Fostering Listening Skills and Initial Intercultural Communicative Competence in EFL Pre-Service Teachers Through the Use of ICT

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Language Teaching, Learning and Research

UNIVERSIDAD PEDAGOGICA NACIONAL
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Introduction

Media, computers, and technology have played a critical role in our contemporary society. Many of the daily activities we do in life are mediated by technological resources such as computers, tablets, cell phones, and 2.0 web tools, including e-mail, learning management systems, applications, and social networks. For this reason, it is unquestionable to assert that many times we depend on technological resources to communicate and to establish social relationships with other people. In the same way that we use media and technology in our daily life, students in general, as in the case of language learners, expect to find and use media and technology in the classroom. Brinton (2001) has stated that teachers and students seem to agree that technology can help to enhance language teaching and learning, and that incorporating technology in our teaching implies bringing the outside world into the language classroom.

Within the context of globalization and the ongoing era of computer technology development, or the so-called Digital Age, this book describes a research experience carried out in an EFL classroom at Universidad Pedagógica Nacional, a public university in Bogotá, in which students were given the opportunity to interact with a hypermedia learning environment named *A Journey Through the US Culture*. The purpose of the study was to help students of English to improve their listening skills and foster their intercultural competence as they simulated taking a virtual trip through which they met and listened to several native and nonnative speakers talking about the main cultural regions of the US and found documents and information presenting cultural aspects.

This study responds to our claim regarding the urgent necessity of incorporating technology into the EFL classroom as a means to facilitate students'

learning processes. It also responds to one of the main goals *of Plan Decenal de Educación*, carried out by *Ministerio de Educación Nacional* (2006-2016) which seeks the pedagogical modernization and implementation of ICT (Information and Communication Technology) in many institutions all around the country. One of its aims is to strengthen teaching processes that acknowledge cross-curricular uses of ICT based on research on education. In fact, one of the pillars of the current policies of the national government of Colombia is to improve teacher professional development through the efficient domain and implementation of technological tools, so that teachers can upgrade their pedagogical practices. This professional development program proposes two main phases. The first one focuses on helping teachers to become aware of the use of technology and its implications in their teaching practices. The second phase seeks a more professional appropriation of ICT, so that teachers can transform old, traditional curricular practices into new ones through the use of technology. This research intended to raise pre-service language teachers' awareness of the pedagogical use of ICT in such a way that they incorporate technology later into their teaching careers once being in-service teachers.

The tendency to teach English communicatively through computer-based materials has become a necessity in the language classroom. In contrast to the traditional and mechanical study of grammar tasks, English teachers have increasingly introduced to learners authentic communicative tasks supported by diverse hypermedia resources, including video, audio, images, the Internet, and flash animation. The importance of using these multimedia resources has been recognized by the national curriculum of many nations because media-based language lessons and materials are seen as an ideal means to facilitate the learning process.

In order to contribute with the Colombian educational concerns about the inclusion of technology in the classrooms, and being aware of learners' language needs and interests in technology, the members of the research group Hypermedia, Assessment, and English Learning[1] decided to design and implement the hypermedia learning environment named *A Journey Through the US Culture* (Vera et al. unpublished) as a means to enhance students' listening comprehension

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1 *Hipermedia, Evaluación y Aprendizaje del Inglés.* Research group from Universidad Pedagógica Nacional, Colombia, recognized and categorized by Colciencias.

in English and foster their intercultural competence. This hypermedia environment aims at achieving such purposes by having students work in a collaborative way through the use of the computer as a mediator in the learning process. It also aims at breaking with the traditional listening activities done in regular classrooms, which are often based on audio recordings, and that request students to answer questions related to factual information.

Thus, this book presents the results drawn from the research project "Exploration of Two Methodological Hypermedia Proposals for the Development of Listening Comprehension and Intercultural Competence," conducted at Universidad Pedagógica Nacional (UPN), and sponsored by CIUP, the Research Center of this university. The first hypermedia proposal designed was *A Journey to Britannia*, which was a role-play game that aimed at helping EFL learners to learn and use learning strategies so as to improve their listening skills. It also was created to foster intercultural competence based on the legend of King Arthur and several cultural aspects of the United Kingdom. The second proposal, called *A Journey Through the US Culture*, focused on fostering listening skills and intercultural competence based on the main cultural regions of the US, including traditions, historical, cultural and geographical facts analyzed from the viewpoints of some North American people, and presented not only in readings and visual material, but mainly in audios, allowing learners to listen to and interpret some cultural content, to relate it to their previous knowledge about that nation's cultures, to reframe their views about that big mixture of cultures and to compare them with our own cultures.

This book will focus on describing the research experience with the second hypermedia learning environment, which was implemented twice by pre-service teachers of the Language Department at UPN. The first implementation was made with an intermediate English class in 2004. The second implementation was carried out in 2013 because, after having used the learning environment as in-home material for several years, the research team wanted to confirm if it was still relevant, useful, and innovating for the purposes originally stated in 2004: to enhance listening skills and intercultural competence in the EFL class. In other words, because this environment had contributed to helping EFL learners over the last eight years, we considered that it was necessary to update the findings in 2013. We attempted to explore once more the validity and pedagogical value

of *A Journey Through the* US *Culture* in our Language Department through an updated research procedure.

Departing from those decisions, the authors of this book also intend to provide the EFL community with explanations of the key concepts that underlie this study as to understand their nature, and to suggest some strategies and tools that have proved to be effective when seeking to develop listening skills and intercultural competence in pre-service teachers, some of which are having learners take a virtual trip (simulated real life tasks) by letting them visit different cultural regions of the USA and listen to people of that country talking about their own culture. Another intention when presenting this research experience is to help teachers to become aware of the difficulties learners might face when learning a foreign language, particularly for the development of the aforementioned skills and competence. The concepts underlying this study can guide teachers to overcome such difficulties and help their leaners to improve their language competences. We also believe that the experience described in this book may give ideas to computer-based material designers and people in charge of selecting these kinds of resources for higher education institutions as to what to take into consideration to design or choose the most appropriate materials related to listening and culture.

In the following chapter we will describe the problem we identified in our teaching context which led us to carry out this research study.

Problem and Context

Statement of the Problem

The research group detected that EFL learners of the Language Department at UPN had four had academic needs:

First, English subjects failed and university dropouts in the Language Program were the result of students' lack of learning strategies to monitor their own learning process and overcome academic problems. It was observed that many students failed the English courses and were demotivated because they realized that learning a foreign language was complicated, even more when they were preparing to become English teachers. That is why the first learning environment, *A Journey to Britannia*, was created to help students to learn and use learning strategies through the use of technological resources.

Second, EFL learners had difficulties in acquiring listening skills. Learners complained about the fact that they could not understand the aural material that they had to listen to in the language lab, and that listening was the most challenging skill to improve. This problem was increased because the students had limited access to the language lab, once a week, and therefore teachers had to do listening activities in the regular classroom through the use of a CD player or a tape recorder. Unfortunately, the use of the CD player was not enough practice, and many times this type of listening did not work well because the recordings were too faint, unclear, and low, affecting listening comprehension. Also, students who were in the back of the classroom were not able to listen clearly to the material as those who were in the front. These situations caused a lack of

motivation because students thought they were not given the appropriate material and the ideal conditions to improve listening.

Third, teachers still needed to promote more collaborative and cooperative learning environments through which learners could get actively involved. Even though students worked with their partners when doing grammar, reading, and speaking communicative tasks, they had a tendency to work individually. The class was directed to answer activities from the textbooks and to complete tasks, but there was not a real commitment to work on projects that encouraged learners to work collaboratively in groups. Moreover, it was observed that when students did listening tasks in the language lab, they mostly worked alone by the help of study guides. Once they had answered the questions individually according to the listening material (a dialog, a story, a news report, etc.), they reported the answers orally to the teacher. So, there was a not real collaborative interaction when they worked on listening tasks.

Fourth, there was a great need to foster intercultural competence. It was observed that the English classes focused primarily on the study of the language forms and communicative functions as well as on the practice of the four communicative skills, but there was limited time to study the target culture. The cultural contents were mostly related to elements of surface culture such as food, tourist places, and geographical sites, and they were studied from an informative perspective rather than from a more critical standpoint. Therefore, learners were not actually building cultural competence, but storing cultural information in a received and passive way.

As we detected these problems, we decided to implement the hypermedia learning environment *A Journey Through the us Culture* in the English courses. It is a technological tool that intends to help learners to not only overcome limitations in listening comprehension, but to promote intercultural competence and collaborative and cooperative learning. Thus, learners were expected to do different listening tasks in the learning environment by getting acquainted with five main cultural groups of the United States. The main task was to have students engage in a virtual trip to the United States as if they were tourists visiting this country. They visited important and representative parts of the country and learned about the cultural traditions of many American ethnic groups such as the Mormons, the native-American people, and African-Americans. Learners were expected to not only read documents that appeared on the screen, but

to listen to lectures, tourist guides, and conversations among speakers in the audios. The cultural regions and the listening tasks were introduced in this environment through diverse technological modes such as audio, texts, photographs, and animation, all of which are ideal to improve language learning. The detailed description of this hypermedia material is in chapter 3.

Research Questions

This project was led by two main research questions:
1. How do participants perceive the methodological proposal developed in the hypermedia environment *A Journey Through the US Culture*?
2. How do intermediate English learners face listening tasks related to culture when they use this hypermedia proposal?

Context and Participants

The Language program at UPN aims to prepare EFL learners to work as English teachers in public and private schools in Colombia. This implies that they learn English as a foreign language and are provided with the pedagogical foundations and practice to teach it. In other words, they are pre-service teachers who are trained and educated to undertake teaching professions in the future.

As it was explained before, there were two moments in which this research was carried out and in which data was collected. The participants involved in the first experience in 2004 were a group of 13 EFL learners, 6 female and 7 male students, who worked in pairs to do the listening tasks with the hypermedia environment. In terms of their proficiency, only one of the students was an advanced English speaker; three were upper-intermediate, seven were intermediate, and two were low-intermediate English learners. However, all of them were aware of the need they had to improve their listening skill, which was the most challenging skills for them. They used the computer lab two hours a week for 16 weeks to interact with the hypermedia environment *A Journey Through the US Culture*.

The participants who were involved in the second experience carried out in 2013 were a group of 27 female and 4 male students whose ages ranged from18

to 30 years. Although they were expected to be in an advanced level, the majority was in an upper-intermediate level and a few were in intermediate. They went to the computer lab one or two hours a week for 13 weeks to interact with the hypermedia environment.

At these two moments of the implementation almost all the students participated in the experience and provided relevant data, except for one student who decided to withdraw from the study because he was more interested in learning grammar. Participants signed a Consent Form (Appendix A), which informed them about all the specific details of the study, requested their consent to participate in the research study, and asked them to answer the interviews and the logs as main data to be collected during the experience.

Expected Impact

We expected the results of this research study would contribute with the language teaching community in different ways:

1. To provide UPN students with the possibility of using computer-based resources that can help them to improve their listening skills and their knowledge of the culture of English speaking countries; that is to say, the enhancement of their intercultural competence.
2. To support language teachers, in general, to open their spectrum of possibilities in terms of other sources they may be able to resort to in order to help their students to improve different skills and who can give culture the importance it deserves when teaching and learning a language.
3. To inform teachers, the Ministry of Education, and other institutions that have to do with decision-making related to the acquisition of materials and to material designers, about considering the development of intercultural competence. It is one of the basic aspects that the teaching and learning process of a language must enhance and thus, it needs to be included in the materials adopted or designed by these institutions.
4. To lead other researchers who might add to the results of this research further development of listening skills, intercultural competence, collaborative and cooperative work, and the use of ICTs in the process of language teaching and learning.

Having given a general view of this research study, in the following chapter the reader will find the explanation of the theoretical perspectives that are the basis of the study and that comprise five main theoretical constructs: listening comprehension, culture in the language classroom, the use of hypermedia in language teaching, cooperative/collaborative learning, and learning strategies. Additionally, the chapter will present some studies related to the constructs mentioned.

Theoretical Perspectives and State of the Art

Theoretical Perspectives

The conceptual and technical design of *A Journey Through the US Culture* is framed within six theoretical foundations: the theories on listening comprehension in EFL, the use of hypermedia in language teaching, the principles of collaborative and cooperative learning; the notion of intercultural communicative competence, the fundamentals of autonomous learning, and the importance of learning strategies. Through the articulation of these six perspectives, EFL learners were expected to foster listening skills and intercultural competence. A description of each theoretical view is presented below.

Listening Comprehension in EFL

For a long time in the history of EFL teaching, listening has been considered a passive skill and an enabling skill for speaking activities. That is to say, listening is practiced at the moment the teacher speaks to the students in the classroom. Call (1985, cited in Osada, 2004) asserts that listening is poorly taught in the language classroom because of teachers' belief that exposing students to the spoken language on the spot provides enough instruction for listening comprehension. There is also the influence of the behaviorist audiolingualism of the early 50s, a traditional approach that privileged imitation and repetition of what students heard as effective factors for listening comprehension. This view started to change when Rivers (1966, p. 196) claimed that "Speaking does not of itself

constitute communication unless what is being said is understood by another person." Nowadays, listening is seen as an active skill which involves a "highly complex problem solving activity" (Byrnes, 1984, cited in Osada, 2004) through which learners become active listeners during the learning process. They listen to, do, and perform authentic tasks of real life, instead of just repeating, imitating, and confirming understanding.

Listening is indeed a complex task. Brown (1994) and Nunan (1999) state that there is a series of psychomotor, linguistic, paralinguistic and social processes that inevitably intervene in listening comprehension in a foreign language (L2). Those processes are simultaneously interwoven and cause listening to become one of the most difficult skills to be developed in the learning process of L2. As stated by Brown (1994), oral discourse has eight aspects that complicate non-native speakers' listening comprehension:

The first aspect deals with chunking and clustering which refer to the division or fragmentation of speakers' sentences and clauses during the natural communication process due to memory limitations. Speakers usually break or divide pieces of verbal information into smaller units such as sentences or a series of words in order to recall the information they are given. Redundancy is the second aspect. It involves speakers' repetitions or restatements of ideas during the communicative act in order to express them in a better way or clarify something that has been said. In English, speakers often use expressions such as *I mean* and *you know*, markers to indicate that an idea is being restated, clarified, or rephrased. Third, the use of phonological, morphological, and syntactic constructions can affect aural comprehension. Such is the case of the contraction of the verbs *to be* and *to have* for the third person (She's going to . . ., and she's gone to), or words such as *poured* and *pored* or *aloud* and *allowed* that can confuse the listeners. Similarly, a fourth aspect that makes listening difficult can be those unplanned variables during the speaking process such as slips of tongue, pauses speakers make in hesitant discourse, corrections of what has been stated, and unfinished sentences when speakers decide to utter a new idea. A fifth obstacle involves colloquial and idiomatic expressions which listeners might find difficult to understand because they are not familiar with them. Poor cultural knowledge becomes the sixth problem in aural comprehension because being unaware of cultural meanings might cause complete misunderstanding, even though the individuals involved in the communicative interaction might have

efficient listening skills. Seventh, difficulty has to do with native speakers' speed, which can cause misunderstanding just because the listener is not able to follow and retain all the information being said. Finally, phonological aspects such as accent and intonation are likely to affect the non-native speaker when he/she listens to oral discourse in L2.

Because of these complex features in aural production, several theoretical alternatives provided by L2 scholars in order to overcome the complications of L2 speakers' listening skills were taken into account when we designed the learning environment *A Journey Through the US Culture*:

Nunan (1999) points out that a competent listener in L2 requires fostering several strategies to divide oral discourse into meaningful words and sentences: the listener must (1) recognize word categories (article, noun, verb, adjective, etc.), (2) identify the rhetorical and functional intention of oral discourse, (3) interpret accent and intonation in order to identify the main ideas and the emotional appeal with which speech is produced, and (4) understand the essential information without necessarily recognizing every word uttered.

Similarly, Brown (1994) provides a list of listening types that can help EFL learners to practice listening tasks in a more purposeful way:

- Reactive listening—although the least practiced in communicative language classrooms— is a task that requires learners to listen to and repeat what is said.
- Intensive listening refers to that practice that allows learners to focus on components of discourse such as phonemes, words, intonation, and markers.
- Restrictive listening demands listeners' on-the-spot answers through physical response or verbal production.
- Selective listening, as its name suggests, requires learners to scan the listening material selectively. This type of listening is usually extensive, including stories, anecdotes, news reports, and TV programs from which students have to summarize or identify the main facts.
- Extensive listening asks listeners to extract the main message or purpose from extensive material. It requires additional strategies such as note-taking and discussion.

- Interactive listening challenges learners to understand oral production in order to respond and interact in a communicative process. It includes discussions, debates, and role-plays.

The hypertext environment *A Journey Through the US Culture* promoted the use of all of these six types of listening, except reactive and intensive listening, since the attempt was to involve students in authentic communicative tasks rather than in repetition and identification of components of oral discourse.

In addition to the different types of listening, Brown (1994) suggests a set of principles that teachers should know in order to design listening tasks:

1. Listening tasks must be supported by listening techniques (listening for main ideas, listening for details, and listening for making inferences) because the mere exposure to oral discourse does not guarantee listening comprehension. The students need to complete a task when they listen to focus their attention on the information being said.

2. Listening tasks must be motivating, involving students' interests, needs, and academic goals. Learners' personal experiences, prior knowledge, and skills become a central issue in teaching listening due to the fact that they can influence on the learning process.

3. Listening must contain authentic contexts, language, and tasks taken from the real world to enable learners to accomplish communicative goals.

4. Learners' answers must indicate that they have listened to and answered correctly.

Listening for main ideas, listening for details, and listening for making inferences became central operations in the listening tasks proposed in the hypermedia learning environment *A Journey Through the US Culture*, given the fact that they were practiced through the activities and questions along the journey. All the aural texts were set within authentic contexts, depicting real life situations and tasks such as having tours around different cities in the United States and listening to tourist guides, lectures, and interviews about the different cultural regions of the country. Thus, the learners listened to authentic aural material such as interviews and speeches, as it can be seen in the explanation of the listening design of the software in chapter 3.

Additional pedagogical suggestions dealing with the way listening tasks should be addressed in EFL education are provided by Lund (cited in Brown 1994). He provides several ways to enhance students' comprehension: learners can be asked to do authentic tasks such as answering a phone call, asking for information, or following directions. They can also be asked to choose one single answer from different options, to transfer information from one format to another, to answer close or open questions, to take notes or fill out tables, to complete a text with their own ideas, to repeat the exact words of a text, to translate a text into the native language, to hold a conversation based on what has been listened to, and to help learners to enhance listening strategies.

Accordingly, the listening tasks of the hypermedia environment were designed in the light of Lund's suggestions as learners were not only exposed to listening to native and non-native speakers, but were asked to do tasks in order to process the information they heard. Thus, they answered close and open questions, transferred aural information into semantic maps that appeared after the listening activities, summarized aural texts, and took notes in order to write a final essay. Moreover, they used learning strategies to facilitate the understanding of the tasks.

All the listening activities included in the hypermedia environment *A Journey Through the US Culture* were designed in light of the previous theoretical framework. A detailed description of these listening tasks will be presented in chapter 3, which relates the design of the hypertext.

The Use of Hypermedia in Language Learning

Since *A Journey Through the US Culture* is a hypermedia proposal, it is relevant to clarify that hypermedia and hypertext are not actually the same. Although they share similar characteristics, they can be different in various features. Their differences can be understood as follows:

A hypertext is a text displayed on the computer, usually containing hyperlinks to other texts to which readers can access immediately. It differs from the standard lineal restrains of written texts because it consists of a variety of linked texts, allowing users to select buttons or icons to move from one text to another without necessarily following an orderly procedure. Bush and Nelson (referred

by Noci & Salaverría, 2003) coined the term *hypertext* in 1963 to refer to the interconnection and non-linear structure of texts and materials (reports, notes, data-bases, computer documentation) which provide links from one page to another. Thus, when a user clicks on a link, he/she is taken to another page. Foltz (1996) points out that in hypertexts, information can be represented in a semantic network where diverse sections of the text are related to each other. A user can browse through or "jump" from one text section to another by choosing the way through according to his/her own personal interest and purposes.

Carlson and González (1993) explain that hypermedia expands the notion of hypertext because the former uses more additional media than the latter to present information visually and aurally. Although both represent a non-linear organization, the hypertext is limited to text, while hypermedia adds animation, graphics, audio, and video. While in a hypertext the user can move from one text to another, in hypermedia the user can move from one medium to another.

For instance, Underwood (1989) describes an experiential geography hypermedia program in which the user can fly over a world map displayed on the computer screen while the video monitor shows a synchronized image of the corresponding overhead view. The user can click on any part of the map and bring to the screen video images of a particular region. This hypermedia could additionally include music and voice. Similarly, several universities have created hypermedia projects such as the case of Harvard University, which developed *Project Perseus* (1988). This program integrates classic Greek literature, history, maps, images of monuments, and works of art. It incorporates several media formats and allows users to move through links "that are made possible by the non-linear, relational approach to computer programming characteristics of hypertext technology" (Neuman, 1991, p. 240). *Project Shakespeare* (Frielander, 1991) is another hypermedia proposal created at Stanford University, which combines drawings, photos, and both animated and still images.

In regards to hypermedia in the field of language learning, *The Zarabanda Notebook*, as Underwood (1989) explains, is a multimedia proposal for the teaching of Spanish as a foreign language. This hypermedia resource or HyperCard program offers the student the possibility to follow a story and see, for example, a drawing of a main character's room. Each object of the room, for example a book, a newspaper, and a map on a table, is a HyperCard button which represents a link to further information. When the user clicks on the map that is

on the table, for instance, the program immediately brings to the screen a map of the village where the main characters live. Each item or place that appears on the map is not only labeled, but represents in turn a button which, when clicked, brings to the video screen a picture of that part of the village. By clicking on other icons, the student can bring to the screen additional information such as a brief description of the characters in the story or a story map, referring to the sequence of events in the story.

Liu, Moore, Graham, and Lee (2002) indicate that educators have become more interested in the use of technological tools to improve foreign language teaching practices, and that much of the reviewed literature regarding technological proposals relate to software tools designed to foster learners' reading and writing skills. These authors state that numerous software programs have been created in foreign languages such as English, French, Spanish, Italian, German, Japanese, and Russian, being English the most discussed and reviewed target language in the available literature on software programs. Likewise, Arono (2014) notes that hypermedia and interactive multimedia programs in language teaching can help students to acquire listening skills through the use of pictures, animation, and video.

Liu et al. (2002) equally assert that *Inter Change*, a component of Daedalus Integrated Writing Environment (DIWE) in second language-learning classrooms, is a tool that allows users to have real-time written conversations, Although it was originally developed to teach English composition and literature for native speakers of English, it has been used in second language instruction, including languages such as French, Spanish, and English. One of the reasons why *Inter Change* has received a good deal of attention in EFL teaching is that it enables students to have meaningful and authentic conversations with other users in the target language.

