguists

and computer programmers. This exemplifies that close collaboration between technology and educators can bring about experiences facilitating foreign language acquisition.

Conclusion

Technology and methodologies

As mentioned in various articles discussed in this literature review, Warschauer and Meskill (2000) contend that language learning methodologies have stemmed from two main theoretical frameworks: the cognitive and the socio-cognitive approaches. In “*Technology and Second Language Teaching*”, they present a historical summary of various language teaching strategies: starting with the blackboard, using a grammar based method to translate one language to another; continuing with the audiotape, used for the audio-lingual method; and then the communicative approach of the 1980s and 1990s, emphasizing motivating and relevant conversations often exemplified with video storytelling.

Cognitive strategies. The authors very clearly sum up the findings expressed in this review: on the one hand, language learning is an individual experience involving mental processes and necessitating cognitive strategies facilitating comprehension (i.e.: interactivity and knowledge construction).

Technologies employed to support the cognitive approach offer interaction with meaningful contexts and include telecommunications and multimedia such as video and audio programs. To exemplify recent advancements in this field, Warschauer and Meskill mention “*Philippe*” (a computer game to learn French) not only allowing the viewing of a video, but also enabling students to create their own on-line digital film production.

The drawback of this method is the focus on individual learning and the possible lack of face to face interaction.

Socio-cognitive strategies. On the other hand, second language learning is a social experience needing apprenticeship and cultural connections with the target linguistic community.

Technologies used for this purpose comprise the Internet; computer assisted discussions; and collaborative publication.

Digital film communication: individual motivation and community awareness

In summary, digital film communication used in a language environment such as a Spanish high school class, offers students the opportunity to work both individually and collaboratively. Selecting and watching a Hispanic film requires some negotiation and can be done in person or at a distance. Writing a script to create an interpretation of the film can be accomplished collectively using the Internet; with computer assisted discussion software; or face to face. The filming is more easily done with cameras and people present. However, it is conceivable that such an endeavor could be achieved by using simple devices, like iPods or webcams.

In a nutshell, the use of digital film communication is an innovative approach centered on learning strategies rather than the technological tools. It offers authentic and meaningful interactivity; social and cultural language exploration; motivating environments; and differentiated learning tactics.

Gaps and opportunities for future research

In the near future, more inquiries are needed to study language acquisition at the elementary and high school levels. Quantitative researches would be beneficial in order to establish the effectiveness of various communication technologies, including CMCs, in foreign language education.

Teachers will necessitate time to develop integrative technological strategies and to select devices and pedagogical processes according to their holistic educational design.

Finally, as Warschauer and Meskill (2000) mention in their article,

“[...] we still believe that integrating new technologies
should be an important goal of language programs,
but a goal of which the cost and complexity
should not be underestimated.” (Warschauer & Meskill, 2000, p. 14)

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