As Liu et al. (2002) explain, there are broader software categories that include word processors, the Internet, and speech recognition software. Word-processing, considered the most "low-tech" of the tools, "... is perhaps the most accepted and universal use of computers in education today" (Hyland, 1993, p. 21). Word processing software usually provides features such as spelling checkers, thesauri, dictionaries, style checkers, and grammar checkers. By citing Levy (1990), these authors affirm that some researchers stressed that word processors tended to increase student enjoyment of assignments in the classroom. Internet-based

tools such as e-mail, synchronous chat, bulletin boards, HTML, DHTML, XML, and digital video are salient facilities currently being used in second/foreign language teaching and learning. Liu et al. (2002) point out that e-mail, for example, has been reported as a facilitating tool to hold realistic communication that enables learners to use real language as it happened with the projects of e-mail exchange done by Hellebrandt (1999) and Kroonenberg (1994/1995).

The pedagogical benefits that hypermedia programs have are that they possess a great variety of devices such as audio, text, images, and animation and diverse resources available, naming dictionaries, files, folders, and e-mail access. They equally contain different types of activities in computer-based learning environments that can satisfy learners' visual, auditory, kinesthetic, and analytical learning styles. These devices provide immediate feedback and allow users to work individually or in group. Hypermedia also provides playful activities, increases inquiry-based learning, enhances computer abilities, and facilitates mental processes and knowledge construction. Indeed, Foltz (1996) claims that the associative, retrieval, and interconnected paths hypertexts and hypermedia offer users are similar to the way ideas are associated and linked in human memory. For that reason, hypermedia environments develop learners' ability to find, use, recover, and acquire information because more than a reading process, it requires users to do problem-solving tasks.

Rueda and Quintana (2004) assert that the characteristics of ICT in terms of interactivity, connectivity, and hypertextuality offer possibilities to improve learning based on the interactive relationship between the individual and the content/information. These two authors think that hypertextuality enriches the study of language due to the possibility to configure the text and thus, to modify language processes and activities such as reading and writing. They mention that hypertexts have implications in the learning process because of their relationship with cognitive science, the human brain, and constructivist learning theories.

It is important to point out that most software programs have been designed to improve grammar, word pronunciation, vocabulary and language skills (listening and writing) in ESL/EFL, but few proposals have been focused on intercultural competence development. Despite the delimited material, some research studies exploring how technology-based materials can enhance cultural competence will be discussed in the State of the Art section of this book.

In regards to the particularities of the hypermedia learning environment *A Journey Through the US Culture*, it is a material that consists of a variety of linked devices including texts, images, pictures, sound, animation, and listening tasks as it is explained later in chapter 3.

Cooperative and Collaborative Learning

The pedagogical implementation of *A Journey Through the US Culture* was supported by the principles of cooperative and collaborative learning, two instructional processes in which learners work together on learning tasks with the purpose of acquiring knowledge through mutual help and reciprocal interaction. Cooperative and collaborative learning have several similarities, yet they also have certain differences. Their similarities mainly rely on accomplishing a specific goal by working together. It is a learning process through which learners acquire knowledge through social interaction, a perspective envisioned from Vygotsky's (1978) view of social constructivism. It also attempts to replace students' competitive and independent attitudes to learning into team-based work and cooperative efforts.

In terms of differences, Panitz (1996) explains that the definitions and principles of cooperative and collaborative learning generally overlap and intermingle. However, Richards and Rodgers (2001) state that cooperative learning is part of a more general instructional approach also known as collaborative learning. Thus, Panitz (1996) clarifies that while collaborative learning is a philosophy of interaction defined by a set of principles to promote socially structured situations, cooperative learning embraces a set of practical procedures and processes to help learners to accomplish desired learning goals. Matthew, Cooper, Davidson and Hawkes (1995) indicate that in cooperative learning, students are given a specific activity, usually by the teacher, so that each member of a group has different responsibilities or roles to complete a whole task. The teacher controls to some extent most of the learning process in the class, even if the students are working in groups. On the contrary, in collaborative learning, students organize and negotiate efforts themselves without the teacher's intervention. Students are more independent and make decisions about their own learning. They take full responsibility for solving problems and building knowledge. According to Dooly

(2008), proponents of collaborative learning, and in extent cooperative learning, claim that these processes help students to be active learners because they can exchange, debate, and negotiate ideas within their groups. They increase students' interest in learning because they are engaged in discussion and are encouraged to become critical thinkers.

During the implementation of the hypermedia environment *A Journey Through the US Culture*, collaborative learning, as proposed by Matthew, Cooper, Davidson, and Hawkes (1995) was carried out. Learners decided, organized, and assigned specific tasks among themselves, so that they had different duties to achieve a common goal. In this sense, learners helped each other to solve tasks through social interaction and meaning negotiation without depending completely on the teachers' aid. Their progress was determined by their sense of responsibility for doing the listening tasks in the hypermedia environment. The teacher was there as a facilitator in case they needed assistance or further clarification in regards to the work they had to do.

Following Lucero's (n. d.) notion of collaborative learning, two or more learners were engaged to work on *A Journey Through the US Culture* weekly. The pedagogical purpose was to engage learners to solve activities and tasks collaboratively. They worked in pairs, usually, one having more knowledge and strategies than the other, so that the student with limited knowledge could develop his/her zone of proximal development (Vygotsky, 1978a) from the social interaction with a more advanced learner. However, in other occasions both students had similar levels of language proficiency, but had dissimilar expertise in certain cognitive and language skills. All the tasks were solved in pairs through cognitive processes such as classification, comparison, evaluation, synthesis, and critical analysis, and other social processes such as discussion, negotiation, and mutual agreement for decision making. This is one of the main innovations of this learning environment as learners coached, assisted, and monitored each other and developed teamwork skills to complete the tasks. Clear examples of how students enhanced collaborative learning will be presented in the findings section in chapter 5.

Notions of Culture

The inclusion of cultural content has become a central issue in EFL education for the last three decades. In the process of globalization, the EFL community is becoming aware of the intertwined relationship between language and culture. It is impossible to teach language without culture in the present because people all over the world establish more and more cross-cultural spaces and international communication. Kramsch (1993) states that culture should be seen as a language practice and as the core of language teaching.

Sowden (2007) explains that in the past, culture was conceived as a body of social, artistic, and intellectual traditions associated historically with a particular social, ethnic, or national group. However, nowadays the term culture is used in a more complex sense, since it has become a problematic term to define. Smith (2005) affirms that culture is a difficult term to describe because it has been defined from different perspectives. For instance, he explains that in the nineteenth century the term culture was considered as improvement of the individual human mind and personal manners. Another definition sees culture as the development of society as a whole and the advance of civilization. Similarly, in the period of Industrial Revolution and the Romanticism, culture designated spiritual development as it referred to intellectual and artistic activities, becoming a synonym of the Arts. From an anthropological point of view, Smith (2005) affirms that culture is to be found in every human expression and not just in the high arts or in Western civilization. From the area of history, culture is seen as "a heritage . . . passed on over time through the generations" (Smith, p. 3); while psychological definitions conceive culture as a problem-solving device that allows people to communicate, learn or fulfill material and emotional needs. In short, there is a great number of definitions that make it difficult to describe culture, a term that is subject to ongoing discussion.

A more recent definition of culture which seems to be suitable for the teaching of culture in EFL education is given by psychologist and linguist Spencer-Oatey (2008):

> Culture is a fuzzy set of basic assumptions and values, orientations to life, beliefs, policies, procedures, and behavioral conventions that are shared by a group of people, and that influence (but do not determine) each member's

behavior and his/her interpretations of the 'meaning' of other people's behavior. (p. 9)

This definition refers to the basic values, beliefs, and conventions shared by a group of people who may want to accept them or who may not necessarily agree, approve, and follow them. Individuals of a group may be influenced by the norms and values of their culture, but not completely dependent on it. That is why culture is transformative and is inclined to change over time.

Prieto (1998) observes that culture is mediated by a process of communication because knowledge, ideas, and beliefs are codified and assimilated by the members of a particular community who share the same linguistic code. Thus, culture is necessarily acquired through language and through a process of social and collective communication. In this sense, when people learn a language, they simultaneously assimilate cultural behaviors, beliefs, values, and conventions that are mostly expressed through linguistic signs. However, the fact that an individual understands a set of cultural expressions and norms does not mean that he/she must embrace them.

Despite the interest in incorporating culture in the English classroom, there has been little attempt to study it in actual teaching. Most teachers and students are more concerned about the teaching of grammar forms, vocabulary, and the practice of communicative functions than in being familiar with aspects of the target culture (Byram, 1997). EFL education has not only emphasized the study of linguistic and lexical forms of language, but has seen culture from a received outlook. Atkinson (1999) asserts that a received view of culture sees the most typical characteristics of a community as relatively unchanging and homogeneous, and as a system of rules that substantially determine the personal behavior of all individuals that belong to a given community. Atkinson claims that this view of culture needs to be reexamined in language education in order to understand it as an entity that undergoes transformation through time.

Hinkel (2001) claims that most of the cultural topics addressed in EFL classes deal primarily with surface culture, naming geographical information, tourist sites, famous people, celebrations, and food, among other aspects. Nevertheless, Hinkel identifies more complex meanings of culture such as sociocultural norms, distinct individual and collective beliefs, values, and actions that are part of deep culture, and that are rarely studied in the English classroom. The

problem is that most people from other cultural backgrounds, like in the case of EFL learners, cannot understand easily the deep meaning presented in the target culture, and this can cause misunderstanding and cultural clash.

In contrast to the notion of received and surface culture, Atkinson (1999) explains that culture should be seen as a heterogeneous and transformative entity because it embraces the inner differences, inequalities, and innumerable points of view toward life and established norms among the members of one cultural site. Considering culture from generalizations, surface views, and oversimplifications can cause the misunderstanding of culture. This idea becomes meaningful for the EFL teaching practices because students should not continue having simplistic, reduced, and generalized opinions of the target culture. Culture has become an evolving, always transforming and dynamic entity that changes and modifies through time and from one generation to another. Differences, diversity, identity, the influence of one culture on another, and the blend of cultural groups coexisting in the same space in this growing globalized world, make notions of culture complex and problematic. If the EFL area does not adopt an evolving transformative view of culture, learners will continue creating stereotypes and generalizations of the target culture.

Taking into account the previous insights of culture, one of the main purposes of the piece of software *A Journey Through the US Culture* was to help students to observe a great variety of cultural material and expressions so that they stopped having homogeneous and reduced stereotypes of American people. They were expected to discover during the virtual trip the particularities and differences among the cultural regions and witness how people, behaviors, traditions, and beliefs change from one region to another in just one nation. Therefore, *A Journey Through the US Culture* intended to help students to see that the people of the US are not homogeneous and that whites are not only the legal citizens of this country, as many students still believe, but that there are complex and diverse cultural groups with particular features, as it happens for instance with the Mormons, the Native-Americans, and those living in the south or New England. As teachers-researchers, we were aware that this was an initial step to teach deep cultural content of the US, since it was a trip. Therefore, a complete understanding of all the complex cultural expressions was not going to be identified during the trip, but it was going to be an initial attempt to start seeing culture with a different approach: involving learners in tasks that allowed them the

possibility to make comparisons among the cultural regions in order to establish their differences and particular characteristics.

Intercultural Communicative Competence

Intercultural communicative competence (ICC) was a fundamental theoretical construct to develop this project. It has been defined as "the ability to interact with 'others,' to accept other perspectives and perceptions of the world, to mediate between different perspectives, [and] to be conscious of their evaluations of difference" (Byram, Nichols, Stevens, 2009, p. 5). However, it is crucial to understand that the notion of intercultural competence, as conceived in EFL education, is still in an early stage of exploration. Foreign language teaching has generally focused more on communicative competence, that is to say, on developing learners' linguistic and communicative skills to speak English fluently and accurately, than on intercultural competence. Byram (1997) seeks to complement the notion of communicative competence by incorporating the intercultural component. Thus, he asserts that intercultural communicative competence is an extension of communicative competence. While communicative competence refers to the speaker's ability to convey and interpret messages and to negotiate meaning within a particular speech community, intercultural communicative competence entails the speaker's ability to interact effectively with people from other cultures that he/she recognizes as being different from his/her own through a process of communication. That is, intercultural communicative competence implies the ability to identify cultural aspects that are necessarily expressed through real language in use when EFL learners have the opportunity to practice the four language skills: reading, speaking, listening, and writing.

In this sense, ICC is not strictly limited to the social interaction of individuals through oral communication and conversations. ICC can also be enhanced through "documents" and "cultural products" created, written, and produced by the human beings of another culture or the native one. Byram (1997) asserts "the intercultural speaker can 'read' a document or event for the implicit references to shared meanings and values . . . can identify or elicit different interpretations and connotations and establish relationships of similarity and difference between them" (p. 62). He clarifies that the intercultural person can use sources such as

reference books, newspapers, stories, television programs, and even kitchen recipes to understand and analyze social relationships among cultures and societies. Taking into account that it is very difficult for English teachers and learners to have daily opportunities to socially interact with native speakers in EFL settings, this clarification was an important input for this study.

It is a fact that *A Journey Through the US Culture* is a computer-based product containing reading materials, videos, maps, and audios with native speakers' dialogs with which learners could become intercultural, since all these resources, including the virtual trip itself, included content of the target culture that aimed at enhancing ICC. This hypermedia proposal attempted to represent a cultural experience through the trip to the US, even though it was clear that the learners were not going to have direct social interactions with any people of the target culture. However, through the resources or products that the proposal possessed, learners could become more intercultural as being aware of differences among the distinct cultural regions and their people.

According to Byram (1997) and Lee (2005), intercultural competence not only involves interaction and understanding, but also the ability to become critical of differences. In fact, Byram (1997) proposes a model of intercultural communicative competence which leads learners of a foreign language to become critical individuals. His model consists of three main aspects or s*avoirs*: (1) knowledge about cultural information, (2) skills to deal with cultural similarities or differences, and (3) positive attitudes toward cultural discovery. These three aspects are acquired through the process of building language competence and will ultimately prepare learners to become critical.

Regarding the first *savoir*, Byram (1997) explains that being culturally competent implies acquiring knowledge about "social groups and their products and practices in one's own and in one's interlocutor's country, and of the general processes of societal and individual interaction" (p. 51). Knowledge involves being conversant with aspects such as beliefs, historical relationships, definitions of geographical space, emblematic characteristics of a group, its institutions, and its religious values, etc.

The second aspect to develop intercultural competence is skills (*savoir comprendre*), which Byram subdivides into three skills: interpreting, relating, and discovering. In regard to the skill of interpreting, an individual gives sense to

specific information and general knowledge which will allow him/her to discover the allusions and meanings present in the foreign culture.

For Byram, the skill of interpreting necessarily relates to the skill of relating which involves the capacity to establish relationships by identifying common or uncommon grounds, and comparing cultural similarities and/or differences.

The skill of interpreting and the skill of relating equally connect to the third skill: the skill of discovery. The learner is able to discover new aspects and knowledge that he/she did not know before. The skill of discovery is "the skill of building up specific knowledge as well as the understanding of the beliefs, meanings, and behaviors which are inherent in particular phenomena, whether documents or interactions" (Byram, p. 38). From this perspective, being interculturally competent requires learners to develop the three skills previously mentioned which all together necessarily take place during the development of intercultural competence.

The third aspect (*savoir être*) involved in the building of intercultural competence is the ability to create positive attitudes such as openness, empathy, tolerance, readiness, and curiosity for cultural expressions and behaviors that may be similar or quite different, even "strange," from our own. According to Byram, these attitudes oppose to popular negative attitudes as prejudice, stereotypes, discrimination, and intolerance which very often cause unsuccessful interaction and cultural misunderstanding among people from diverse backgrounds. With the acquisition of these three aspects, individuals can be prepared to deal with other groups different from their own and to become more critical and analytical to understand why differences exist.

Byram points out that being a critical intercultural speaker (*Savoir s'engager*) targets several directions: (1) being critical about the beliefs, behaviors, and meanings of a group to better understand and deal with them based on reflection and analysis, (2) identifying "the ways in which particular cultural practices and beliefs maintain the social position and power of particular groups" (p. 20), and (3) discussing power relations in communication, such as that "the native speaker is always right" or when members of the dominant group have the possibility of "exercising power over the foreign speaker" (p. 21) just because he/she is not a native speaker.

That is why it is necessary to help EFL students to not only acquire language competence, but to develop their critical intercultural awareness. One of our

responsibilities as educators is to empower students with knowledge, skills, and attitudes, aiming at helping them to become more critical and interpretive of cross-cultural, social, and political meanings in this increasing globalized society. Because intercultural competence has become a fundamental aspect in EFL, one of the main goals of the hypermedia learning environment, *A Journey Through the US Culture*, was to create cultural awareness and enhance critical opinions about the cultural aspects that the students found through their virtual trip along the different cultural areas of the US represented in the journey.

Learning Autonomy

The term *learning autonomy* has been used through history in all aspects of life, and has been object of study in many fields of the development of human beings. In the past decades it has been given diverse definitions according to the discipline or the context in which it is studied. In general, Winch (2006) defines Autonomy as "the ability of individuals to choose and follow their own conception of a life that they judge to be suitable for themselves, an indispensable condition of individual well-being" (p. 1). It means that autonomy depends on the individual himself, and it is not something imposed by others. Since it is a concept that has permeated all the disciplines, as already stated, it has been considered a key aspect in the educational field, especially in relation to life-long learning skills. Moreover, many definitions have been given to it.

Autonomy is the capacity and critical ability to reflect on one's experience and to take charge of one's own learning. It takes the individual to be an independent learner and to be able to solve learning problems (Holec, 1981). Autonomy is the capacity to take control of one's own learning. It is a multidimensional capacity that takes different forms for different individuals in different contexts at different times. Autonomy implies recognition of the learners' rights within educational systems (Benson, 2001). "Autonomy is a capacity for detachment, critical reflection, decision making and independent action. It presupposes, but also entails, that the learner will develop a particular kind of psychological relation to the process and content of his learning" (Little, 1991, p. 4). It is a situation in which the learner is totally responsible for and conscious of all the decisions concerned with his learning and their implementation (Dickinson, 1987).

Although all those definitions vary in some way, all of them imply the necessity that learners take responsibility for and control of their own learning, especially nowadays, when the teacher is a guide and learning is performed by the student or learner himself/herself. Autonomy is considered nowadays to be a condition for learning to occur successfully. Thus, the teacher must be able to foster it in the students. According to Boekaerts (1997), the fosterage of autonomy is crucial not only to guide the learner's own learning during the formal education, but also to educate the learner in order to update his or her knowledge after leaving the school.

Not only the definition of autonomy is important when trying to help the students to be responsible for their own learning; autonomy also implies several features that must be taken into consideration when the teacher's goal is to make "autonomous students, and that involve student control, joint responsibility for evaluation, and an emphasis on learner awareness:" Learner autonomy implies responsibility in all the aspects that have to do with the learning process (Holec, 1981, p. 3 cited in Little, n. d.), including the following:

- Determining and controlling learning objectives
- Defining content and progression
- Selecting appropriate methods and techniques
- Monitoring the learning process
- Evaluating the learning outcomes
- Acquiring learning strategies
- Managing time

This means that the learner who becomes autonomous will have the freedom to make decisions not only in relationship to the content, but also to the pace of learning, the path to the goal, the organization of his/her learning process, the measurement of his/her success, the strategies, resources, and so on.

Dickinson (1987) asserts that autonomy presupposes a situation in which the learner is entirely responsible for all his learning decisions and their realization, and in the case of complete autonomy, there is no teacher or institution participation. However, autonomous learning does not mean being completely detached from the teacher and from other learners. The teacher will continue to be a guide that gives students the instruction and the guidelines they will need to become autonomous, given that autonomy cannot be achieved suddenly. In

other words, it is the instructor who provides students with the strategies to be able to take control of their own learning and who will empower them to take responsibility for their own learning.

According to Little's learner autonomy theory (1991), some principles are to be applied by teachers if they want to help students to increase their autonomy level:

- Learner empowerment, which will guide learners to assume responsibility for their own learning and give them control over the learning process. In this aspect, the teacher must initiate, support and direct the processes in which the students identify new learning goals, new learning activities, strategies and materials, and time.
- Learner reflection, which implies helping learners to think about their learning in order to review what has been achieved in a certain period, after having done an activity, after having used a strategy, etc. In other words, the teacher must help them to evaluate their own learning outcomes, identifying weaknesses and strengths.
- Appropriate target language use, which requires the teacher to scaffold classroom discourse for learners to be able to use the target language for authentic communicative purposes from the very beginning, starting from simple language to more complex discourse.

Nevertheless, although it has been said that the teacher is essential in the autonomy fosterage process, the learner must try to develop skills such as self-management, self- monitoring and self-assessment, skills that will, in turn, make a student who will be motivated and confident, disciplined and organized, responsible, reflective; logical and analytical, creative and willing to take risks, aware of the learning process, as well as resourceful and able to assess and evaluate his/her weaknesses and strengths (Benson, 2001).

A student with those features will be an active member of his/her own learning process since he/she will be aware that the teacher is not the center of that process anymore. That kind of learner accepts that his/her own efforts are essential to progress in learning and behaves accordingly; is willing to cooperate with the teachers and others in the learning group for everyone's benefit; and consciously monitors his/her own progress, and makes an effort to use available opportunities to his/her own benefit, including classroom activities

and opportunities to work on the language outside the educational institution (Scharle & Szabó, 2000).

According to Scharle and Szabó (2000), there are three important phases in order to help a student become a responsible learner: Raising awareness by means of showing the students new ideas, experiences, and activities to help them to be aware of their learning process in terms of changing attitudes, so that the students understand their new roles in the learning process, which will imply a change in behaviors; and transferring roles, the phase in which the students take some of the teachers' role to decide on tasks, activities, and other decisions to be made in the process.

All in all, being an autonomous learner will necessarily improve the student's motivation, which in turn will help him/her to develop his language competence so that he/she can be a successful learner and user of the target language. Although the methodology chosen to work with the environment *A Journey Through the US Culture* was collaborative, data revealed that, at some point, students approached the tasks in an autonomous way when they assigned responsibilities to complete them. This autonomy was evidenced in their willingness to put effort in the fulfillment of activities, to monitor their progress, to take advantage of the opportunities to improve their learning, and to cooperate with others. This aspect will be discussed in the findings.

Learning Strategies

The hypermedia environment is also based on a cognitive theory which claims that strategies allow learners not only to acquire declarative knowledge (the *what*), but also to acquire procedural knowledge (the *how*) to process, organize, store, and use declarative knowledge (Anderson, cited in Gagné, 1985). In general, the listening comprehension activities that teachers set in the language classroom require learners to listen to declarative knowledge (information, events, facts, ideas, and data) without providing them with essential strategies or techniques to facilitate the comprehension, interpretation, and organization of the information heard. That is why, as a crucial step to do the listening tasks, students were trained to implement learning strategies so that they could develop procedural knowledge in order to become successful learners. In effect, learning

strategies constitute a key aspect to engage in the cultural trip around the US in the hypermedia application. Learning strategies, as defined by O'Malley and Chamot (1990), are procedures or techniques that facilitate the completion of a learning task, and that are used by learners to self-direct and improve their own learning process.

State of the Art

Encompassing the theoretical framework described in the previous pages, this research study equally took into account the State of the Art, which allowed us to get acquainted with actual research studies that have focused on promoting culture, listening skills, and technology in the EFL area. We wanted to observe to what extent our hypermedia learning environment, *A Journey Through the US Culture*, might be an innovating teaching resource to promote listening and interculturality in L2 through collaborative learning in comparison to other studies working on the same research interest. The state of the art also allowed us to define the pedagogical contributions to the field based on what other colleagues have done so far, and verify the pertinence and validity of our proposal. Thus, the state of the art includes, in the first place, research related to the articulation between culture and technology and, in the second place, research in which the listening skill has become the core of study.

Research on Culture and Technology

As explained in the section "The Use of Hypermedia in Language Learning," computer-based materials such as the Internet, software, and hypermedia resources have increasingly become important instructional means for foreign language learning practices. However, most research projects implementing technology materials in the language classroom have been designed to the improvement of grammar and vocabulary knowledge and the fosterage of listening, reading and writing skills. Only few cases have studied the effects of using computer tools and multimedia to promote EFL learners' intercultural competence.

First, the state of the art at an international level is provided, followed by a section focused on the national context.

International Context

This review is framed within the distinction between synchronous vs. asynchronous modes of Computer-Assisted Language Learning (CALL) or computer-mediated communication (CMC) (Chun, 2008). Synchronous CALL happens when users "exchange opinions in real time format via chat rooms, instant messengers, or video conferencing. Participants . . . post typed messages which appear on the computer screen; and they can scroll back and forth to review previously sent stretches of the discourse text." (Nguyen, 2008, p. 26). That is to say, users at different places have to log in at the same time to work simultaneously on the tasks, for instance with pieces of software or hypertexts, following specifications such as time allotted and clear instructions. Synchronous CALL primarily depends on CMC tools, namely chat or video conference to interact with other users.

On the contrary, asynchronous CALL refers to that type of computer mediated communication through which interaction is not simultaneous because it takes place through the World Wide Web (www) resources such as "e-mail, web blog, newsgroups, and postings in bulletin board system" (Nguyen, 2008, p. 26). With these means, users can interact with others and complete the tasks at different times according to users' availability, access to the Internet, and their individual progress, since users do not need to log in at the same time. Due to the fast growth of Web 2.0, asynchronous proposals are more popular today than synchronous CALL environments because of the telecollaborative tools it offers to both communication and the learning processes. Therefore, the research reported here emphasizes cases of asynchronous CALL, which is one of the most implemented perspectives in EFL educational settings.

Synchronous CALL

Lee (1998) reports a pilot study on the use of Internet technologies by using on-line newspapers and on-line chat rooms. The purpose of this study was to

achieve three goals: (1) to foster advanced Spanish learners' cultural knowledge through authentic reading material, (2) to enhance intercultural experiences through chat rooms, and (3) to improve students' writing and speaking skills by promoting collaborative learning.

Lee used several on-line newspapers, including *Clarín Digital*, published in Buenos Aires, *La Jornada* published in Mexico City, and *ABC*, a newspaper published in Madrid. She says that newspapers, containing authentic language and reporting events of the world, helped language learners to become aware of cultural knowledge. Moreover, she explains that electronic chat rooms have become a popular Internet technological device because they provide environments in which real people from different nations produce real language for real communicative purposes.

Prior to the study, Lee designed a questionnaire named "Survey of Your Experience with Internet Technology," to examine 62 students' attitudes towards using Internet tools in fall 1997. Results showed that students had a positive attitude toward the Internet. Then, she gave 31 Spanish learners on-line activities to achieve the goals of her study previously stated. A second questionnaire called "Survey of Your Experience with On-Line Activities," was distributed after the students completed the on-line activities. Finally, an exit oral exam was given to the participants to determine if their oral skills had improved from using on-line activities.

In order to collect the data, Lee created a web site which provided students with selected newspapers from Hispanic countries and access to chat rooms for weekly on-line discussions. One of the chat rooms found at the web site was created by using Para Chat, which offered a place for chat room sessions. Another chat room was *El Tiempo Libre,* originated in Mexico. When accessing to these chat rooms, students could discuss current cultural issues with native speakers and participate in intercultural exchanges.

Results from the experience showed that half of the students agreed that on-line chat rooms helped them to improve their writing skill in Spanish as they had written information and ideas when chatting. Students also showed a positive attitude to the use of chat rooms in the language classroom, since they commented that they had gained cultural understanding and "a sharper perspective of the target culture" by interacting with native speakers via *Tiempo Libre*. Concerning newspapers, most students agreed that the on-line newspapers were

an important means for obtaining up-to-date knowledge of the world, and facilitated their cultural learning. They affirmed that they had not only learned about culture through short stories, news items, bibliographical information, social news, and simple technical material written for general reader on the newspapers, but had also read authentic language. Lee concludes that on-line activities (chatting) motivated learners to participate more in communicative discussions in comparison to the limited communicative opportunities they had in the conventional classroom. Lee also indicates that the Internet is a powerful pedagogical tool that involves learners in a process of communications and cultural learning with other people in the world.

Asynchronous CALL

O'Dowd (2003) argues that there is little research on whether on-line intercultural collaboration develops learners' understanding of the other cultures. Despite the scarce research projects that have attempted to explore the relationship between intercultural competence development and computer-based materials, there are several cases that have examined this topic:

In regards to more research involving computer-based tools and intercultural competence, O'Dowd (2003) reports a research project on e-mail exchange, which involved five pairs of Spanish and English second-year university students in an academic year. O'Dowd was teaching English as a foreign language to some Spanish students in León, Spain. He came into contact with a teacher through an on-line mailing list, who was teaching Spanish as a foreign language at King's College, England. O'Dowd and his counterpart decided that five members of each class would be paired together to establish cultural exchanges.

Participants from the two groups did several tasks. For instance, they wrote a letter to introduce themselves, and told partners what it may be if they visited the other's home town. Through in-class e-mailing, EFL learners in Spain discussed the image of Britain in Spain and recounted past experiences with members of the British culture. Spanish learners in England did the same. Also, students from both groups visited a Spanish/British local tourist shop correspondingly, and reported back to their partners what they saw in the shops by saying how items in the shop represented the target culture. Another task requested EFL

students to read and discuss various short extracts about England and the English cultures and explained to their partners (Spanish learners in England) how they viewed English culture and its people. The tasks allowed participants to interact with members of the target culture in order to acquire knowledge and become more aware of the different interpretations of cultural products or practices which members of another culture may have or experience.

According to O'Dowd, this research was a combination of ethnography and action research approaches. He analyzed participants' on-line interaction (since he asked Spanish students to send to him copies of all e-mails they sent or received from their partners in London), requested them to answer questionnaires, and interviewed them in order to gain insight into why some e-mail exchanges may fail to develop intercultural awareness while other e-mails can alter learners' opinions of seeing their own and the target cultures.

One of the main issues found by O'Dowd was that during the intercultural exchanges, students seemed to be fighting against the stereotypes that they felt other cultures had of Spain and of Spanish people. Through the e-mails, English learners talked about their lives and their homes, and tried to correct the stereotypes which they believed others, in this case the students in London, had of their culture. An example of Spanish people's stereotypes taken from data was that foreigners think that Spanish people are very lazy and love going to parties. Through the e-mails, students changed these stereotypical views.

Data also showed information about different attitudes towards "los toros" (bull fighting) when the two groups asked to give their opinions about this ancient Spanish tradition. This topic revealed opposite cultural views because some associated bullfighting with "Spain, blood, cruelty, and festivals," while others associated it with more positive terms such as "tradition, olé, and bull-fighters." This interchange caused diverse opinions on one of the most representative cultural symbols of Spain.

O'Dowd concludes that e-mail exchanges seem to confirm the value of network-based interactions for the development of intercultural learning as it was found in this research. E-mail exchange helped students to develop intercultural communicative competence because they were challenged to identify and explain the values and meaning of products and practices in their own and target cultures. Finally, O'Dowd points out that it is important that intercultural e-mail exchanges continue to offer more findings in further research and analysis.

Myers (2006) indicates that EFL teaching should engage language learners in activities mediated by technology that generate awareness of how language and culture can construct identities and meanings. Based on his positive attitude to digital technology, Myers refers to research studies done by several educators who have explored how cultural awareness can be actually enhanced through computer-based materials and tools. One exemplary study was conducted by Kim (2003), cited by Myers, who researched the impact of website authoring by ESL students in US high schools. Students from a multicultural classroom did a culture project that consisted of constructing a website about an aspect from their own culture. Students searched the web for links to relevant cultural sites. First, they wrote explanations about cultural topics and stories on the web pages. Second, they discussed their ideas with classmates. Finally, they gave final oral presentations. Significantly, the project forced students to negotiate their identities out of the everyday confrontations they were experiencing with the American culture and the English culture. Kim reported that this project helped international students living in the US to construct confidence and be proud of their cultural identity, as it happened with Korean students in American schools (Kim, 2003, p. 157). Through the use of technology, including websites, learners did self-examination of their own cultural perceptions and learned about how to describe their identity in the second language to students of different cultures.

Another study that Levy (2007) refers to involves an Australia-Brazil Collaboration project conducted in 2001. In this study, e-mail was used to facilitate an on-line culture learning experience between 24 English language teachers at the Federal University of Minas Gerais (UFMG) in Belo Horizonte, Brazil, and 12 language teachers (various L1s) at Griffith University, Brisbane, Australia. The main goal of the project was to help language teachers from both countries to gain culture learning. The majority of participants were non-native speakers of English, and they did not know each other prior to their first on-line communication.

By having intercultural communication through e-mail, participants not only learned about new cultural content, but were able to distinguish differences between norms and practices of both cultural settings. For example, Many Brazilian participants gave their age the first time they introduced themselves to their Australian partners through e-mails, since telling a stranger their age in an introductory conversation is common practice in Brazil. However, in Australia it

is often unusual to tell strangers one's age when introducing oneself for the first time in an e-mail.

Another finding was that when Brazilians and Australians spoke via e-mail, they described their own country very modestly, while gave many positive opinions about the other culture. Participants also described the target culture by referring to stereotypes, which were useful for a point of departure to continue the conversations on-line. In later e-mail conversations, participants from both countries modified, restated, and redefined the stereotypes they initially had about the other culture, thus giving a more nuanced description of their culture to their partners over time. Levy cites an example showing this fact as Brazilian participants said that they

> …would like to know what people around the world might think about Brazil. It was funny to see so much samba, soccer, and Rio de Janeiro in the pictures. It was funny because not everyone in Brazil likes samba, and some people, in spite of enjoying it, can't dance it very well. And not every man in Brazil has a way with soccer. (p. 116)

When the e-mails were analyzed as data in this study, it was found that participants from both countries talked about a wide variety of mutual interests and topics such geography, paralanguage, food, transportation, employment, animals, music, sports, weather, movies, actors, and pop stars. Levy concludes that when e-mail texts are viewed as a means for cultural exchanges, a very rich resource of cultural data becomes available for in-class group discussion among participants from two different and distant cultures.

Liaw (2006) presents the findings drawn from an online learning environment which was developed to foster EFL students' intercultural competence at a school in Taiwan. Students involved in this study read articles on topics of their own culture, instead of reading articles of the target culture. Later they had to express their opinions about those articles to speakers of another culture (American students). Thus, the project offered EFL learners the opportunity to read about and discuss their own cultural practices. After reading the material, students had access to an online learning environment, an e-forum, which allowed them to exchange their views on the material they had read with speakers of the target language. The idea was to allow EFL learners to function as mediators

between their own culture and the target culture by using the target language to communicate with speakers who spoke English as a native language.

The articles chosen for this experience were taken from *Sinorama*, which according to Liaw, is a popular bilingual magazine that includes articles on the lifestyles, society, and cultures related to the people in Taiwan. Liaw asked students to read the articles written in English, which referred to their own culture. The readings were provided through a web-based environment. Once each Taiwanese student had read each article, he/she was grouped with two peers in the USA with whom he/she exchanged views through a discussion in the forum, hence promoting intercultural competence development.

The findings of this study revealed that through this experience all the participants had been motivated and rewarded. The most interesting part for them was when they read English articles on their own culture and had the chance to describe and explain their own culture to others. Liaw analyzed the students' forum entries, and she found that students had developed four types of intercultural competence: (1) students were interested in knowing other people's way of life and introducing their own culture to others, (2) they had developed the ability to exchange personal opinions, as they had realized that they could understand other cultures by seeing things from a different point of view, (3) they had gained knowledge not only about their own, but others' culture for intercultural communication, and (4) they had acquired knowledge about intercultural communication processes. Based on students' entries, the participants used personal experiences and responses to the articles in order to describe and explain their own cultures and to compare to and contrast the way people did things in the two cultures.

In more recent research, Lee (2011) conducted another study which explored how using CMC via blogs and face-to-face (FTF) interaction through ethnographic interviews with native speakers (L1s) supports autonomous learning and develops intercultural communicative competence. The project involved 16 US Spanish learners who had never used blogs prior to the project and who participated in two study abroad programs sponsored by the Center of Modern Languages at the University of Granada in Spain. Lee and a partner teacher taught a course about the language and culture of Spain in such a way that students fostered ICC. Three types of blogs were created for the project: The first kind was personal blogs in which participants wrote daily reflection about various aspects

of the Spanish culture and identified differences from their own perspectives, including current events, popular culture, and native speakers' behaviors and attitudes. The second kind was a class blog through which students posted a 200-word entry to share their observations with the others, ask questions regarding the assigned topic, and/or make comments on others' postings. The third type was a project blog in which students chose a cultural topic of their choice and created a blog to compile and share information about that topic. To do so, they read articles and interviewed people face-to-face in order to document the topic in the blog.

Data collected from blog entries, reflective reports, and post surveys were used to report learners' autonomy and intercultural learning. With respect to autonomy, some of the main findings showed that blogs had created appropriate conditions to support learners' autonomy, since most students reported that they had self-managed and solved problems when writing entries in the blogs. Also, writing entries required them to self-direct and assume an active role in their own learning. However, a few less self-regulated students said that it was difficult for them to write three weekly entries because they were unable to complete them on time and because they found it problematic to write their comments in the target language. These participants confessed having less motivation to participate in blog discussions. Lee indicates that some learners' degree of autonomy was affected by the lack of willingness and self-determination to perform actively in learning tasks.

As autonomy was connected to the observations learners had of cultural aspects, findings revealed that more than 70% of the students found blogs a useful means to engage in the process of self-reflection, understanding, and analysis of cross-cultural similarities and differences between their own culture and the target culture. One clear example taken from data is that one participant wrote in his personal blog that he had not understood why he was constantly reminded in Spain of not taking a shower for more than five minutes and not using the Internet for more than two hours daily. In a later blog, this student reported that

> Now I understand that water and electricity are so expensive in Spain. I was not aware of this at all until I lived with my host family. I do think we Americans should pay more attention on things like this and we waste too much of everything. (Lee, 2011, p. 97)

Based on this example and other ones, Lee reports that almost 90% of participants agreed that they had gained cross-cultural perspectives from their interactions with their partners through the blogs and their reflective entries. Lee concludes that it was evident that the students showed the ability to compare and contrast the two cultures, which is fundamental for the development of ICC.

Cresswell (2008) conducted a study on culture learning in some Spanish companion book websites and textbooks. This research examined the on-line tasks associated with six current Spanish textbook programs. The design focused on an analysis of culture concepts included in on-line tasks in order to determine if they complemented the gap left by textbooks in regards to culture content. The researcher observed if learners were encouraged to recognize their own cultural conditions if learners were prompted in process- based tasks such as solving authentic problems, giving solutions, and applying new knowledge. The findings revealed that evidence of encouraging learners to recognize their own cultural condition and to engage in process-based tasks was present to a minimal degree. Also, it was discovered that the learning of the target culture was characterized by low-level thinking skills and by a predominance of tasks that requested the understanding of factual information. Just a few tasks motivated learners to respond to hypothetical and creative situations. The researcher recognizes that the world websites are an authentic venue for culture learning in contrast to textbooks, but he suggests future directions to expand the scope of the usefulness of on-line tasks because they complement the presentations of culture content in textbook.

National Context

In the national context, a case study involving culture and technology was carried out by Mizuno, Jánica, Rey, and Rosado (2006). They analyzed the students' opinion on the characteristics that multimedia material should possess to enhance the transcultural learning of level 7 English learners from the Language Institute at Universidad del Norte (Barranquilla, Colombia). The study was carried out with 20 students from different majors, using class observations, interviews, and questionnaires. The most relevant findings show that the participants mentioned that multimedia material should not only have topics about

the foreign cultures, but about their own culture, that students should be given the opportunity to contact people from other cultures, and that they should be given travel tips when visiting other cultures. They also said that multimedia material should be attractive to students' sight, be interactive, present content related to their age and context, be varied, let students express their opinions, and facilitate valuable transcultural exchanges. Students also mentioned that the multimedia should give general information about English speaking countries. The researchers pointed out that it is also necessary to raise students' awareness of the varieties of English, although that was not mentioned by the students.

In her study, Aldana (2012) explored EFL eighth graders' perceptions of their own culture and the culture of the target language while they spoke with English native speakers by using ICT. They particularly used e-mailing, E-pals[1], voice thread[2], Gloster[3], and Edmodo[4]. Aldana equally observed how telecollaboration took place during an intercultural encounter between the two groups of eighth graders from different cultural backgrounds. The results revealed that EFL students' perceptions of their own and the target cultural frames were negative and positive. Specifically, EFL students' perceptions of their own culture and the target culture were influenced by negative and positive stereotypes that they had learned in their own cultural background. The study also showed that positive attitudes enabled EFL students to be more conscious of cultural differences which, in turn, moved them from a closed view to a more open view of cultural differences.

Moreover, it was noticed that negative stereotypes hindered students' possibility to see beyond their own culture and prevented them from appreciating cultural differences. Thus, they tended to judge the foreign culture in a negative way in relation to the perceptions they had of their own culture, and thought

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1 Collaborative Internet tool that allows teachers and students from around the world to interact and collaborate on cultural projects through an e-mail platform.

2 A collaborative, multimedia slide presentation that holds images, documents, and videos and allows students to navigate slides and leave comments.

3 Web tool that allows creating virtual posters with multimedia elements such as text, audio, video and images.

4 Free educational platform that allows communication between students and teachers in a private fashion similar to microblogging.

that one culture was superior to the other. Thus, the cultural value of difference was devalued. Data also showed that cultural differences appear to be minimized since EFL students' own vision of the world is expanded into the target culture as a means to understand it.

In relationship to the impact of Internet applications in EFL students' perceptions of their home culture and the target culture, it was concluded that Internet applications were favorable to study two cultures. Telecollaboration was a potential means to gain understanding of the target culture because it enabled EFL students' intercultural contact with people from the target culture. From this intercultural experience, it can be concluded that telecollaboration also provided EFL students with the opportunity to explore cultural differences and similarities based on the cultural information they obtained during the intercultural experience.

Telecollaboration helped to reflect about cultural aspects that are taken for granted and allowed students to become aware of cultural differences and discover through a comparative approach how they and their peers perceived the world. In other words, the ICT tools used in the study offered the students a valuable opportunity to interact with the target culture, which helped them to reflect on their own culture and considered how they and the speakers of the target language see the world. This means there was a development of intercultural communicative competence.

A research study carried out by Arias (2010) searched the possible impact of Web 2.0 on the professional development of a group of in-training teachers. It was found out that the use of several ICT tools such as wikis, blogging, and pod casts pose advantages in several aspects: in terms of the technological component, students affirmed having improved the knowledge of the tools and having changed their view of ICT, given that they started to see them as learning and teaching tools. In terms of the pedagogic component, findings showed that the ICT tools enhanced the students' motivation to learn, were an innovative tool to learn and practice the target language, and fostered intercultural competence. Participants recognized that ICT are sources of social and knowledge construction and, at the same time, promote autonomous work. Finally, in regards to the linguistic component, there was evidence that the tools helped the students to improve the knowledge and the use of the grammar of the foreign language as well as the language skills and vocabulary.

It is a must to recognize that in the national context there have been other salient research studies seeking to promote intercultural competence in the EFL classroom. Nevertheless, these studies have not implemented computer-based material and technologies. The important contribution of these studies is that they have started to recognize the importance of addressing culture and fostering ICC in the foreign language settings in Colombia. Such is the case of Castro and Bohórquez (2006), who collected data to find out and compare how students from two universities, one in Tunja and the other in Bogotá, assessed the incorporation of cultural aspects of the foreign country into the teaching of the foreign language. The guiding question of this research was: How do EFL students interpret cultural aspects embedded in foreign language learning? Through questionnaires and students' essays, participants expressed their feelings, thoughts, and understanding of the cultural aspects they addressed in class.

Findings revealed that participants studied the traditions and customs of different countries and the way people live in them. That is to say, they saw culture as history, as knowledge about the world, as understanding, and as identity. Students referred to cultural aspects such as holidays, music, history, and literature as important aspects to learn in the target language. Although the researchers claim that the teaching of cultural content should lead to promote tolerance and resist prejudices, the study does not evidence deep interpretation of the target culture. They recognize there is still the need to promote tolerance, respect, and patience toward the other culture.

In another research study, Gómez (2010) proposes the incorporation of authentic multicultural literary texts of the US in the EFL classroom as a means to develop critical ICC. The data collected showed how learners acquired cultural knowledge, developed critical intercultural skills, and created positive attitudes towards different cultural groups of the United States (Latinos, Jewish-Americans, and African-Americans) when they read literary short stories. Through the implementation of four constructivist approaches (inquiry-based approach, dialogical approach, transactional approach, and content-based learning), learners became critical about issues related to gender inequality in patriarchal societies, prejudices against working social classes, immigration, family conflicts due to gaps generation, and conflicts of race and exclusion in multicultural societies. One of the interesting findings is that learners compared the situation of many

minority groups of the us to their own lives and their country, and became critical in terms of difference and intolerance.

Research on Fostering Listening in EFL Education

Regarding research on the listening skill, Carrier affirmed that the majority of research has focused on cognitive aspects, and very little attention has been given to the social context of listening. Among the aspects that have been researched she mentions variables such as speech rate and pausing, stress and rhythmic patterning, morphological and syntactic modifications, discourse markers, elaborative detail, memory, text type, and prior knowledge, as well as psychological factors namely anxiety, self-confidence, and gender. She claims that it is important to research on the effect of social relationships on conversational interaction, which, in turn, has an effect on listening comprehension (1999, cited in Osada, 2004).

Another field of research is related to the use of cognitive and metacognitive strategies to enhance listening comprehension. Authors such as O'Malley and Chamot (1990), Oxford (1990), and Wenden (1998), among others, have conducted research to describe, define, and classify the strategies good learners use.

Goh (1997) conducted a diary study that revealed second language learners' beliefs and knowledge about their listening skills in the Republic of China. From an analysis of the listening diaries of 40 ESL learners enrolled in an intensive English language program in Singapore, it was found that many of them had clear ideas about three aspects of listening: their own role and performance as second language listeners, the demands and procedures of second language listening, and the use of learning strategies for listening. The listening diaries demonstrated that the students had a high degree of metacognitive awareness. They were conscious of their learning process and of the demands of listening to English, and had specific beliefs about the factors that could enhance or impair their listening comprehension. As a result, they were not only capable of observing cognitive processes in their listening, but also capable of verbalizing their theories about learning to listen in another language. The researcher thought that a diary provided the right stimulus for students to reflect on their listening.

Goh followed Flavell's typology on metacognitive knowledge proposed in 1979 and the definitions stated by Wenden about that type of knowledge proposed in 1991: person knowledge (general knowledge learners have about how learning takes place and how different factors can influence language learning, or what learners know about themselves as learners, and the beliefs they have about what leads to their success or failure in learning a language), task knowledge (what learners know about the purpose, demands, and nature of learning tasks and their knowledge of the procedures that constitute these tasks), and strategic knowledge (knowing about which strategies are likely to be effective in achieving learning goals) (p. 362). The researcher found evidence of person knowledge, task knowledge and strategic knowledge learners had, which she suggests should be shared in the listening classroom to help learners to become more aware of the different aspects of second language listening and become more autonomous.

Vandergrift (2003a) conducted a small-scale study with two groups of 41 students registered in the second semester of beginner-level French as a second language course. He reported that students completed two tasks designed to teach students how to listen and then reflected on its usefulness in facilitating comprehension and its effectiveness in raising their awareness of the listening process. Results showed that students reacted positively to both listening tasks and provided suggestions for improving the second task. Students highlighted the benefit of predictions, the usefulness of discussion with a partner, and the motivational effect of focusing attention on the process, as well as the product of listening, which is one of Vandergrift's proposals in relation to teaching listening.

Vandergrift, Goh, Mareschal and Tafaghodtari (2006) designed and validated a self-report listening questionnaire (MALQ) to assess second language (L2) listeners' metacognitive awareness and perceived use of strategies while listening to oral texts. They used an exploratory factor analysis of the responses of a large sample, 966 language learners, and a subsequent confirmatory factor analysis with another large but different sample of 512 learners, which resulted in a 21-item instrument with robust psychometric properties. Five distinct factors which group strategies emerged: problem-solving, planning, and evaluation, mental translation, person knowledge, and directed attention. They were able to demonstrate a significant relationship between MALQ scores and actual listening behavior. Those authors claim that although the results are based on learners'

self-reports, they evidenced learners were aware of some of the metacognitive strategies they were using, and that is a good step "to learners for developing their awareness of the comprehension process and useful to instructors for diagnosing students' metacognitive awareness and self-regulatory abilities, thereby assisting instructors in helping L2 learners to overcome listening comprehension difficulties" (p. 438).

The problem-solving factor included awareness of strategies such as using known words to deduce the meaning of unknown words, using the general idea of a text to deduce unknown words, using one's experience and general knowledge in interpreting the text; adjusting one's interpretation upon realizing that it is not correct, monitoring the accuracy of one's inferences for congruency with the developing interpretation, and comparing the developing interpretation with one's knowledge of the topic. The planning and evaluation factor involved strategies such as having a plan for listening, thinking about similar texts as a guide for listening, having a goal in mind while listening, periodically checking one's satisfaction with the ongoing interpretation while listening, and evaluating the strategic effectiveness of one's listening efforts.

However, the mental translation strategy represents an inefficient approach to listening comprehension that beginning-level listeners often feel compelled to use (Eastman, 1991), but which they must overcome in order to become skilled L2 listeners (Vandergrift, 2003a). The factor related to person knowledge implied strategies such as assessing the perceived difficulty of listening compared to the three other language skills, learners' linguistic confidence in L2 listening, and the level of anxiety experienced in L2 listening. Factor 5, related to directed attention, included strategies such as getting back on track when losing concentration, focusing harder when having difficulty understanding, recovering concentration when one's mind wanders, and not giving up when one experiences difficulties understanding (pp. 450-451). Results showed that the four metacognitive processes (i.e., planning, monitoring, problem-solving, and evaluating) did not emerge as distinct from one another but can be accounted for in the first two factors: problem-solving and monitoring loading on Factor 1 and planning and evaluating loading on Factor 2.

This strong connection between these factors, exemplified by their relatively strong intercorrelation (including Factor 5), which "might be further evidence for the complexity and interconnectedness of these metacognitive processes,"

are described by Vandergrift (2003a) as "orchestration." This author agrees with Murphy (1985), who explained that strategies are most effective when they "couple together like the links in a fence, or the molecular units that bond together to form the double helix of a molecule of DNA" (p. 38).

Vandergrift (2003b) also conducted another investigation of listening strategy applications with 367 grade students learning French, in which he examined the types of strategies used and the differences in strategy use by more skilled and less skilled listeners as revealed while these students listened to authentic texts in French. Think-aloud protocols were used and data were coded and analyzed both quantitatively and qualitatively. Significant differences between less skilled and more skilled listeners were found. More skilled listeners showed less translation, more use of metacognitive strategies, more questioning elaboration and more monitoring, which "work together to generate a cycle of strategy deployment that promotes a greater depth of interaction with the text and results in more successful comprehension" (p. 485). The author proposed an emerging model of the skilled listener.

This approach is characterized by a systematic and flexible use of both top-down and bottom-up processes in interaction with the input. This flexibility is evident in the consideration of potential frameworks of interpretation before a decision is made. The processes underlying this questioning elaboration, according to the author, involve more than just cognitive strategies because listeners plan for resolution by considering possibilities (metacognitive strategies of problem identification, self-management and/or selective attention) and then verify their anticipations (metacognitive strategy of monitoring).This resembles somehow the findings of our own study.

Vandergrift suggests that less skilled listeners need to be taught these metacognitive strategies of planning, monitoring and evaluation and that "listening competence can be consciously developed with practice" on developing those metacognitive strategies, which "is critical to the development of self-regulated learning" (p. 489), one of the aims of teachers to prepare students for lifelong learning.

The previous studies described investigated the use of strategies in different classroom situations. Now we will turn to studies that incorporate technology and interactivity to foster listening comprehension or learning strategies to improve listening skills.

One study similar to ours in the use of hypermedia was conducted by Strambi and Bouvet (2003), although it differs from ours in the sense that the hypermedia was used as part of the materials implemented in two virtual courses, not in a face-to-face course as in our case. They reported the process of design and development of two distance language courses (Italian and French) for university students at beginning levels of competence in Flinders University, Australia, in 2001. They designed and developed learning materials and tasks to be distributed on CD-ROM (called Envol), complemented by a WebCT component for additional interactivity and task authenticity. The CD-ROM contained a variety of learning activities, many of which involved access to audiovisual materials, in order to compensate for the lack of face-to-face interaction with sources of the target language that is a characteristic of distance learning, and also to exploit the advantages offered by hypermedia. Video clips and audio segments for listening comprehension activities were recorded for the Envol CD-ROM on the basis of scripts created by instructors at Flinders University. In the case of the Italian CD-ROM, interviews with native speakers were video recorded without a predetermined script in order to ensure input authenticity. Television and radio broadcasting, as well as film excerpts were also used to increase learners' opportunities for exposure to a variety of authentic input sources.

Since only four students used the materials, they decided to conduct semi-directed interviews to collect qualitative data. They acknowledged that only part of the original design was implemented, and that further research was needed to assess the impact of the environment on learning outcomes. They reported that the results of preliminary evaluations were encouraging. Authenticity, relevance, and usefulness were some of the features closely associated with the Envol CD-ROM. These were some of the aspects that were taken into account when designing our hypermedia environment.

A few negative comments were also made, mostly concerning the unavoidable technical problems occurring during the use of the CD-ROM. For example, some video-clips did not run and some of the activities providing automatic feedback lacked consistency or contained errors. However, the students were very satisfied with the CD-ROM and highlighted that it was a comprehensive point of reference and that it contained learning activities that were more suitable to the context of adult distance language learning, which made the learning process more efficient and effective, and more enjoyable. Nevertheless, the researchers

were aware that the learners' positive attitudes in relation to their experience in the course were mostly dependent on the instructors' efforts to establish positive relationships with their students and to provide a high degree of flexibility and support. This situation was also perceived in the two occasions when our hypermedia learning environment was implemented: the teacher in charge of the course played an important role in providing an overview of the environment and support to students along the implementation.

Another study related to listening and technology was conducted by Bedoya (2012) in Medellín, Colombia. He used a quasi-experimental design and investigated the role of metacognitive instruction in the development of metacognitive awareness and listening comprehension in a second language. The 26 participants came from two intermediate EFL intact groups. He used an integrated metacognitive instruction model to train students from the experimental group in the use of metacognitive strategies for L2 listening comprehension. For ten weeks, the students from both groups listened to authentic podcasts in and out the classroom using portable players. As data collection instruments, he used the TOEFL test of English and the MALQ (metacognitive awareness listening questionnaire) designed by Vandegrift et al. (2006) and an open questionnaire with five questions to explore the students' perceptions about the experience. The analysis of the data evidenced improvement in the metacognitive awareness and in the listening comprehension performance of the students from the experimental group, and a very positive reaction from both groups to the use of authentic materials and portable players.

The study carried out by Iman, Abdul-Reheem Amin, Mahsoub Abdul-Sadeq AL and Magdy Mohammad Amin (2011) aimed at exploring the effectiveness of using explicit language learning strategy-based instruction in developing secondary school students' EFL listening comprehension skills. It hypothesized that using explicit strategy-based instruction would develop students' EFL listening comprehension skill and its subskills. The subskills were identified according to students' text-book, teacher's guide, and the Ministry of Education Directives for secondary school teachers (2010-2011). An EFL listening comprehension test was used for measuring students' development in listening comprehension. The subjects of the study were randomly drawn from two classes at El-Shimaa Secondary School for girls, Benha, Qalyoubiya Governorate, Egypt. The experiment lasted five weeks at a rate of three sessions a week, 90 minutes each. The strategy

instruction used in the present research study was the Cognitive Academic Language Learning Approach or CALLA. The sessions included listening comprehension activities and followed the five phases of the CALLA approach. Findings of the study were statistically dealt with the Statistical Package for the Social Science software (SPSS) version 17. T-value, mean scores, standard deviation, and degree of freedom were calculated. It was found that the experimental group achieved more gains in their EFL listening comprehension skill and each subskill due to using the explicit language learning strategy instruction.

At a local level, Vera, Pérez and Olaya (2011) reported the results of a study carried out with twenty one in-service English teachers from three state schools in Bogotá, in 2009. It explored the role that a learning environment mediated by ICTs played in the professional growth of English teachers to develop listening skills and intercultural competence. Teachers used the interactive game called *A Journey to Britannia* and were involved in training workshops carried out at their schools. After doing these workshops, teachers were invited to design their own activities and podcasts for listening or culture teaching; these were later analyzed to see how they put together the strategic knowledge acquired through the software and the workshops.

In terms of cognitive processes, the activities proposed in the professional development program (PDP) helped teachers to become more aware of the processes that were used in the interaction with the software and led to the use of three kinds of direct strategies: memory, cognitive and compensation according to Oxford's taxonomy of learning strategies (1990). In regards to the memory strategies, teachers reported having used strategies to create mental links and effectively review the exercises seen. In relation to cognitive strategies, the following strategies were apparent: (1) Using resources (dictionaries, Internet), (2) association, (3) use of images, (4) use of context, (5) analyzing and reasoning, which embrace reasoning deductively, analyzing expressions, comparing L1-L2, translating, and transferring knowledge, i.e. using prior knowledge to learn the L2, (6) relating prior and new knowledge to expand their knowledge (elaboration) and linking parts of the new information or making personal associations, and (7) note taking.

Besides, they also showed the use of compensatory strategies that included the use of linguistic clues as inferred from linguistic evidence and other clues such as the use of context to understand the texts. Concerning the metacognitive

processes, the use of six strategies was perceived: (1) identification of the objective or purpose of the task, (2) directed attention, (3) attention and selective execution, (4) strategic planning, (5) self-regulation and (6) self-evaluation. Specifically when dealing with the interactive game, teachers used metacognitive strategies such as identification of the aim of the game for organizing information heard, or read about it and, thus, helped themselves in the accomplishment of the proposed tasks. The teachers also used directed attention to focus on identifying the main ideas of the audios in each one of the seven games and the sequence of ideas in those audios so as to answer the multiple choice questions proposed, ignoring irrelevant distractions. They also used selective attention and execution to decide focusing on specific situational aspects proposed in each of the software games.

In the fourth strategy, called strategic planning, examples indicated that participants planned and practiced the linguistic aspects needed to carry out the language task. In the fifth strategy, called self-regulation, it is perceived that teachers monitored the usefulness of strategies implemented in relation to their pronunciation, grammar or appropriacy of register in the interactions with the game characters and reconsidered those which were not effective. Finally, in the last strategy, self-assessment teachers emphasized the importance of students' personal evaluation of their learning during and after the completion of the tasks.

This chapter has provided a theoretical panorama of the constructs that supported the design and implementation of *A Journey Through the US Culture*. Chapter 3 describes the main technological and pedagogical characteristics of this hypermedia environment.

Design and Implementation
of the Hypermedia Proposal
A Journey Through the US Culture

Led by the theoretical constructs accounted for in chapter 2, this chapter explains the fundamental conceptualization that our research group took into account to create the hypermedia learning environment *A Journey Through the US Culture*. The main objective of this application was to foster EFL learners' listening skills in L2 and to foster initial intercultural competence. This hypermedia is classified as author-ware, since it is a shell where authors (teachers) can change the content and activities of the software without changing its programming, provided they follow the instructions given by the programmers.

To do the programming the ActionScript language from Macromedia Flash MX 2004 was used. The ActionScript is, as its name indicates, a scripting language. This means that you do not need to create a complete program to achieve results. Usually, the application of code snippets to existing objects in our films allows us to call and ensemble certain functions as to achieve our goals. The users' data and answers are stored in a database which, in turn, is stored in one computer. That is why users have to always use the same computer and the same username and password, until they finish the journey; the answers, time spent in each section and the number of times that the student has visited each map or region can be seen by clicking on the "My Profile" button, as it will be explained later in this chapter.

Seven authors, a programmer, a graphic designer and five English native speakers from the United States composed the development team. The authors were Luz Dary Arias, Luis Fernando Gómez, Clara Quiroga, Zulma Rocío Buitrago, Alba Olaya, and Alejandro McNeil, under the coordination of Esperanza Vera, the group leader. The lead programmer was Camilo Andrés Galeano, and

the lead graphic designer was Martín Montenegro. The audios were recorded by Cecile Dunn, Alejandro McNeil, Andrés Méndez Pitts, Helen Pitts, Clara Quiroga, Michael Zherik, and Marda Rose at the Audiovisual Lab at Universidad Pedagógica Nacional, and later were revised and edited in a professional studio.

In this piece of software, the users listen carefully to different types of texts on the American history and culture to put together the puzzle that allows them to decode the elements that have shaped the culture. For that purpose, the hypermedia is structured around six maps: four that are associated to an audio, the political map (map 5) that provides information about each state when clicking on it, and an interactive map that provides access to the content of each region by clicking on it. In the audios related to the first four maps, the speakers deal with the importance of geographical features in the settlement of Pilgrims (map 1 and its related audio), the importance of rivers in the history of the United States (map 2 and its related audio), key aspects of its economy (map 3 and its related audio), and the beliefs, traditions and social life of five North American Indian tribes (map 4 and its related audio) namely the Navajos, Hopi, Sioux, Cherokees, and Apaches.

Through the journey, the maps, and the twelve cultural regions of the United States, guided by the perspective of natives and non-natives of that territory, students are expected to use their skills to understand the oral texts presented so as to: develop the twenty-four meaningful pedagogical tasks proposed based on what is heard; become familiar with some of the most representative people, tourist sites and festivals; have a better understanding of the role of some of the most important historical, geographical, economic, political and social aspects in the creation of that culture and be able to give account of them and, finally, to compare some of those relevant aspects to their own culture in a formal paper. The software was designed, validated and adjusted between 2003 and 2005, based on the implementation conducted with language students, in the research projects called "Diseño y validación de un ambiente hipermedial para el aprendizaje del inglés" and "Exploración de dos propuestas hipermediales para el aprendizaje del inglés," sponsored by UPN's Research Center, CIUP.

Being a didactic technology-based material, this hypermedia resource represents a virtual trip through the United States. The user or learner assumes the role of a tourist going to this country through which he/she has not only the possibility to visit the most important cultural regions of this Anglo-Saxon

nation, but also to reflect on the aspects that have shaped that mixture of cultures and compare them with their own culture. In order to create this virtual journey or trip, the design took into consideration, in the first place, the graphic design. It included hypermedia devices such as hypertexts, animation, graphics, audio, and navigation bars. In the second place, the application incorporated the description of the cultural regions of the United States, as well as the inclusion of listening and writing tasks related to cultural contents. By articulating technological devices along with the pedagogical perspectives of how to promote interculturality through listening skills, this proposal was expected to become a meaningful resource in the EFL classroom. It attempted to transform the traditional listening practices in the language classroom and study the target culture from a more authentic experience and critical perspective.

Conceptual Design

The first characteristic of this material is that it mostly fits synchronous CALL because the user interacts with an agent constituted by the software itself, although it also has of one the tools of asynchronous CMC, the e-mail availability to establish communication between teacher and students. In that sense, it responds to Nguyen's (2008) explanation that a strict division of these features in computer-based material is not absolute. Computer-based material can be both asynchronous and synchronous because "even real-time chat, for example, is hardly completely synchronous due to delays depending on such variables as Internet speed, typing speed (Murray, 2000), and preferences of use, in which an off line chat message, for example, may be received and responded two days after being received" (p. 27). The software was interactive as it responded in real time to the user's commands through mouse clicks to links, images, drop-down menus, and navigation bars; it also stored the user's actions and answers to provide an updated user profile.

In *A Journey Through the US Culture*, participants were not forced to take the virtual trip and finish the listening, reading, and writing tasks depending on allotted class time and at the same pace. It rather allowed learners to travel through the different regions of the United States at their own pace and without any haste, plus respected users' decisions on the learning strategies they thought were useful for their particular needs. They had the chance to log in and log out

when they wanted, and the multimedia lab was available for free practice, despite the fact that they usually logged in when they had the English class. Moreover, it was learner-centered because participants were allowed to make personal decisions to plan the itinerary to visit the cultural regions of the United States based on their curiosity and readiness rather than following a pre-established plan proposed by the teacher or the material. Learners were autonomous in deciding when to write their reflections about what was being learned and sent them to the teacher via e-mail. This reflection was done in English because it was about the final questions they had to respond for the final written activity. This hypermedia resource counted on images, animation, links, and audios related to cultural content that learners would not find in other materials.

On the other hand, *A Journey Through the us Culture* was designed under a synchronous paradigm because users had to interact with the program, which constituted an artificial agent students had to interact with, when they came to the multimedia lab. However, it was also conceived to promote asynchronous communication between the teacher and the students because it counted with tele-collaboration tools such as e-mail access, but it could not be used due to technical problems. The proposal pointed out a virtual trip through which two students (pair work) interacted with the reading material and the listening tasks (lectures, conversations) simulating they were travelling, rather than using tele-collaboration tools to practice listening and study culture with the other classmates. In this sense, pair work promoted both autonomous and collaborative learning as the trip requested to help each other. Although at the end of the trip learners had to send to the teacher's e-mail account their critical written reflection about the cultural regions they had visited, they actually did not interact with other partners different from the one he/she usually worked with.

Graphic Design

The software is divided into the following sections:

1. Once the users log in (See Figure 1), the initial screen welcomes them and asks initial questions to involve and place them into the context of a virtual trip to the United States. This is also an initial step that guides students to work on their previous knowledge about the American culture

as later they will be asked to compare what they knew to the information learned during the trip. Through a tutorial, learners are told about the expected goals of the trip, the instructions to travel, the kind of tasks they will solve, the type of help the hypertext offers to users, and how to type, save, and send to their e-mails their own reflections about the cultural zones they visited, at the end of the journey.

Figure 1. Screen to Log In

2. The students have access to another screen where they can find a menu of thematic maps, a geographic map, an economic map, and the map of the cultural zones (see Figure 2), each one connected with a specific region of the United States. So, for instance, users can see a geographical map, a hydrographic map, and the political map where they can learn about the different natural sites and main rivers of this country. There is an economic map that includes graphically all the natural, agricultural, and industrial resources of each state as well as their technological industry. Also, a political map facilitates graphically easy understanding of the fifty-five states of the United States. In the political map, learners can click on each state and have direct access to a brief summary, including the name of the state, the capital city, the state's nickname, origin of its nickname, area, population, economic activities, and year when it was added to the United States. Students can decide with a click which map they want to visit first, and this choice reinforces the hypermedia design through linked texts or images, allowing the student to select and move from one text or screen to another without necessarily following an orderly procedure.

Figure 2. Menu of Thematic Maps

3. At the top of the screen in these maps, users will find some buttons that
    allow them to listen to some short dialogues and lectures (see Figure 2).
    To access them, they can click on the "play" buttons that are active in
    each map.

Figure 3. Sample of Menu Button to Listen to the Audios

4. One of the main maps is the cultural map, which is divided into 12 cul-
    tural regions based on Luedtke's (1988) classification in his book *Making
    America: The Society and Culture of the United States* (see Figure 4). This
    map includes several cultural regions such as New England, Pennsylva-
    nia, Middle West, the Mormons Region, Metropolitan New York, the
    South, The Rocky Mountains, and Interior South.

Figure 4. Map of the Cultural Regions of the United States

5. Learners take a cultural trip once they have chosen one of the cultural regions, and learn about different cultural topics such as history, geography, economy, politics, beliefs, institutions, traditions, and cultural achievements in regard to music, literature, and art. Each cultural region contains a cultural description of the region and a set of questions to explore the learners' previous knowledge of the region that is going to be studied (see Figure 5).

Figure 5. Brief Description of a Cultural Region
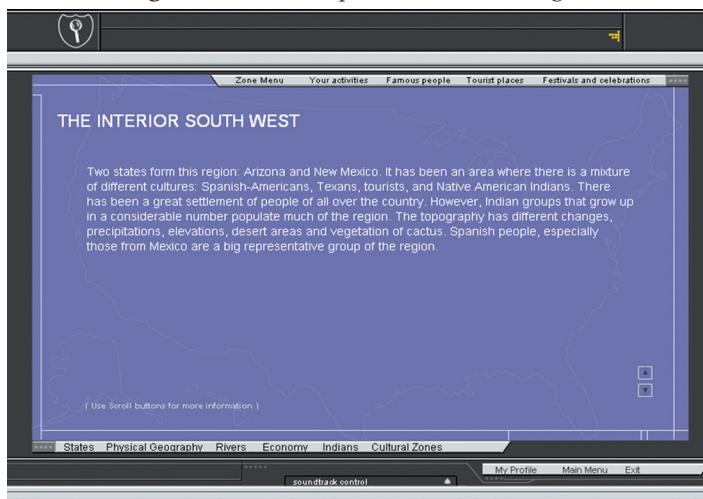
6. There is a section named Tourist Places, in which learners acquire information about general cultural aspects and tourist places of each region, by having access to photographs and brief descriptions of the places.
7. Each region contains information, images, photographs, and brief profiles of famous people of the region, and how they have contributed to the nation's cultural development (see Figure 6).

**Figure 6.** Sample of Images of Cultural Facts About Alaska
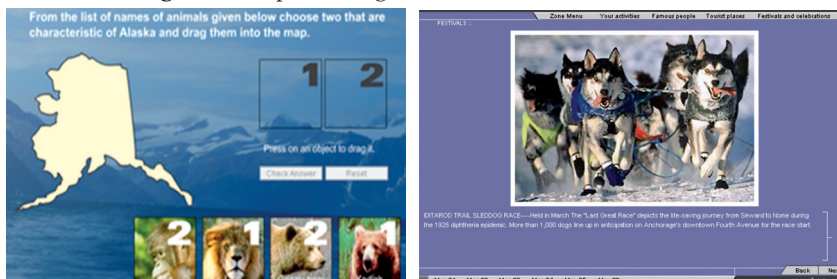
8. There is a section containing traditional festivals and celebrations of each region, including dates, descriptions, activities to do, and photographs. All these sections can be accessed by clicking on the bar below (Figure 7).

Figure 7. Sample of a Navigation Bar Within Each Region

9. Each cultural region has two listening tasks per region (figure 8) aiming at helping learners to become culturally competent in such a way that they are able to discover, relate, and interpret cultural differences among the different cultural regions they visited, such as Metropolitan New York, the South, and the Rocky Mountains, and if possible to their own native culture. The listening tasks are accompanied with related visual material which helps students to understand the audios.

Figure 8. Example of the Links to the Audios in Each Region
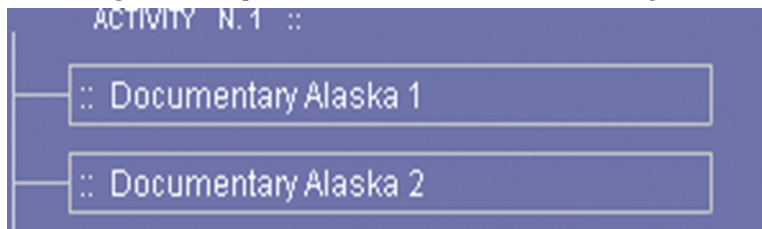
10. Several audio recordings of lectures, conversations, interviews, and tourist information are included and supported by listening tasks which

request learners to work on information transfer activities, multiple choice exercises, matching games, classification, sequential order, inference-making tasks, and semantic maps. These sets of tasks follow Brown's suggestion (1994) that students need to do a task when they listen to any new piece of information in order to focus their attention and practice active listening.

11. Learners can have access first to the audios identified with the animations "A01" and "A02" or they can start by having a look at the questions displayed when clicking on the button "T01" or with the semantic maps shown when clicking on the button "T02" (see Figure 9). Their choice will depend on their learning styles; this is one of the advantages of hypermedia.

Figure 9. Sample of the Access to Audios and Listening Tasks

12. After hearing the dialogues, users can click on the "Test" button, and they will find a series of questions to assess their understanding of the texts heard (see Figure 10). If the user fails the test three times, the "Script" button will be activated and will open a document with the complete script of each dialog or lecture. This information is given when clicking the "Help button," too. We recommend using this aid only after the user has made the effort to understand what is heard.

Figure 10. Sample of Instructions for the Listening Test
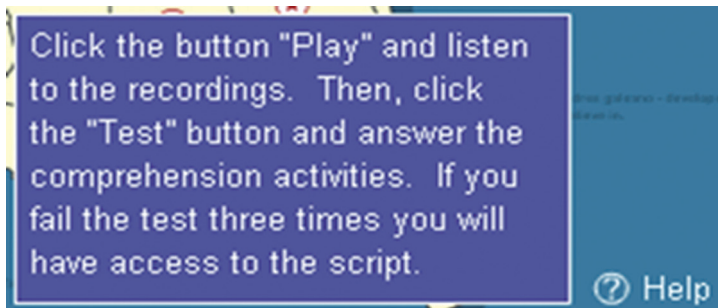
13. As part of setting, the hypermedia includes national musical themes from the United States. With the "Soundtrack control" button (see Figure 11) you can select the theme to listen to or turn off the audio.

Figure 11. Sample of "Soundtrack Control" Button

14. Additionally, the software provides learners with the following hypermedia devices: a dictionary, access to Word, so that they can take notes, and the possibility to send their notes to their e-mail address. The material included visual materials such as pictures and images, which were a support for visual learners, who surely needed complementary visual aids to focus on the reading and the listening activities and to take the virtual trip (see Figure 12).

Figure 12. Sample of Visual Material Incorporated in the Hypermedia Environment
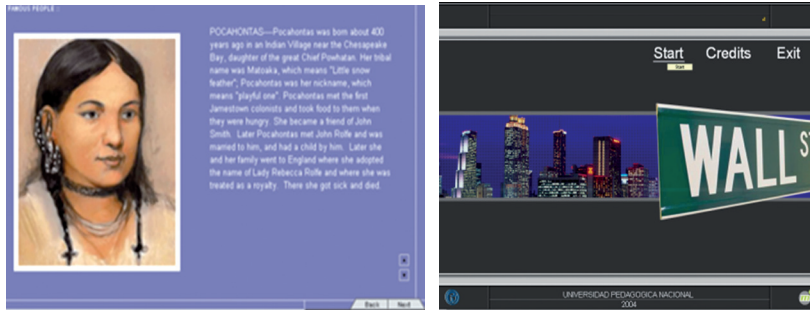
15. Once the journey is over, the hypermedia learning environment provides the students with reflection questions to consolidate the knowledge they have gained during the visit to each cultural zone (see Figure 13).

Figure 13. Sample of Reflection Questions About Cultural Content

WHAT DO YOU KNOW ABOUT THIS REGION?	
1. Why did people from other countries come to the United States in the XVII century?	
2. What was the foundation process of New York like?	
3. What was the cause of the war between English and Americans in the XVIII century and how did the war end?	
4. What are the reasons for New York to have a great ethnic diversity?	
5. Why are New Yorkers characterized by being open minded and by respecting human rights and ethnic diversity?	

16. On "My Profile" button (see Figure 14) the student finds the users' technical file, which contains information on their journey throughout

the state, the links visited and the activities done, as can be seen in the screenshot to the right. The "Main Menu" button takes the user to the screen where he/she can enter again his/her name and code. The "Exit" button takes the user out of the software.

Figure 14. Sample of the Users' Technical File
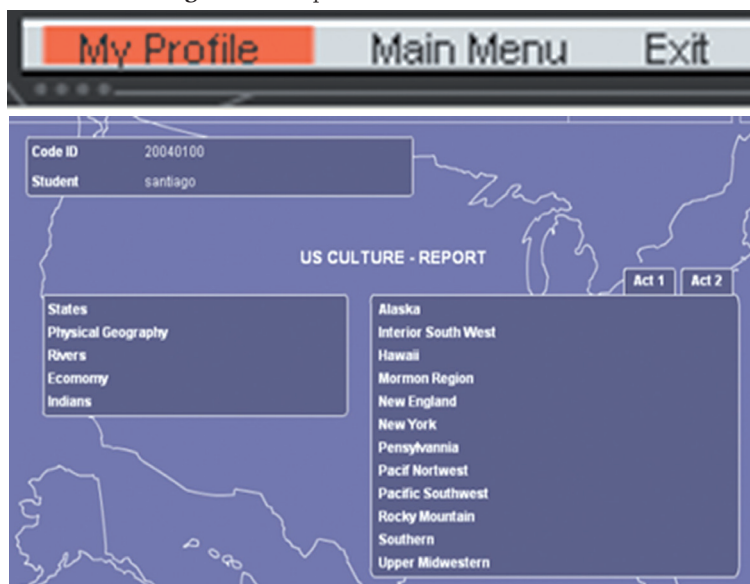
17. After finishing the virtual trip through the United States, learners are required to answer two macro-questions as a final task. The first one is related to the geographical, historical, economic, and social aspects that have contributed with shaping the American culture. The second question asks for the similarities and differences among the cultural aspects of the United States and the learners' own culture in view of improving their intercultural competence. In doing so, learners need to explore the different cultural regions of the United States by listening to oral discourses and reading texts in order to find the pertinent information, analyze, evaluate, and summarize it.

The Listening Design

Being aware of the difficulties that most EFL learners have to comprehend authentic listening material and English native speakers, the hypermedia environment *A Journey Through the us Culture* was designed in such a way that it provides them with the means to mainly practice four kinds of listening: (1) Restrictive listening which consists of answering a set of questions; (2) selective listening which requires to scan relevant information, and (3) extensive listening which requires note taking and discussion as well as inference, prediction and argumentation. The software also provides learners with the possibility to practice interactive listening, which requires that students interact in a communicative way with their partners when doing tasks together based on the recordings. Although this latter type of listening can also occur when the student interacts with other speakers, this software promotes interactive listening among students when trying to understand the audios jointly to solve the tasks. The listening tasks were designed according to Brown's principles mentioned in the theoretical framework and Weir's (1993) classification of mental operations that are to be practiced to fully develop the listening comprehension. He classifies those operations into three: Direct meaning comprehension, inferred meaning comprehension, and listening, and writing. Direct meaning comprehension implies understanding the information that is clearly stated in the aural texts. It involves four different kinds of operations.

The first one is listening for gist, or the general idea of a text. Students had to identify, in a general sense, the main ideas. This helped them to contextualize the audio recordings. The second one is listening for main idea(s) or important information. It deals with tracing the development of an argument, distinguishing main ideas from supporting details as well as facts from opinions when clearly marked, differentiating statement from example or a proposition from its argument; listening for specifics, which involves recalling important details; and last, but not least, determining speaker's attitudes/intentions toward listener and topic (persuasion, explanation). Many of the activities proposed to check comprehension require learners to identify these kinds of operations to understand explicit information in the aural texts.

A third and more difficult level of comprehension is what this author calls inferred meaning comprehension. It embraces four macro-operations: Making

inferences and deductions, which requires the listener to evaluate content in terms of information clearly available from the text; relating utterances to the social and situational context in which they are made; recognizing the communicative function of utterances, and deducing meaning of unfamiliar lexical items from context. This level of comprehension was required from students when they found unknown words or expressions, complex sentences, unfamiliar contexts, and communicative functions, and had to make inferences to cope with the difficulties these elements posed for them.

Another kind of listening that Weir (1993) considers important is the one associated with writing (note taking from lecture, telephone conversations, etc.), which requires the listener to have an ability to extract main points to summarize the whole text, reducing what is heard to an outline of the main points and important details, and an ability to extract relevant key points from a text on a specific idea or topic, especially involving the coordination of related information. Definitely, using these abilities related to taking notes and summarizing main points became necessary for the students in our research to be able to answer the questions and to fill out the semantic maps (see Figure 15) contained in each cultural region. Those semantic maps were intended to help as advanced organizers so that students could see a graphic summary of the aural texts being analyzed in each cultural region of the United States. Table 1 illustrates with examples some of the listening operations and tasks students were to do:

Table 1. Examples of Operations and Tasks Performed by Students

Cultural topic	Students' task	Operation
The Southern region	To decide if the statement given was false or true. This statement talks about the fact that politicians and public figures could be involved in gangs.	Listening for main ideas
Economy	To give detailed information in a short question as for example saying which is one of the most important minerals found in Texas. The student must type the name of the mineral.	Listening for specifics
The Alaska region	To choose from a list the animals characteristic of Alaska. The students must drag the names of the animals into a map of Alaska.	Listening for specifics

Cultural topic	Students' task	Operation
The Midwestern region	To specify in a true or false question if Capone understood the ideals of the American dream.	Inferring
The New York region	To respond the open question about the cause of the war between English and Americans in the xviii century.	

Another key aspect in the design of the environment was the need of including both top-down and bottom-up processing. Tsui and Fullilove (1998, cited in Vandergrift, 2004) claim that while less-skilled listeners may initially benefit from a great deal of contextual support, they will need to develop rapid and accurate bottom-up processes to become skillful readers or listeners. Undoubtedly, learners in our hypermedia environment were expected to use their bottom-up processing to perform what Rost (2002) calls linguistic processing, in which the listener has to distinguish word boundaries, identify the clustering imposed by the rhythm at which utterances are produced, unless emphasis is added, and recognize the use of intonation. Learners were also expected to perform top-down processing, called semantic processing by Rost, because it originates in the listener's memory as he/she compares incoming information with prior knowledge to confirm or update information, check understanding or misunderstanding, infer, reason, and eventually learn. Vandergrift (2004) mentions different kinds of prior knowledge such as topic, genre, culture, and other schemas stored in the long-term memory, and states that one chooses one or the other type of processing according to the purpose for listening. To foster top-down processing we first included at the beginning of each cultural region questions to explore and activate learners' prior knowledge on key aspects of each region and included written and graphic information on important people, celebrations, and places of each region so as to prepare them somehow for understanding the aural information that was coming. After listening, learners were expected not only to answer some specific questions, but also to complete a semantic map (see Figure 15) per region that synthesizes information.

Learners were not only exposed to native speakers' speech, but were also asked to do tasks in order to show comprehension of the information they had heard through close and open questions. In order to design the audios we counted on the help of native speakers who were recorded while being interviewed naturally

about, for instance, the places where they were born, famous people, the characteristics of people in their regions, the influence of rivers in the national development, how people celebrate national holidays and the factors that have shaped their economy. In that way, we could have authentic materials for the students to listen to. Some examples of this are the interview to a native speaker about the influence of rivers in the economic development of the region and an interview to another native speaker about the people in the Pacific Northwest region. We also hired native and non-native speakers who recorded their voices based on transcripts that had been previously written by the researchers, and that related the main cultural contents that belonged to each cultural region. Therefore, when learners clicked on each one of the regions, they found the instructions for the listening tasks. Once being aware of the task they had to do, they clicked to listen to the audio. This activity involved paying close attention to the audios and completing the task. Learners had the opportunity to listen to the audios as many times as they needed. Based on a previous piloting of the hypermedia environment in which students suggested the inclusion of written transcripts, we decided to include them to help less skilled listeners to confirm understanding.

One of the main characteristics of the audios is that they were contextualized within authentic situations, and learners listened to real facts about cultural information of each region through real language use. This type of listening material challenged learners to foster their listening skills because they were listening to voices different from the teacher's voice, which is the one mainly heard in the traditional classroom.

Another important cognitive aspect taken into account in the design of the listening activities was the representation of information. Information can be stored in the long-term memory through analogue or analytical representations. An analog representation resembles physical representations, either comprehensively or in a superficial manner. Examples of analog representations are those related to semantic maps (see Figure 15), physical models, graphs, and sketches. Analytical representations, on the other hand, are totally abstract and arbitrary without any resemblance to their referent, such as language, mathematics, formal logic, musical notation, computer languages, and propositions (Hardy & Jackson, 2000).

Those psychologists also claim that although images as a form of representation are often discussed as a visual phenomenon, we produce images in all sensory

modalities: auditory (animal sounds, melodies), olfactory or kinesthetic (coming from the muscles in training, relaxation). Often the images have been compared with mental pictures; however, images, in contrast to photographs, are very dynamic and constructive, with a high degree of plasticity. In a very general sense, images are one of the main reasons why we can remember the past and predict the future. Images can be used in the resolution of practical or theoretical problems as a means of assessment and verification of possible solutions and to restructure a problem. Images are frequently used to encode certain types of information that should be consolidated and that has been selected to be sent to the long-term memory (Hardy & Jackson, 2000). For example, as Paivio (1986, 1991) states in his dual coding theory, specific verbal information has an easily accessible image code and, therefore, is remembered better than abstract verbal information, which must be encoded as words or as propositions only.

Another way to represent information is through semantic networks or maps. Since the late 1970s, authors such as Anderson et al. (as cited in Hardy & Jackson, 2000) have worked on semantic maps or models that represent knowledge as a set of nodes (concepts) and connections that link them. The first models of semantic networks were hierarchical in nature since there are subordinate nodes (instances or specific elements) which are necessarily connected to superordinate nodes (concepts) in which information is stored in the form of attributes. More recent models have focused on specifying the nature of the relationships between the various nodes and have explored different types of organization other than the hierarchical. Many of these models adopt the structure of the language. One advantage of these models is that they allow individual differences that can vary according to the needs of different cultures, and the inability to understand them can cause problems. On the next page, we include one example (see Figure 15) of the semantic map that served as the basis for one of the digital semantic maps in the hypermedia.

Figure 15. Sample of a Semantic Map (Ohio)
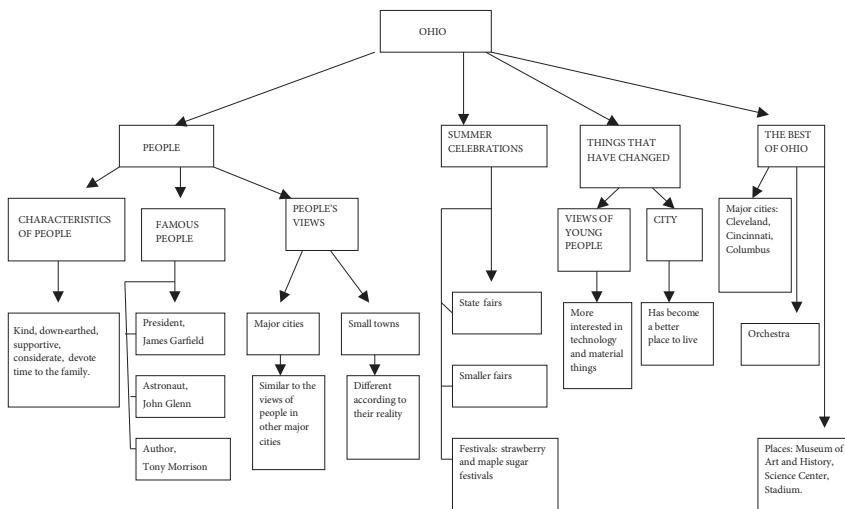
The Intercultural Design

Although we have already explained part of the cultural aspects of this hypermedia learning environment when the graphic and listening design were explained, it is worth emphasizing that the conceptual design was strongly supported by a cultural component. The virtual trip was designed in such a way that it encouraged learners to understand relevant geographic, economic, social, political, and historical aspects that have contributed to the development of American society. The virtual trip not only allowed them to get familiar with some of the main influential figures, tourist places, events, holidays, values, and attitudes that represent the diverse subcultures of the United States, but also to compare and contrast the cultural regions and if possible establish connections with their own culture. As Vera, Pérez and Olaya (2010) state, when learning about a foreign culture it is not enough to learn just important dates, features of clothing, food, festivals, among others, but to develop certain skills and attitudes for the students to be able to interact with members of that culture. Consequently, the trip was designed to help students to develop the skills of comparing, relating, and interpreting and creating attitudes of openness, curiosity, and readiness to learn

cultural contents as suggested by Byram. In other words, for successful communication among members of different cultures, there should be interplay of their intercultural competence.

Applying the conception and theories about intercultural communicative competence presented in chapter one, the hypertext *A Journey Through the us Culture* was designed to provide learners with a cultural tour all over the Unites States. It embraces factual, behavioral culture, and the culture of achievement. It is an expedition to its pluralistic cultural expressions and an encounter with its culturally diverse people. This virtual trip attempts to help learners to understand important aspects of American culture such as its history, geography, customs, festivals, traditions, and literary expressions. Furthermore, it includes more complex cultural meanings like worldviews, beliefs, values, and attitudes to life as perceived in the different regions. Some examples of beliefs and views that the software presents, among others, are related to how people see the cowboy in the interior southwest region, to the belief people have about the sport fans in the Southern region, who are considered not contentious and easy-going. Another example of belief is that Southerners are hospitable and enjoy a casual way of life. Concerning values we can mention, among others, examples related to women's role among the Indians, the value Indians give to land and the value people in general give to rivers because of their role in the economy. Through the trip, and based on Byram's (1997) view of intercultural competence, learners were expected to encounter and acquire new knowledge about the target culture which they probably partially knew or had not known before. At the same time, the trip was meant to be a resource to enhance the skill of discovery as learners explored, visited, and learned about diverse cultural practices in each region; the skill of relating, as the tasks encouraged them to identify similarities and differences among the cultural regions of the United States, and between the target culture and their own; and the skill of interpreting, as they were expected to deal with and give sense to unfamiliar cultural meanings and expressions.

Furthermore, the hypermedia application intended to create learners' positive intercultural attitudes, as proposed by Byram, such as curiosity, readiness, and openness toward the information they learned and discovered during the trip. In fact, the two macro-questions that learners had to answer at the end of the journey were designed to help them to write a critical response toward the heterogeneous and distinct characteristics of the cultural regions of the United

States based on the journey they had undertaken. This final task aimed at having students show the knowledge, skills, and attitude toward diversity, aspects of intercultural communicative competence, which resulted from the experiential virtual trip.

Another important insight in regards to intercultural communicative competence (ICC) has to be pointed out in this design. It has been argued that ICC is the ability to interact with others in the process of communication and to accept other perspectives and perceptions of the world, to mediate between different perspectives, and to be conscious of differences. In light of this thought, it is a must to clarify that, with this trip, students were not obviously able to interact directly with speakers of the target culture. Nevertheless, they were going to be exposed to read and analyze "documents" and "products" (readings about the characteristics of the cultural regions, maps, and images), as well as to be encouraged to listen to non-native and native speakers involved in real listening language tasks (lectures, tourist information, and conversations about cultural content). These are materials and strategies that Byram considers valid to enhance ICC in FLT/ EFL settings where learners have few possibilities to interact with members of the target culture.

Going further, the cultural design for this proposal took into great consideration Byram's contribution with the development of ICC in educational settings—which he calls critical cultural awareness in education—such as the foreign language classroom, as he supports his view on Doyé's (1993) input that:

> . . . Education shall lead learners to reflections on social norms, including those of other societies than their own, in order to lead them to a capacity for political judgment; this corresponds to the aims of FLT to lead learners to respect the norms of other societies and to evaluate them in an unprejudiced way . . . to install in learners a disposition for engagement and interaction with others; in the case of FLT the 'others' are usually from another culture . . . (pp. 43-44)

It is implied then that although ICC can be achieved through oral interaction in the process of communication, which would be ideal in principle for all learners, it is not totally possible in many FLT contexts such as the EFL classroom. Nevertheless, teachers and educational settings should prepare students with the disposition and the skills (cultural awareness) to confront sooner or later

intercultural encounters in life, a kind of disposition that *A Journey Through the us Culture* attempted to enhance as learners imagined a virtual trip to the United States.

As can be seen, the conceptual design of *A Journey Through the us Culture* amalgamated and articulated theories on technologies applied to the teaching of English as a foreign language, teaching principles on listening skills in L2, and the fostering of intercultural communicative competence. The fusion of these perspectives produced this material to improve common limitations and teaching practices that exist in the language classroom.

Research Design and Data Analysis Procedure

Research Methodology: A Qualitative Case Study

This research is a qualitative case study, characterized by the fact that it provides descriptions of phenomena that occur naturally in relationship to human behavior in its own context, without the researcher affecting the things as they occur (Seliger & Shohamy, 2004). In this type of research the interest is in the process and in the context, not in the outcomes or specific variables; in discovering and not in the confirmation of theories or so. Therefore, as suggested by Merriam (1998) in regards to case studies, we engaged in providing an in-depth description and understanding of the pedagogical implementation of the hypermedia learning environment taking into account the EFL learners' responses to the interaction with it. This research was also characterized by the researchers getting as close as possible to the subjects under study by direct observation in their natural setting: the learners' real EFL classroom. We decided to use this type of qualitative research because we wanted to observe the students in their natural language learning environment in which they were able to use the software, without manipulating any variables; hence, the students in the study used the learning environment as they wanted, in the order they wanted, and applying the strategies they chose to complete the tasks.

It is important to state that case studies describe and analyze single units, such as individuals, programs, groups, events, and communities (Merriam 1998, p. 19). It means that the population under study must be delimited according to specific characteristics. In our case, the study aimed at describing the perceptions and the strategies of two groups of students who belonged to a Language

Teaching program and who had an intermediate level of English. Following Becker (1968, in Merriam, 1998), this study intended to pursue the two main purposes of case studies: to get a comprehensive understanding of the unit under study and to build general theory about the regularities that characterized the group over a period. The exploration of the learning environment took place with the two groups, specifically during two academic terms each one.

Considering that a qualitative case study is an inductive process and does not establish a priori interpretations or reflections, we decided to pose two research questions that would guide us along the process, but that did not represent a bias to the study. The research questions were refined and improved along the process. They allowed us to find out how the participants perceived the methodological proposal that lay behind *A Journey Through the US Culture*, and how they faced the listening tasks proposed in the learning environment.

Based on the two research questions, this qualitative research (see Chapter data and information were collected from the perspective of the EFL learners under observation, whose profile was presented in Chapter one. Their opinions and reflections about the learning experience they had with the hypermedia learning environment became the core of our study. As researchers, we neither distorted nor affected the data collected or its interpretation. In other words, and according to Merriam (1998), we were interested in understanding the meaning the participants constructed in regards to the hypermedia learning environment and how they made sense of it. Therefore, we collected information related to the learners' opinions and comments on the listening tasks, the cultural contents, and the characteristics of the computer-based learning environment. Concerning this, we used two data collection instruments that sought to get meaning built by the students based on their experience with the environment, namely logs and interviews. These instruments helped us to collect information directly from the students' perspectives.

Instruments for Data Collection

The main data collection instruments we used were logs (Appendix C), which learners completed after each exploratory session with the environment and interviews (Appendix B) carried out after the experience. The instruments were

administered in Spanish with the purpose that students could express all their reflections naturally and we could get as much data as possible. The reasons for using logs and interviews for the data collection process are presented below:

Logs

We decided to use logs because, as Fogarty (1994) affirms, logs are academic diaries and appropriate data collection instruments in which students can write their thoughts easily and evaluate their learning process. Logs, which also allow teachers and researchers to keep a record of students' learning experiences, are suitable to collect qualitative data given that:

- The students synthesize their thoughts about what they do in the learning activities.
- The students can show not only the performance level the researcher is looking for, but also can they improve their higher thinking skills such as synthesizing and assessing their own learning.
- They are tools that allow redefining the objectives to be achieved.
- They allow keeping a record of strategic thinking and decision making processes.

Semi-Structured Interviews

Semi-Structured interviews were the other useful instrument to collect data for our research purposes because they are conceived as a direct dialogue with participants. Interviews allow participants to give their opinions about their learning experience and provide researchers with feedback about a specific procedure. For the design of the interviews, we took into account Genesee and Upshur's (1996) recommendations:

- Identifying the decisions to be made from the information that will be gathered.
- Organizing questions in a logical order.
- Writing questions avoiding redundancy.
- Preparing instructions that are suitable to the sample chosen.

- Revising the questions.
- Administering the questionnaire to other individuals who have a similar profile to the profile of the people of the sample.

Besides those recommendations, the research team took into consideration some suggestions given by a research advisor:

- Inform the interviewee about the purpose of the interview.
- Mention the confidentiality with which the information will be handled.
- Ask some question to break the ice.
- Ask the student questions that lead him/her to specify the information he/she is giving in order to avoid adjectives that might not give appropriate data.
- Avoid using metalanguage.
- Avoid asking yes/no questions.
- Avoid asking several questions at a time.
- Include several questions to close the interview.

Researchers' Role

During the first moment of the study (2004), in which data were collected, the team was composed of seven researchers[5] while in the second moment (2013), it was composed of three[6]. As we stated in the description of the research methodology, in qualitative studies the researcher is the main instrument, considering that he/she takes part in all the steps of the research process. "[T]his makes the researcher enter into the lives of the participants in a sustained and intensive way or in a brief and personal way" (Marshall & Rossman, 2006, p. 79). In this sense, we can affirm that the researchers in this study "entered" into the lives of the student participants for they worked together with them during the time in which the software was implemented. This occurred particularly in the case

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5 Vera, E.; Arias, L.D.; Buitrago, Z. R.; Gómez, L. F.; McNeil, A.; Olaya, A.; Otálora, M.

6 Arias, L. D.; Gómez, L. F.; Vera, E.

of the researchers who were in charge of the courses in which the software was implemented.

The two main roles played by researchers, according to Marshall and Rossman (2006), are as participants and observers, which makes a continuum during all the research process, and that in our study we could not separate. However, despite the fact that the researchers worked on these two main functions, the seven researchers of the team who worked in the first experience in 2004, and the three researchers who worked in the second experience in 2013 fulfilled other different roles according to the stages of the project:

- Designers and Planners: The head researcher expressed her interest in the topic and identified the problematic situation in order to design the research proposal including all the stages with the support of some of the research team members.

- Teachers and facilitators: The teachers in charge of the groups of participants guided all the process of the implementation during the academic period, responded to any doubt they had, and explained the entire process, including the ethical considerations that would be taken into account by the researchers.

- Data collector: The teachers in charge of the courses were the ones that administered instruments. However, other members of the team also helped to conduct the interviews.

- Data managers: Several members were in charge of transcribing interviews and consolidating the answers to logs into several files in order to make the data analysis easier.

- Data analysts: As it will be explained in the data analysis procedures, all the team helped in the analysis of data in order to come up with the last version of categories and subcategories.

- Reporters: Some members wrote the final report to be submitted to the Office in charge of investigation in the institution where the study was carried out, and three of the members wrote the book we are presenting.

In conclusion, the researchers of this study performed several roles, but only three were insiders considering that they were part of the group and knew it.

Data Analysis Procedures

The implementation of the two data collection instruments described above supports the fact that our qualitative research is also heuristic. This means that its purpose was to explore and discover what happened with the use of the hypermedia proposal. That is to say that the focus of the research was approached without preconceptions and the data were analyzed following an inductive process that led the researchers to discover explanations, patterns, etc. to explain the phenomenon under study.

The researcher team was divided into subgroups with some specific tasks to be done: to interview the students and administer the logs, and then transcribe the data from them in consolidated files. The interviews, which took eight minutes per student and were recorded, were transcribed for the researchers to be able to analyze the data by going back to the files as many times as needed. The transcription of each interview took between 45 minutes and one hour.

The analysis of the data gathered in the interviews was done individually at first by each of the members of the research team, aimed at looking for topics and patterns that would allow inferring students' perceptions about the software and determining which strategies were reported as used by the students when doing the tasks. After this individual work, the entire research group met several times to discuss the patterns identified during the data analysis in view of reaching a consensus. Later, the researchers were divided into pairs to continue working with the methodology arranged.

In relationship to the logs, after students responded the questions, several computer files were opened in order to have all the students' answers together organized according to the question order. This was done to consolidate the answers in just one file so that the research team could be able to visualize and analyze the data more easily. As with the interviews, first the analysis was done individually by the members of the research team, and then the team met several times to arrive at a consensus in terms of the data classification according to the patterns established in the analysis of the interviews.

The analysis done individually and then in team was carried out following the grounded theory approach (Strauss & Corbin, 1990) to data analysis, which is based on coding procedures. In order to do that, the information gathered was read several times to identify which data would answer each of the research

questions. This process helped the team to identify some patterns that were later on given names. Then those patterns were grouped into subcategories that once sorted out and analyzed in terms of frequency and characteristics were grouped into final categories. With the purpose of organizing data in a better way, color codes were assigned to the categories and numbers and letters were assigned to the emerging subcategories. This process was done with the two instruments in order to triangulate the information (Freeman, 1994) and by the same token, give validity to the research study.

Thus, since it was an inductive process, findings were expressed in the form of categories based on the patterns we had identified, that is to say, based on similar answers provided from students' opinions that were constantly present in the raw data. In this sense, being this a qualitative research study, the findings became descriptive because they were expressed through words (categories), not numbers. Consequently, categories emerged from the data and that is why those emerging categories are the abstract concepts that stand for the phenomena under observation (Strauss & Corbin, 1990).

The following chapter presents the findings of this research. It displays the emerging categories, their subcategories, and the qualitative description of each category supported by evidences taken from the data.

CHAPTER 5

Research Findings

In this section, we will present the results of the data analysis by describing each of the categories that emerged from the data and that responded each of the research questions. The categories will be supported with evidence taken from the data collected in the different instruments. These examples are participants' verbatim reports and opinions that validate the pedagogical implementations of the hypermedia learning environment *A Journey Through the us Culture*. In parentheses, each opinion is labeled with the name of the data collection instrument from which it was taken. Thus, letter *I* stands for interview and letter *L* for log. The date when the data collection instrument was administered is also specified. Finally, the initial letter of the participant's name is provided. In the case of initial repetition, another letter of the alphabet is given. Every excerpt has been interpreted and translated into English.

Findings for the First Research Question

The first research question was: How do participants perceive the methodological proposal developed in the hypermedia environment *A Journey Through the us Culture*? This question aimed at understanding students' opinions and insights about the proposal. Their answers provided information that was analyzed and reduced in the following categories and subcategories. It is relevant to clarify that this research question focused on identifying students' perceptions about the methodological proposal. Therefore, the categories and subcategories that appear in Table 2 represent and join all the diverse perceptions students

had toward the hypermedia learning environment in terms of its methodological features.

First Category: The Graphic and Methodological Design of the Hypertext Generates Motivation and Facilitates Listening Comprehension of Cultural Content

This category embraces three subcategories as can be seen in Table 2. The three subcategories are related to the motivation factor, which became a salient finding in the data collection tools. Since motivation emerged as a remarkable issue that led participants to value the characteristics of the hypermedia proposal, we consider necessary to address this factor before we explain each subcategory. In other words, we begin the discussion of the first part of this category, "The graphic and methodological design of the hypertext generates motivation," and then we discuss the subcategories derived from this main category in terms of (1) Geographic and semantic maps allowed learners to understand and synthesize cultural information and deepen on it. (2) Activities, images, transcripts, and interactivity raise interest in reviewing and learning about cultural content of the United States, (3) the appropriate English level of audio recordings and written texts facilitate the comprehension of cultural aspects.

Table 2. Students' Perceptions of the Methodological Proposal
Developed in *A Journey Through the US Culture*

Categories	Subcategories
I. The graphic and methodological design of the hypertext generates motivation and facilitates listening comprehension of cultural content.	A. Geographic and semantic maps allow learners to understand and synthesize cultural information and deepen on it.
	B. Activities, images, transcripts, and interactivity raise interest in reviewing and learning about cultural content of the United States.
	C. The appropriate English level of audio recordings and written texts facilitate the comprehension of cultural aspects.

Categories	Subcategories
II. The methodological design fosters the development of some aspects of intercultural competence.	A. The proposal fosters the acquisition of cultural knowledge.
	B. The proposal boosts positive attitudes towards the target culture.
III. The hypermedia learning environment helps to develop the learning of linguistic knowledge and integration of language skills.	A. The learning environment fosters the learning and consolidation of linguistic knowledge.
	B. The learning environment develops the integration of language skills.
IV. The hypermedia learning environment promotes cooperative and collaborative learning.	A. Cooperative work enables learners to share their opinions and to learn from each other.
	B. Collaborative learning allows learners to assign and distribute tasks among them, and fosters their learning styles and learning strategies.

In regards to the main finding, that the graphic and methodological design of the hypertext generates motivation, participants thought that the methodological design was interesting because they were able to learn new things related to each cultural region through the virtual trip. They had the opportunity to clarify and complement aspects that they already knew about those communities and learn new ones. Opinions such as "everything was interesting for me," "it was interesting," "it was entertaining," and "I like it so much" embrace students' constant descriptions of the hypermedia in all the data collection instruments. The positive comments about the methodology developed in the piece of software indicate that this material generated students' motivation to explore and learn new aspects with an engaging disposition. Results as the examples below indicate that they were attracted to take the journey and learn by themselves through this computer-based material:

1. Pues nos, por lo menos, pues sí a todas nos pareció interesante puesto que era una zona de la que alguna de nosotros ya tenía ciertos conocimientos, pero con, pues con los textos que había, pues se afianzaron muchas cosas y

se conocieron cosas muy interesantes, eh, aspectos religiosos, más que todo, de esta zona. (I, Dec. 1, 2004, L). (We all think that the Mormons' region was very interesting. Although some of us already had knowledge about this region, the texts of the hypertext helped us to foster many other aspects that we did not know about, for instance, religious practices of this region.)

2. Interesante, me gustó mucho porque de pronto toman como los sitios turísticos más importantes de cada región, por ejemplo estaba el de "Mark Twain", o en, en Portland, ciudades interesantes y lugares turísticos. Además está la imagen y el texto, entonces uno puede imaginarse lo que dice ahí. (I, Dec. 1, 2004, B. and J). (It was interesting. I liked it a lot because the hypertext shows the most important tourist places of each region. For example, we found Mark Twain's region, Portland, other interesting cities and tourist places. Also, the images and the texts help us to imagine what is described there.)

3. Las imágenes, los ejemplos, y los juegos son muy entretenidos. (I, Dec. 1, 2004, B and P). (The images, examples, and games are very entertaining.)

4. La práctica me pareció agradable y entretenida porque la mezcla entre imágenes, sonido y texto hace la experiencia un momento de aprendizaje agradable. (L1, Feb. 27, 2013, E). (The practice was pleasing and fun because the combination of images, sound and text makes the experience a nice learning process.)

The students' previous opinions also show that their level of motivation was increased by the presence of texts and images related to each cultural region, and that this visual material was a useful means to help them to imagine and understand better the descriptions provided about each region. For instance, in example 1, the participant argues that she was able to learn new interesting information through the texts, and could relate the new information to that she already knew about a region of the United States. Likewise, the participant in example 2 affirms that the learning environment was interesting because the images of the tourist places led him/her to imagine as if he/she was at those places. Also, comment 4 indicates that the experience was pleasing and entertaining because

all the elements of the hypertext enabled learners to engage in an enjoyable learning process. These important comments corroborate the pedagogical benefits of hypermedia programs addressed in the theoretical framework in that they possess a great variety of devices such as audio, text, and images that can motivate and encourage EFL learners to engage in a more enjoyable and meaningful learning process as happened in this experience in which the students were able to imagine that they were on a tourist trip.

According to our data analysis process, the motivation factor that increased students' interest to interact with the hypertext is closely linked to the three subcategories below:

Subcategory A: Geographic and Semantic Maps Allow
Learners to Synthesize Information and Deepen on It

Students pointed out that they had developed high motivation to learn cultural knowledge through (1) the different economic, geographical, and political maps of the United States, and (2) the semantic maps they needed to complete for each listening task. In their opinion, the maps involved learners in a meaningful experience. Students considered that the semantic maps that they had to fill out in each region were a great help because they allowed them to see and complete the synthesis of each audio recording, and helped them to understand the speakers' explanations. Therefore, the geographic and semantic maps allowed learners to deepen on the contents, as reflected in the following excerpts.

1. [Los mapas] "están muy bien elaborados y tienen una buena presentación porque retoman todos los aspectos más relevantes de cada región y los explora a profundidad. (L. Nov. 11, 2004, L). (Maps are well-designed and well-displayed because they contain the most important aspects of each cultural region and explore them deeply.)

2. [Los mapas semánticos] son buenos porque ayudan a sintetizar la información que se da. (L. Nov. 11, 2004, L). (Semantic maps are good because they help us to summarize the information we learn.)

3. Y los problemas que habíamos tenido de vocabulario para entender los *listenings* se, digamos, se resuelven con el mapa (semántico)… entonces es un apoyo excelente. (Sic, I, Dec. 1, 2004, L). (And the problems we had with vocabulary when we were doing the listening tasks were easily resolved with the semantic maps. Therefore, maps are an excellent help.)

4. Considero que los mapas semánticos son una estrategia muy elaborada y estructural, que exige la concentración del alumno y su agilidad Porque: la estructuración de las ideas exige un aporte más concreto con respecto a los aspectos más importantes de la cultura de las regiones de los Estados Unidos. (L3, April 17, 2013, K) (I think that semantic maps represent a very elaborate and structured strategy that demands concentration and mental agility from the student, because completing them requires a bigger effort regarding the most important aspects of the culture of the United States' regions.)

5. Considero que los mapas semánticos son un buen ejercicio mental Porque condensa la información de los textos y audios y los vuelven más fáciles de captar. (L3, April 17, 2013, D). (I consider semantic maps require a mental effort because they synthesize the information given in texts and audio recordings, which makes them easy to understand.)

6. Considero que los mapas semánticos son muy buenos, pues existimos personas que nuestro aprendizaje es mejor con esta técnica ya que nuestro tipo de estilo cognitivo es muy esquemático. Por otro lado con estos esquemas podemos dar cuenta de datos concretos y breves así mismo es mucho más fácil memorizar las ideas principales del texto y el listening. (Sic. L3, April 17, 2013, H). (I think the semantic maps are very good since there are people who can learn better when using this technique as our cognitive style is schematic. On the other hand, with these organizers we can account for specific and concise data making it easier to memorize the text main ideas.)

7. De lo que aprendí hoy, pude utilizar: asociación o relación de las palabras claves de un mapa conceptual, el cual me permitió aprender nuevo

vocabulario en inglés, ya que relacione la idea principal de cada cuadro, con la idea secundaria. Lo apliqué así: el concepto del cuadro principal y lo relacioné con las características de ese concepto (ideas secundarias) (L 1, Feb 27, 2013, O) (What I could use of what I learned today was: association or relation of the keywords of a mind map, which allowed me to learn new vocabulary in English given that I related them in idea with the secondary one. I applied it like this: I related the concept (main idea) with its characteristics (secondary ideas.))

The above examples show that maps were a strategy that allowed students to understand, synthesize, remember, and establish relationships among the concepts and ideas of the contents they had listened to and, in consequence, the students had a better and deeper understanding of what they were asked to listen to. Their comments indicate that without the maps, it would have been hard to retain in their minds all the cultural information speakers presented in the audio recordings. Since the purpose of semantic networks or maps is to represent the structure of knowledge that someone has built (Jonassen, 2002), we believe that when asking the student to complete the missing information on the semantic maps of each recording, we were offering them the opportunity to not only visualize the organization that the speaker has given in his/her speech, but also to provide a kind of summary of the most relevant categories and concepts in that speech. Following Jonassen (2002), we could say that these semantic networks are important cognitive tools, since the production of thought is easily achieved when students try to represent it graphically through these tools, and by the same token, they can understand main and supporting ideas and learn vocabulary in context.

Despite these encouraging perceptions, data also showed that some students experienced two difficulties when using the semantic maps: one student mentioned that the semantic maps required to be completed with very specific information and not with the general information they had understood, making it difficult for them to find the correct answers. Other two students affirmed that when they typed the answers in, sometimes the software did not accept as correct some words in capital letters or in low case letters (example 2) and they could not figure out which the mistake was.

8. E: ¿Y cómo les parecieron los mapas semánticos?

   A: Sí, los más difíciles, para mí fueron los más difíciles. Porque se capt-aba, porque la información que se captaba era muy precisa,…es obvio que un mapa semántico tiene que abarcar un contexto general de lo que usted comprende, pienso yo que se limitaban mucho a cosas muy precisas, muy precisas dentro de los cuadros. (I, Dec. 1, 2004, S and A.). (I: What's your opinion about the semantic maps? A: For me, they were very difficult because the information they required was very precise. I think that a se-mantic map has to cover a general context of what one understands in the listening activities, but the semantic maps in this hypertext accepted only exact answers.)

9. …pero el mapa conceptual cuando uno escribe, de pronto es un nombre y pues uno lo coloca en mayúscula y de pronto no es [aceptado], pero esa es la respuesta, entonces no sabemos si el nombre va en mayúscula o en minúscula, o si hay que separar las letras…(I. Nov. 12, 2004, J). (. . . how-ever, although one might have ticked the correct answer, the semantic map does not accept it when it is written in capital letters. So, we do not know if we should enter the answers in capital or small letters or if we have to leave a space among letters).

10. Pero [uno] no sabe, y tampoco no sabe cuál es la incorrecta, si es *spelling*, si es, o es realmente la palabra. (I. Nov. 12, 2004, B). (The hypertext did not tell you whether the answer you typed was incorrect, whether it was mis-spelled, or whether it was the right word.)

These important insights about the technical difficulties that some partici-pants had when interacting with the learning environment led us to consider doing a technical revision of the material for implementations in the future. This kind of feedback from students let us become aware of some minor problems that need to be adjusted to improve the software and offer future students a cor-rected version of *A Journey Through the US Culture*. Nevertheless, in spite of these inconveniences that some students experienced, all in all we can affirm that the activities with the semantic maps were fruitful, in the sense that they served

as advanced graphic organizers once students were familiar with their use as they appear in each region.

Subcategory B: Activities, Images, Transcripts, and Interactivity Raise
Interest in Reviewing and Learning About Cultural Content of the US

Students evaluated the images, the activities, and the audio transcripts. They stated that the activities were very interesting because they summarized relevant information, consolidated information about the culture of the United States, and raised their interest in learning.

1. Las actividades son apropiadas porque permiten recopilar información importante a manera de repaso. (L2, Dec. 2, 2004, G). (Activities are appropriate because they allow us to collect and review important information.)

2. Apropiadas porque lograban abarcar de una manera global la información dada. (L2, Dec.2, 2004, G). (Activities were appropriate because they provided information in a very general and global sense.)

3. Bueno, la parte de la gente famosa, los lugares turísticos, los festivales y las celebraciones nos parecieron muy interesantes, pues la información es muy curiosa y hay datos exactos, además las imágenes ayudan como a despertar el interés por conocer aún más sobre, sobre América y la cultura de América. (I. Nov.12, 2004, V). (Well, the sections related to famous people, tourist places, holidays, and celebrations were very interesting because the information not only raised our curiosity, but also provided exact facts. Images helped us to raise our interest in learning about the us and its culture.)

4. Interesantes y centradas porque a través de estas actividades se logra el objetivo de mostrar la cultura de los Estados Unidos. (L. Nov. 12, 2004, V). (Activities and images were interesting and goal-oriented because, through them, the culture of the us was presented.)

5. Al principio no entendíamos como buscar cada una de las actividades y como escuchar los audios, al hacerlo me pareció interesante ya que el sonido es claro y las imágenes corresponden al tema. (Sic. L1, Feb. 2, 2013, M). (At the beginning we did not understand how to look for each of the activities and the recordings. When we did it, it was interesting because the sound is clear and the images correspond to the topic.)

6. El nivel de lengua utilizado por los hablantes en cada juego me pareció Bueno, es bastante parecido al inglés al que estamos expuestos diariamente en el aula de clase. (L1, Feb. 27, 2013, E). (The language level of the speakers in every game was nice. It is very similar to the English level we are normally exposed to in the classroom.)

7. …me parece una forma innovadora de aprender una segunda lengua y la cultura de los países en donde dicha lengua se habla, además que nos insta a ser autónomos y a ser críticos y exigentes con nosotros mismos. (L1, Feb. 27, 2013, I). (It is an innovative way to learn the language and the culture of the countries where that language is spoken, besides the fact that it encourages us to be autonomous, critical, and demanding with ourselves.)

8. La creatividad del programa es muy interesante, los hipervínculos usados que llevaban a las preguntas y respuestas junto con las imágenes son muy útiles, pues sirven como apoyo para recordarlos por largo tiempo y programas como éste deberían ser usados en todos los semestres para ayudar a la comprensión y el aprendizaje. (Sic. L1, Feb. 27, 2013, K). (The creativity of the program is very interesting, the hyperlinks that take you to the questions and answers together with the images are very useful since they help to remember them for a long time and programs like this should be used in all the terms to help comprehension and learning.)

Another salient fact that shows the hypermedia environment generated students' motivation is that it is a varied and interactive material that fosters interactivity between the user and the program, as can be seen in the following opinions:

9. No sé, pues de pronto las expectativas van más por el lado de las actividades porque yo veo que en cada región, de pronto hay como una variedad de actividades, eh, eh, en un modelo diferente. Sí, lo que a uno más le gusta es eso, la, la, la interacción, entonces que le preguntan y que le den opciones y que uno responda… entonces en esta región ya habían [sic] unas preguntas donde uno podía arrastrar las respuestas y me pareció chévere; entonces había como, como hacer parejas, entonces por un lado estaban unos nombres y uno los tenía que asociar a determinadas ciudades o, o regiones, eso no lo había visto en otra, en una región que había trabajado antes… (I, Dec. 2004, R.). (I had expectation for the activities because I saw that in each region there was a variety of activities. That was what I liked the most. The activities contain questions, give options to answer, and request us to move information using the cursor. We had to associate contents from different cities and regions.)

10. Lo qué me llamó la atención… primero que todo la presentación de cada menú. Me pareció muy creativo y las animaciones representaban para mí el preámbulo de un interesante viaje interactivo. El uso de imágenes en cada estado atrapó mi atención, y la información que se podía encontrar al seleccionar dichos íconos es muy completa. (L1, Feb. 27, 2013, I). (What called my attention was the presentation of each menu. It was very creative and the animations were the introduction to an interesting and interactive trip. The use of images trapped my attention and the information available when clicking on the icons is complete.)

11. El software es sencillo de trabajar y dedica a todos los *skills* la misma intensidad de ejercitación. (Sic. L3, April 17, 2013, P). (The software is easy to work and devotes the same practice to all the skills.)

12. Las actividades propuestas me parecieron divertidas, lúdicas y variadas porque podemos encontrar desde actividades para completar la información y mapas mentales. (Sic. L3, April 17, 2013, D). (The activities proposed were fun, entertaining and varied because we can find even activities to complete with information and mind maps.)

13. Pienso que las explicaciones dadas son constructivas porque en el momento en el cual una debía desarrollar el test recordaba fácilmente el tema debido a las imágenes y a lo interactivo del programa. (L1, Feb. 28, 2013, U) (I think the explanations given are constructive since when the test had to be responded, one would remember the topic easily thanks to the images and the interactivity of the program.)

According to these opinions, participants recognized that the methodological qualities of the hypermedia environment can promote a high level of motivation. The environment is a facilitating means to learn the foreign language and its culture through interactive activities, which they did at their own learning pace. They thought that the interactive characteristics of the material such as the different choices they were given to answer the questions, the possibility to move information using the mouse, and the opportunity to click on different icons, engaged them in a more innovating, interesting, and memorable learning experience.

Concerning the images, it is clear that they served as a preamble to the interactive journey that caught the students' attention, helped them to become familiar with some of the most important people, places, celebrations, and historical and economic events of the United States. They also helped some students to remember important information of each topic. In that sense, we agree with Hardy and Jackson (2000) when they claim that overall, images are one of the main reasons why we can remember the past and predict the future. The many static images of the hypermedia were used to encode certain types of information that had to be consolidated and that can be sent to the long-term memory.

These first findings reveal that the graphic design of *A Journey Through the us Culture*, including the maps, the cultural regions, the images, and the icons, involved students in a virtual world by means of technological and computer applications. Students' opinions, as data suggest, also claim that the generation of high motivation strengthened their English learning process in terms of contents and knowledge.

Subcategory C: The Contents and the Appropriate English Level of
Audios Facilitate the Comprehension of Cultural Aspects of the US

According to the students' responses in the interviews, the contents of the audio recordings were clear and pertinent, and the appropriate English level of the speakers on the audio recordings (pronunciation, accent, and fluency) transmitted clearly the cultural contents. They were appropriate to students' English level, as indicated in the following comments:

1. … los listening, a la larga de todo el proyecto, me parecen muy claros, y, y particularmente, para mí, me parecen muy, muy pertinentes y muy apropiados para el nivel de lengua que uno maneja… (sic, L2, Dec. 2, 2004, A). (All the listening activities were clear and, in particular, I think they were pertinent and appropriate to my language level.)

2. Pertinente, pues utilizando un lenguaje sencillo lograban transmitir claramente una serie de conocimientos acerca de la cultura. (L2, Dec. 2, 2004, A). (The contents were pertinent because they had easy language, allowing us to acquire cultural knowledge.)

3. El inglés pues no, no suena como colombiano ni nada pero a mí me parece que está bien, a mí me parece que está bien porque es pausado, eh, no es difícil, las expresiones tampoco me parecen difíciles, la pronunciación es buena, buena desde el punto de vista que uno entiende y que no tampoco le suena como, como acento latino; a mí me parece que está bien. (I, Dec. 1, 2004, R). (Speakers' English level was slow, not difficult at all, and expressions were easy to understand. The pronunciation in the audios was good. I was able to understand easily even though they were native speakers.)

4. Los términos usados no son complejos y son bastante entretenidos. (L1, Feb. 27, 2013, E). (The terms used are not complex and are entertaining.)

5. El nivel de lengua utilizado por los hablantes en cada juego me pareció muy pertinente y fácil de entender, lo cual ayudó a responder las preguntas con más asertividad. A veces si hablaban un poco rápido. (L1, Feb. 27, 2013, I).

(The language level used by the speakers in each game was pertinent and
easy to understand, which was useful to be able to respond the questions
successfully. Sometimes they spoke a bit fast.)

6. El nivel de lengua utilizado por los hablantes en cada juego me pareció ex-
celente aunque un poco difícil cuando el hablante hablaba muy rápido pero
en general considero que se tiene un muy buen nivel en lo que respecta a
los hablantes. (L1, Feb. 27, 2013, F). (The language level of the speakers was
excellent although a bit difficult when the speaker spoke fast, but in general
I think it was a very good level concerning the speakers.)

7. El nivel de lengua (inglés) utilizado por los hablantes en cada zona me pare-
ció: apropiado y es muy fácil de entender ya que no se usan acentos muy
marcados. (L3, April 17, 2013, D). (The English language level of the speak-
ers in each zone was appropriate and easy to understand given that there
were no marked accents.)

The benefits found in the listening activities in the hypermedia learning en-
vironment, as can be observed, motivated the participants to listen to the audio
recordings. They were not distressed about the complexity of the tasks or afraid
of facing the listening activities, as it happened when they did in the convention-
al classroom. One implication might be that learners did not find themselves
forced to listen to the recordings at the time the teacher requested. Instead, as
they were going through the virtual journey and made their own decisions about
what path they should follow, they listened to the aural material autonomously
and whenever they wanted. Based on the data analysis, we assume that the listen-
ing tasks of *A Journey Through the US Culture* were motivating and meaningful
for the participants because, as suggested by Brown (1994), participants were
encouraged to practice different kinds of listening operations such as selective,
extensive, and interactive listening. The selective listening tasks required learners
to scan the listening material selectively from stories, lectures, and news reports.
The extensive listening tasks asked to extract the main ideas or purpose from the
recordings when the learners completed the semantic maps. In the same fashion,
participants were required to do interactive listening tasks when they worked in
pairs and interacted in order to help each other to solve the listening tasks and

respond to complete the semantic maps, as well as to write reports about the cultural topics they had learned during the trip. By integrating the top-down and bottom-up processes fostered by these three types of listening tasks mediated by the autonomy boosting features of ICTs, we can help learners to develop strategies so as to cope better with the operations they may eventually encounter in both academic and everyday life contexts.

Second Category: The Methodological Design Fosters the Development of Intercultural Competence

Students reported that the hypermedia learning environment was not only a motivating material that facilitated interactive practice in context, but also allowed them to acquire cultural knowledge. Findings reveal that although learners were provided with diverse cultural information through their visit to the cultural regions of the United States, they still had a remarkable tendency to detect elements of the surface culture. That is to say, they mostly recalled easy observable elements of culture that they encountered during the trip as can be seen in these two examples:

1. Lo que más le llamó la atención fue La información de tipo no sólo cultural sino también geográfica y política que refleja el pensar norteamericano. (L2 Nov. 12, 2004, A). (The cultural, geographic, and political information presented in the hypertext called my attention because it reflects Americans' way of thinking.)

2. Bueno para mí como estudiante es muy interesante conocer algunas capitales de, de los estados de del sur que realmente no conocía, esto me, me indica que, que lo que nosotros sabemos acerca de la cultura de los americanos (de manera) muy superficial, entonces con esto podemos lograr una estructura más profunda para tratar de entender el modo de ser, específicamente, de la región del sur, y ya como una generalidad, el modo de ser del, del, del habitante de los Estados Unidos. (I. Nov. 12, 2004, V). (As a student, it is very interesting to learn about some capitals of the southern part of the United States. I did not know this information before. This learning experience

indicates that the information we know about the American culture is very superficial. With the hypermedia learning environment we had the chance to reach a deeper understanding of the way people live in the southern part of the US and, in general, of the people of this nation.)

The first example shows how the learners in the study recognized that the trip allowed them to identify geographical and political information that reflected "Americans' way of thinking." However, they did not exactly explain what "way" of thinking was reflected through these geographical and political references. The student was not able to say concretely the "way" of thinking Americans are supposed to have depending on the region they live. Thus, data indicate that some participants are still influenced by a received way of culture as proposed by Atkinson (1999), which deals with the identification of general elements of culture (in this case the geographical and political division of the United States), rather than interpreting those surface elements of culture at a deep level.

However, one of the positive findings that we observed in the data is that through the virtual trip participants became fully aware of the fact that they did not even know all the American elements of surface culture. Therefore, they held a received view of culture, as expressed in example number 2. This student, for instance, recognizes that her knowledge of the American culture is still very superficial and that she needs to move on in order to acquire deep knowledge of the target culture as to "understand" its people's "way of being." This opinion becomes an important achievement for our research because it indicates that *A Journey Through the us Culture* is a hypermedia learning environment through which learners can raise awareness of how they see their own level of cultural understanding and the necessity to become more reflective and more critical about the target cultural information. In fact, this learner accepts that she needs to appraise the American culture in a deeper way. After interacting with the piece of software, she showed an interest in learning not only factual elements and important places, but people, their "being," and the "inhabitants" of the United States. Her opinion also points out that she has learned about the people that live in the southern region, and this implies that she, as an EFL learner, has started to consider that Americans are not a homogeneous group of people, but are diverse according to the regions in which they live. This finding shows that they struggled to break with the stereotypical representations they had of the United

States in order to value the particularities and distinctiveness of each cultural region. Therefore, learners started to develop intercultural competence through the interaction with the hypermedia proposal.

Subcategory A: The Proposal Fosters the Acquisition of Cultural Knowledge

One of the most salient characteristics of the proposal is that it allows learners to acquire new cultural knowledge about the us, an aspect contained in Byram's view of icc, as can be seen in these examples:

1. En el día de hoy aprendí algo de cultura americana, como por ejemplo de las formas de vida de los indígenas en estados unidos, la ubicación de los estados etc. (sic, L1, Feb. 2, 2013, M). (Today I learned something about the American culture, for instance the way indigenous people lived, the location of states, etc.)

2. Aprendí y conocí cosas sobre la cultura estadounidense que ignoraba, lo cual me parece muy valioso porque enriquece mi formación como docente de lenguas. (L1, Feb. 27, 2013, F). (I learned and knew things about the us culture that I ignored, which is very valuable because it enriches my education as a language teacher.)

3. Creo que es una muy buena estrategia para aprender sobre otro país y su cultura, teniendo en cuenta una clara contextualización y una integración de lo aprendido para construir conocimientos colectivos. (L1, Feb. 27, 2013, E). (I think it is a good strategy to learn about another country and its culture, considering a clear context and the integration of the knowledge learned in order to build collective knowledge.)

Participants recognized that they learned content related to the diversity of the us This fact supports Byram's idea that in order to become intercultural, individuals must necessarily acquire knowledge about "social groups and their products and practices in one's own and in one's interlocutor's country" (1997, p. 51). In the same way, in the previous examples and in the others presented

through this chapter, students remarked that they had acquired knowledge they did not know before. For instance, they mentioned having learned about the traditions of Native-American groups, the Mormons' religious practices, and the economic development of this nation. Learners became conversant with beliefs, historical relationships, geographical spaces, and emblematic characteristics such as tourist places, natural resources, important people, and cultural achievements in terms of art, music, and literature.

It is important to mention that learners' acquisition of new cultural knowledge, as evidenced in the examples above, is meaningful for their teaching career. It implies that what they learned had an impact for their life as English teachers in the future. Moreover, learners reported, as in example 3, that the cultural knowledge they acquired was clearly contextualized and promoted the construction of "collective knowledge." This comment represents a high pedagogical achievement of the learning environment *A Journey Through the us Culture* because it ratifies that the meaningful contextualization of cultural content in the English classroom through computer-based material can actually promote icc development.

Additional units of analysis taken from the data illustrate that participants admitted that they had the possibility to develop their intercultural competence through the enhancement of the skill of discovery proposed by Byram:

4. Bueno, antes de ver este programa nosotros teníamos una imagen diferente de Estados Unidos, pues la que generalmente tiene todo el mundo, que es pues, eh, que es un país demasiado civilizado, que sólo se preocupa por, pues por su progreso económico y pues es un país que está lleno sólo de edificios y construcciones y, y mucha civilización, mucho asfalto, pero pues después de haber visto esto nos hemos dado cuenta que tiene bastantes lugares interesantes y muy bonitos, y que sobre todo los estadounidenses valoran como elementos, eh, fundamentales dentro de su cultura, eso es algo que nos parece interesante. (I. Nov. 12, 2004, A). (Before working with the hypertext, we had a different opinion of the United States. In general, we thought that it is a very civilized country, that people in there only cared about economic development, and that it had many buildings and constructions. However, after working with the hypertext, we have realized that this country has

many interesting and natural places and, over all, that Americans value those places as part of their own culture.)

5. …pues uno visita los mapas de las zonas culturales, que ahí es donde están divididos los… y ahí se pueda dar cuenta del, de, de, de las regiones culturales que existen, y algo que me sorprendió de visitar ese mapa es que la región del sur abarca casi hasta un estado que es Maryland, cerca de Nueva York, entonces es como curioso ¿no? que, que, que esa región abarque un es, Maryland, que es prácticamente el norte de los Estados Unidos; o sea me parece muy curioso eso, de pronto es que el estilo de vida es muy parecido por ser, cerca al Atlántico, yo creo que el estilo de vida muy parecido o él, [sic] el dialecto, no sé, pero me pareció curioso, muy curioso. a través de ese mapa puede ver que cada estado tiene un, un, ahí uno puede como encontrar una explicación al poderío de los Estados Unidos, porque cada estado es muy diverso y, y no sólo se dedican a la agricultura, al mismo tiempo que industriales son agrícolas, entonces no descuidan la agricultura. (I, Dec. 1, 2004, A). (When one visits the different cultural regions one can realize that the USA is a country with many cultural sites. I was surprised by the fact that there is diverse information about each state. For instance, Texas is important for its agricultural production and industrial developments, such as in the case of oil reserves. Texas is also important for its airline industry. Therefore, through the economic map of the USA, one can observe that each state has its economic power and that each state is diverse since both agriculture and industry are developed.)

As can be observed, through the virtual trip students discovered aspects related to the economic progress of the United States, including its architectural, agricultural, and industrial development. Although participants paid attention to elements of surface culture, they still stressed out that there were many elements that they did not know about the country before interacting with the hypermedia learning environment. Words in the data such as "we have realized that...," "it seems interesting for us...," "we can see that...," "it was curious that...," and "we could see that...," suggest that many unknown elements of the target culture were discovered through this computer-based material. Discovering, therefore, became a powerful skill in the language classroom when students

interacted with the piece of software as they were challenged to find, scrutinize, and examine specific information that, in part, was unfamiliar to them and that became part of their new knowledge during the journey.

Furthermore, data evidence that participants equally enhanced the skill of relating:

6. [Pienso que] los aspectos económicos de los Estados Unidos no solo son diversos sino diferentes a las prácticas económicas de nuestro país. (L2, Nov. 12, 2004, V). ([I think that] the economic aspects of the US are not only diverse, but different from the economic practices we have in our country.)

7. Es que, a nivel escrito se aprenden particularidades de cada estado, y a nivel de habla, pues ahí en el mapa de lo cultural, el mapa de los estados, lo que se enfatizaba, como decía J C., era las celebraciones y la, las principales cele-braciones que ellos tenían o, que también son comunes para nosotros, como el año nuevo, la semana santa, que allá tienen otras connotaciones y otras fechas diferentes. (Sic. I. Dec. 2, 2004, A) (The written information helps us to learn particularities about each state and the oral information in the cultural map emphasized topics such as holidays and celebrations they have, which are similar to ours, such as New Year and Easter, but have different meanings and are celebrated on different dates.)

The previous examples make clear that students developed the skill of relat-ing as they connected the cultural information of the target culture to their own during the visit to the different cultural regions. In the examples, students ex-plained that economic practices are different in each culture, and argued that they had found similarities in regards to holidays and celebrations in their culture. It is seen that learners were capable of establishing relationships by identifying common or uncommon grounds and by comparing similarities and contrasting differences, being this evidence of intercultural competence construction.

However, despite the fact that students related known and unknown con-tents between the two cultures, such as the activities people do on holidays, it is vital to state once more that students' opinions in the interviews and logs did not show full critical comments about those relations. For instance, the second stu-dent claims that holidays such as New Year and Eastern in the us have different

meanings from the same holidays in Colombia, but there is no evidence of the specific meanings he refers to; that is to say, he does not explain what those meanings are about. This finding let us infer that although the participants actually developed the skill of relating during the interaction with *A Journey Through the US Culture*, they still needed to explain more critically and with specific details the interpretation of those meanings. This let us conclude that although the hypermedia learning environment is a pedagogical means to enhance intercultural competence, further exploration should be made to determine how it can encourage learners to become more critical with respect to the information they discover and relate between the target and the native cultures. One possible cause of this limitation is that participants might have considered the critical perspective of those cultural meanings in their minds, but found it difficult to discuss them verbally in English. Nevertheless, if we take into consideration Byram's (1997) definition of the skill of interpreting as the ability to make sense of a given situation or document, it is likely to conclude that the participants involved in this study were confronted to "make sense" of those new cultural discoveries and relations through the piece of software, since they mentioned in all the examples presented in this category that they built perceptions of the target culture and established similarities and differences. The truth is that, as data suggest, there is an inevitable need to continue enhancing both the skill of discovery and the skill of relating through the interaction with the hypermedia environment in future implementations, so that students can gradually emit more critical opinions about the discoveries and relations they make of cultural content.

Subcategory B: TheProposal Boosts Positive Attitudes Towards the Target Culture

Data also show that participants created positive attitudes toward the target culture. Through their comments, participants showed great disposition to acquire new knowledge. Most of the comments about the cultural information in the hypermedia environment were loaded with positive feelings and views that reflected participants' readiness, curiosity, and empathy to understand the target culture, this being support of how they were able to enhance their ICC:

1. La práctica incluida en cada estrategia me pareció excelente ya que es con-textualizada y me ayudó a comprender aspectos de la cultura estadouniden-se que no entendía. Es una actividad motivadora (L1, Feb. 27, 2013, I). (The practice of each strategy was excellent given that it is contextualized and it helped me to understand aspects of the American culture that I did not understand before. It is a motivating activity.)

2. Lo que me llamó la atención de la sección del hipertexto que visité hoy que pude aprender diferentes elementos sobre la vida económica, la industria, la ubicación, las poblaciones de estas ciudades y las capitales. (Sic. L3, April 17, 2013, H) (What called my attention in the section of the hypertext that I explored today was that I was able to learn different aspects of the econom-ic and industrial life, the location, the population of these cities and their capitals).

It can be observed in these examples and in the previous ones that expres-sions such as "it was excellent," "it helped me to understand," "what called my attention was…," "it is valuable," and "it is a good strategy to learn..." reveal that learners were eager, enthusiastic, and open-minded to learn about the culture of the US without any restriction or prejudice. Their positive attitudes emphasize that the hypermedia learning environment was a motivating and meaningful re-source to enhance their intercultural attitudes toward the foreign culture. This important finding coincides with Byram's view that English learners are able to strengthen their ICC if they are given the opportunity to deal with the unknown. With a tolerant and receptive disposition, they were willing to discover interest-ing and fascinating elements of the American culture that they had never known before.

From the evidence taken from data, it can be concluded that the participants involved in this study were able to foster their intercultural communicative competence through *A Journey Through the US Culture*. They recognized that they acquired knowledge, strengthened skills, and created positive attitudes in a more meaningful and memorable way through the hypermedia learning en-vironment than they would have in the traditional English classroom. Still, as argued before, learners need to be encouraged to become more interculturally critical, a task that should be done eventually in future interventions with this

learning environment and any other pedagogical attempt mediated by ICTs. All in all, we can conclude that language learners need to enhance their intercultural competence, upholding critical positions to cultural aspects and meanings they are faced with when learning a language and about its culture.

It becomes essential to stress at this point that although this category and its two subcategories indicate that learners developed ICC, it calls the attention that students mainly referred to elements of surface culture. In exploring more possibilities to determine why such emphasis on surface culture and limited critical cultural awareness were caused, we as researchers concluded that the piece of software needed to provide users with more tasks and critical questions that would have led them to address issues of deep culture. In fact, there was a major weight of surface elements of culture, and although the purpose was to encourage learners to become critical about those elements by comparing the different cultural regions, the hypermedia material needed to include deeper and more complex issues of the target culture. However, we consider that there is no loss with this situation as it was a relevant finding for us to become aware of two striking realities: first, teaching deep culture is challenging, although not impossible in EFL education. Second, this is a point of departure to make some modifications of the design of *A Journey Through the US Culture* in the future, so that deep culture is more visible. So far, the findings are significant but further research is still to come based on this conclusion.

**Third Category: The Hypermedia Learning Environment Fosters
the Consolidation of Linguistic Knowledge, the Integration of
Language Skills, and the Awareness of Teaching Strategies**

This category comprises the explanation and illustration of the findings related to the participants' perceptions of the usefulness of the hypermedia in varied aspects of their language learning.

Subcategory A: The Learning Environment Fosters the Consolidation
of Linguistic Knowledge and the Awareness of Teaching Strategies

The patterns that determined this subcategory refer to the knowledge students consolidated in terms of English language. In regards to linguistic knowledge, students stated that audios, texts, and audio transcripts, not only improved their listening skills, but also provided them with the opportunity to learn vocabulary, to correct pronunciation, and to clarify grammar points when they had to listen to authentic speeches given by native speakers. Most of them pointed out that they were able to understand authentic language at a normal speed and affirmed that it was appropriate to their current language level.

This learning and consolidation of linguistic knowledge was possible thanks to the way this hypermedia is structured: there are four groups of activities that seek to promote the understanding of oral and written information going from literal oral comprehension to critical comprehension. For this reason, we included some activities aimed at verifying that students had understood the most relevant explicit oral and written information while other activities led students to make inferences about implicit information and some others guided them to take a position regarding the cultural content they were listening to and were expected to analyze. For both kinds of activities students were supposed to have a lexicon at an intermediate level; in case they did not and failed to understand certain words, they had to apply their own strategies or use other resources included in the environment. For instance, the access to the transcripts or the discussion with peers permitted students to recognize some unknown words or expressions, learn new ones or infer their meaning from the linguistic or situational context. Linguistic context encompasses the phonetic, morphologic, syntactic or textual material connected with a word while situational context has to do with the immediate situation and the sociocultural background in which the language event takes place (Porto Reguejo, 2007). In this sense, students put together the linguistic knowledge, experiences, memories or any other aspect that could affect their understanding of a communicative event, in order to construct meaning. As Werth (1999 as cited in Porto Requejo, 2007) affirms, "The context of a piece of language (…) is its surrounding environment. But this can include as little as the articulatory movements immediately before and after it, or as much as the whole universe, with its past and future" (p. 171).

Part of that universe that helped students to enrich the contexts of the different situations presented in the recordings were the activities proposed, the transcripts and the peers' linguistic and background knowledge as well as interaction with peers as can be noticed in the following excerpts. Following Vygostsky (1978), we can state that these aforementioned elements functioned as mediators between the oral texts and the learners and therefore served as scaffolds that supported students' language learning.

1. [Las actividades] fueron interesantes porque aprendí mucho de la cultura de Alaska y incrementé mi vocabulario. (Sic. L2, nov.12, 2004, V). (Activities were interesting because I learned about Alaska's culture and I increased my vocabulary.)

2. [Las actividades propuestas me parecieron] muy buenas porque: ayudan a reforzar tanto vocabulario, escucha, comprensión como estructuras gramaticales. (L2, Nov. 11, 2004, L). ([Activities] were very good because they helped me to strengthen my vocabulary, listening, comprehension, and grammatical structures.)

3. …pues que el *listening* es una habilidad que, por ejemplo para mí, es la más difícil, y entonces pues trabajando en equipo y con ese programa que se enfoca hacia el *listening* es más fácil, o sea uno va, poco a poco, obviamente eso no es de un día para otro, pero poco a poco va mejorando su escucha, en inglés. (I, Dec. 1, 2004, V). (In my opinion, listening is the most difficult skill when learning English. However, as we worked in group to do the listening tasks, it was easier to understand the message. I mean, little by little, I was able to improve my listening skill in English.)

4. Es una Buena herramienta para el conocimiento de la cultura norteamericana y además ayuda al mejoramiento de las habilidades comunicativas en la segunda lengua; inglés. (L3, April 17, 2013, Q) (It is a good tool for knowing about the North American culture and besides it helps in the improvement of the communicative skills in the second language.)

5. Las transcripciones de los audios "Permiten revisar y cotejar la información que se ha oído previamente. Además, permiten adquirir vocabulario y pronunciación. (L2, Dec. 2, 2004, C). (Audio transcripts allowed us to review and verify the information we had heard before. Moreover, they allowed us to acquire vocabulary and pronunciation.)

In this last excerpt, the student implies that the interaction with the transcripts allowed him to read and compare what he had previously heard. The context provided by the transcripts could have increased his comprehension. According to Chapelle (1997, as cited in Strambi & Bouvet, 2003), learners' interaction with computer-based materials could be viewed as providing similar opportunities for negotiation of meaning to those observed in human interaction. She argues that learners' access to the transcript in a listening comprehension activity could be viewed as an example of interaction, and the recourse to additional reference materials in order to increase comprehension could be interpreted as an instance of negotiation of meaning and scaffolding.

In the following excerpts the students see themselves not only as learners but as teachers who need to adapt themselves to different contexts and topics, and to be open to both acquiring all kinds of knowledge, and using the teaching strategies they learn in their own teaching practices to contextualize the language learning with the culture where the language is spoken.

6. … pero como maestros no sola…, no nos van a poner a escuchar lo que queremos, uno va a tener que hacer *listening* de cualquier tipo… entonces tiene uno que adaptarse a todos los contextos, a todos los temas, y además de eso, de que se va a reforzar el *listening*, vamos a aprender más de una cultura diferente; igual uno tiene que estar abierto a todo tipo de conocimiento que le llegue, y no puede ser eh, tan selectivo. (I, Dec. 1, 2004, G). (As teachers, we have to be exposed to listening activities through which we are challenged to understand different contexts and topics at the same time that we can learn about different cultures. One has to be open-minded to any kind of knowledge.)

7. De lo que aprendí hoy, pude utilizar: nuevo vocabulario, además de las estrategias que se dan en plataforma para preguntar, esto me parece muy interesante en la práctica docente. Lo apliqué así: el nuevo vocabulario lo estoy usando en mis conversaciones, asimismo en las pruebas que hago en mis prácticas docentes hago una nueva forma de respuestas como en la experiencia de la plataforma. (L1, Feb. 28 2013, W) (Of what I learned today I was able to use: new vocabulary; besides, the strategies given to ask. This is very interesting in the teaching practice. I applied it like this: I am using the new vocabulary in my conversations. Likewise, in the tests I administer as a teacher, I design a new way for students to respond as in the experience of this platform.)

8. De lo que aprendí hoy, pude utilizar: Toda la Información que presenta el software es muy útil, pues conozco más y más sobre el contexto de la segunda lengua que estoy aprendiendo. Aplicaría todo este contenido aprendido, en la medida que, gracias a ellos lograré contextualizar a mis futuros estudiantes acerca de la lengua que está aprendiendo y la importancia de esta en la cultura en la que nace y es hablada. (Sic. L1, Feb. 28, 2013, T.) (Of what I learned today I was able to use: All the information given in the software is very useful for I know more and more about the context of the second language I am learning. I would apply all this content learned as thanks to it I will contextualize my future students about the language they are learning and its importance in the culture where it is spoken.)

Subcategory B: The Learning Environment Helps Students to Integrate Their Language Skills

Data revealed that this hypermedia allowed students to integrate language skills because it required that they not only develop listening tasks, but also reading tasks to be able to complete the semantic maps for each region. It also required speaking when the students interacted with their classmates in order to answer previous knowledge questions about life in each region, and when they solved the comprehension activities in a collaborative fashion. Learners also practiced writing when they had to write the essay to compare their own culture with the

target culture once they had concluded the virtual trip. Some other students re-
marked that they even learned pronunciation, grammar, vocabulary and history
while interacting with the environment as can be noticed in the following ex-
cerpts. The participants appreciated the integration of language skills we wanted
to promote with the structure of the activities, following authors such as Brown
(1994), who emphasizes the importance of that integration to develop the com-
municative competence.

1. Practicar mi 'speaking', contrastar opiniones y puntos de vista y conocimien-
   tos. (L. Nov. 11, 2004, L). ([I had the opportunity] to practice speaking when
   I contrasted and expressed my opinions and knowledge.)

2. Pues de pronto uno puede, o sea uno puede practicar el listening, uno puede
   practicar también la lectura y como la comprensión, o sea todas lo que uno
   sabe lo puede compactar en algo tan pequeñito como un mapa conceptual,
   entonces pues yo pienso que es como una práctica de todas las habilidades
   que uno está aprendiendo. (Sic. I. Dic. 1, 2004, S). (Well, one can practice
   listening and reading, and do comprehension activities such as, for instance,
   the semantic map we had to work with. So, I think that we have the oppor-
   tunity to practice all the language skills.)

3. Uno tiene mucho conocimiento, pero no de esa manera tan precisa, como
   se puede adquirir a través del programa; entonces lo, para mí es más impor-
   tante el nivel de *listening* porque sé que se puede mejorar muchísimo, sino
   a nivel de comprensión de lectura también se podría decir que es un buen
   ejercicio. (I. Dic, 1, 2004, A). (One might have some knowledge of the US,
   but I did not acquire it in the way we did it with the hypertext. Also, in my
   opinion, the most important part was listening because I realized that I was
   able to improve my listening skill, and the listening activities were good.)

4. [La actividad de producción escrita me pareció] buena porque ayuda a am-
   pliar el vocabulario y además se puede retener más información con la toma
   de notas. (L. Nov. 11, 2004, S). (The writing activity was good because it
   helped me to acquire more vocabulary. Moreover, one can acquire more in-
   formation when taking notes.)

5. La práctica incluida me pareció muy interesante, llamativa y muy útil porque: se presenta la temática a ver de una forma que atrapa la atención, y útil debido a que se puede mejorar en la escucha y pronunciación de la lengua inglesa. (L1, Feb. 27, 2013, F). (The practice was interesting, attractive and very useful because the thematic is presented in a way that calls your attention, and useful because you can improve listening and pronunciation in English.)

6. Es una buena página para practicar algunas de las habilidades como lo son *listening*, gramática, comprension textual, vocabulario, *writing* y a la misma vez aprender cosas sobre esta cultura. (Sic. L3, April 17, 2013, Y) (It is a good [web] page to practice some skills as listening, grammar, reading comprehension, vocabulary, and writing and at the same time learn things about that culture.)

7. Ayudan a mejorar las tres de las 4 habilidades esenciales para el aprendizaje y manejo de una segunda lengua. Listening, reading y writing (L1, Feb. 27, 2013, T) [The environment](… helps to improve three out of the four essential skills for the learning and command of a second language: Listening, reading and writing.)

8. La práctica incluida me pareció muy Buena porque desarrollaba distintas habilidades y competencias: especialmente *Reading, listening, speaking, and work team.* (Sic. L1, March 2, 2013, X). (The practice included was very good because it developed several skills and competencies: especially reading, listening, speaking, and teamwork.)

9. Otra cosa que me gustaría añadir acerca de mi experiencia el día de hoy es que: es que es un programa muy bueno puesto que, uno aprende aspectos importantes de la cultura de US y al mismo tiempo aprende a mejorar muchas falencias en el idioma inglés, tales como vocabulario y *listening*. (L1, March 3, 2013, O) (Something else I would like to add about my experience today is that it is a very good program due to the fact that one learns important aspects of the culture of the US and at the same time you can overcome many weaknesses in English, such as vocabulary and listening.)

By promoting this integration of skills in our hypermedia, we addressed one of the kinds of Computer Assisted Language Learning (CALL) named integrative CALL, which fosters the integration of skills and is based on two important technological developments: multimedia technology, which entails hypermedia, and the Internet (Warschauer, 1996). In our hypermedia, a variety of multimedia resources such as text, graphics, sound, animation, and video are integrated allowing in turn the integration of the different skills or modes of communication. Since contents are organized following the non-linear structure of hypertext, it gives learners control over the navigation path they can follow, going backward or forward as they may want to focus on a written or oral text or on an activity or skip it, according to their needs and preferences, which gives them control over their learning. They can also evaluate their understanding because the results of the comprehension activities are provided immediately and are stored in databases that keep records of the learners' performance. If students cannot succeed at answering the proposed activities after three attempts, the software allows them to see the transcript of the recordings, discuss with their peers to check comprehension and answer the activities again. All of these activities which facilitate the development of listening, reading, writing and speaking skills in an integrated way may enhance the development of auditory comprehension, as well as the development of critical thinking in language learners.

In this category, we have illustrated with verbatim examples that the hypermedia learning environment fostered on the one hand the consolidation of the participants' linguistic knowledge and the integration of language skills so that they could overcome their weaknesses in language use and enhance their communicative competence through interaction with peers. On the other hand, the learning environment also raised the students' awareness of some teaching strategies they could use in their future practice as language teachers. This last finding is especially important for our language education programs to bear in mind not only in their face to face classes but above all in any computer mediated learning experience we design and implement.

**Fourth Category: The Hypermedia Learning Environment
Promotes Cooperative and Collaborative Learning**

From the data analysis with respect to this category, two important facts came into view: the fact that students shared knowledge and opinions with peers through cooperative work and that they also did collaborative learning when they assigned and distributed tasks among them to assume a shared responsibility through which they learned to identify each other's strengths in language learning. This interaction and knowledge of their cognitive strategies would help them to develop in the long run their autonomy and skills for long-life learning.

*Subcategory A: Cooperative Work Enables Learners to Share Their
Knowledge and Opinions and to Learn From Each Other*

Students perceived that the learning environment motivated them to learn and helped them to work cooperatively. They reported that working in pairs was a pleasant experience because they were able to plan the procedure to do the tasks, to monitor their comprehension, and to be attentive to learn. They equally valued the opportunity to listen to others' points of view in order to complement their own viewpoints. Moreover, they pointed out they had learned vocabulary and improved pronunciation when working with their classmates. They also stressed the fact that they had increased their knowledge when they interacted with other students in order to make decisions on the use of learning strategies, and to direct themselves to work with computer-based material. Therefore, learners had the opportunity to enhance cooperative learning, which is one of the challenges that professionals have to cope with in the present times.

With respect to cooperative learning, as found by Clavijo, Quintana and Quintero (2011), we can affirm that "from a social perspective, interaction is the departure point of learning given that no isolated human being can develop their superior mental functions". By the same token, "Language is one of the most important mediators of learning and in that way it is part of social construction." (p. 27).

Learners reported the importance of sharing opinions to learn from each other about different aspects of language, namely vocabulary and pronunciation

or about cultural content such as geography, another country and its cultures, or even about technology as can be observed in the excerpts below:

1. Así trabajando en grupo pues uno tiene que compartir opiniones, puede oír otras cosas, puede ampliar como su, su vocabulario, como me pasó a mí, eh, por ejemplo él, él leía el texto y entonces yo podía escuchar cómo era, cómo era que se pronunciaban las palabras y yo también trataba de repetirlas, entonces para mí eso fue muy bueno porque también aprendí como a, a llenar mi vocabulario. (I, Dec. 1, 2004, S). ([Working cooperatively helped me to listen to my partner and change my point of view. I often happen to have an opinion and do not want to change it, but] as I worked in group I had to share different opinions with my partner. I was able to listen to others' ideas. For instance, I was able to learn more vocabulary when my partner read the information in the hypertext and I listened to and repeated the words he said. Therefore, this activity was very good because I learned new words.)

2. A mí me parece que para este programa es, es casi necesario trabajar en grupo, de a dos personas porque uno se enriquece con, con el conocimiento que le pueda aportar al otro y porque es, no es como un juego, sino más bien como, como una exploración de terrenos, de, de áreas geográficas, de información, y me parece que eso se puede hacer mejor trabajando en parejas que solo. (I. Dec. 1, 2004, L). (I think that it is necessary to work in pairs when using this hypermedia learning environment because we can learn from our partners' knowledge. The proposal is not only a game, but a terrain in which we can explore geographical zones and other information. That is why it is better to work in pairs than to work individually so that we can help each other to explore the material.)

Additionally, as we can see in the following examples, they were also able to learn about the use of technology and how to explore the software:

3. Por ejemplo uno no sabe muchas veces para qué sirven ciertos botones o comandos que trae el software y el compañero lo sabe, por ejemplo lo de, lo del *script*, de un momento a otro apareció que, que el programa tenía el *script* para los, para el *speaking* que hacía el, sí, el, el hablante; entonces eh, eso fue

bueno porque uno puede saber herramientas o técnicas y el otro compañero le puede complementar, eso pues es enriquecedor también. (I. Dec. 1, 2004, C). (Sometimes I did not know the use and function of some buttons, knobs, or commands that the software included. However, my partner knew what they were used for. For instance, we discovered that the software had the scripts of the listening activities. So, it was good because I learned to use the technical tools to work with the program as my partner helped me to use them. It was an enriching experience, too.)

Students also considered that the software promoted teamwork to achieve common goals, a skill they will have to develop when they become teachers:

4. De pronto que aquí se refuerza más lo que se ha venido trabajando en la universidad, que es, digamos, como el procurar trabajar en equipo, el complementar uno el trabajo del otro y no es separar el trabajo: usted haga una parte, yo hago la otra; sino aquí sí se refuerza, y es súper necesario que los dos trabajen, pues eso, digamos, es como complemento de lo que hacemos afuera y es algo que tenemos que aplicar cuando salgamos a trabajar. (I. Dec. 1, 2004, L). (I think that this material helps us to foster the methodologies we have used in our English classes such as working in group, helping each other, and complementing our views, instead of assigning separate tasks. I mean, like when you say "you do this part and I do this other part." On the contrary, we strengthen the need to work together because teamwork is something we need to use in our future teaching career.)

Besides learning from peers, it is worth mentioning that the examples given highlight the benefit of the software in relationship to the collective understanding and construction of knowledge and error correction, due to the social interaction that occurs in the development of the tasks:

5. Creo que es una muy buena estrategia para aprender sobre otro país y su cultura, teniendo en cuenta una clara contextualización y una integración de lo aprendido para construir conocimientos colectivos. (L1, Feb. 27, 2013, E). (I think it is a good strategy to learn about another country and its culture

taking into account a clear contextualization of the things learned to build knowledge collectively.)

6. El trabajo en parejas me pareció significativo dado que es muy útil poder discutir acerca de lo que mi compañera comprendió y de lo que por mi parte logré comprender. (L3, April 17, 2013, Q) (Pair work was meaningful given that it is very useful to be able to discuss what each member of the team can comprehend.)

7. … vital, ya que de esta manera se abarca más información y se complementa cuando hay falencias. (L3, April 17, 2013, D) ([Pair work was] vital since in that way more information is encompassed and the members of the group can complement each other when there are weaknesses.)

Based on the previous examples, it can be evidenced that the students were able not only to improve their knowledge in different aspects, but also to practice the foreign language in a real context. Additionally, this helped them to improve their confidence when using the language for real purposes, in this case to solve problems and to do the tasks given as it is noticed in the examples below:

8. Es genial en virtud de que compartimos conocimientos entre nosotras dos, y el vocabulario que alguna no sabía la otra lo entendia. Por otro lado practicamos el *speaking* y la seguridad al hablar esto me gusta mucho de esos ejercicios. (L3, April 17, 2013, H) (It is awesome to share knowledge; the vocabulary one of us did not know, the other did. On the other hand, we practiced speaking and the confidence when you speak… that is what I like of those exercises.)

9. El trabajo en parejas me pareció… Adecuado y bueno ya que la ayuda de la otra persona es buena para aclarar dudas, llegar a acuerdos, colaborarse uno con el otro cuando no se entienda algo, compartir conocimientos. (L3, April 17, 2013, Y) (Pair work was appropriate and nice owing to the fact that the partner is good to clarify doubts, come to agreements, collaborate with each other when something is not understood, and share knowledge.)

Subcategory B: Collaborative Learning Allows Learners to Assign and Distribute Tasks Among Them

This category encompasses the features that have to do with collaboration and autonomy. In relationship to the first feature, it can be asserted that the students contributed to the achievement of goals by means of distributing activities such as writing and listening or operations like inferring, so that they could do the tasks. They also felt that they were not alone in the process and that the responsibility was shared:

1. ues, en nuestro caso es mucho mejor porque estamos los dos, pues pensando en cómo vamos a hacer, entonces usted escribe, yo pongo cuidado en esto, el otro está pendiente de esto, entonces, yo miro…estamos conectados, que uno esté con alguien que pueda contestar y estar pendiente, es muy rico porque estamos los dos en la jugada. (I. Nov. 12, 2004, B and J). (I think it is better when we work together. We both think how we are going to do the task. While one of us takes notes, the other one pays attention to [the audios]. While my partner pays attention to one aspect, I pay attention to another thing. So, we are connected. It is good that one can work with a partner who can be attentive [to the information] because we both work to do the task.)

2. Deducciones, de pronto B es mejor para, para el *listening*, pero yo soy mejor para deducir, y entonces ella escucha, pero yo le digo ah pero puede ser esto, entonces terminamos dando una respuesta. (I. Nov.12, 2004, J). (While my partner is good at listening I am good at making inferences. Therefore, while she listens to the audios I say to her what the answer can be. At the end, we agree on choosing one answer.)

As it was mentioned before, the students assigned roles for the completion of tasks according to their strengths. Besides that, they were conscious of the processes their peers applied when doing the tasks and thus they could compare their partners' strategies with their own. This is part of the awareness that was probably raised with the learning environment in terms of the use of strategies, which in turn, we expect can become the beginning of students' autonomy. This can be observed in the quotations below:

3. Como que uno aprende a conocer los procesos que el otro maneja… entonces esto debe ser por esto, y como conocer que es como más analítico o algo así. (I. Nov. 12, 2004, B). (I learned about the learning process my classmate has. One of us is more analytical than the other.)

4. Conocer estrategias de estudio diferentes de las mías que podrían ser eficaces en mi propio proceso de aprendizaje. (L. Nov. 12, 2004, J). (I was able to know my partner's learning strategies which are different from mine. I discovered that those strategies can be useful for my own learning process.)

As this last excerpt evidences, the student is able to reflect on the strategies that might facilitate his learning. This reflection is also part of the process of self-monitoring, a step to become autonomous, issue that will be further explained in the findings of the second research question, in the following section.

Findings for the Second Research Question

The second research question of this study referred to the learning strategies the students used when facing the listening tasks in the learning environment. As has been pointed out by Flavell (1987), metacognition encompasses the strategies the good learners are aware of in order to solve problems not only in learning situations but in everyday life contexts. Planning, monitoring, and evaluating problem solving activities are the executive processes involved in metacognition. Developing metacognitive skills has to do not only with the personal development of the individual, but also with maintenance of social relationships and eventually with our survival in society. These metacognitive skills are part of individuals' self-governance or self-determination that will make them the agents of their learning and the managers of their own life. These skills, according to Stenberg (1992), are synonyms of human intelligence; that is to say, being more metacognitive means being more intelligent.

For us, metacognition is a synonym of self-regulation. Learning self-regulation entails processes such as setting goals and monitoring progress when intending to reach success in a learning task (Zimmerman, 2000 as cited in Boekaerts, Pintrich & Zeidner, 2000), which are the same processes involved in

metacognition. Students who are characterized by self-regulatory skills are the ones that engage in planning, goal setting, comprehension monitoring, strategy use and reflection (Azevedo & Hadwin, 2005). In doing this, they know about their own capacities and the knowledge about what they have to do in order to achieve their goals and the strategies they can use, which coincides with the three types of metacognitive knowledge proposed by Flavell (1979) and that will be discussed later on.

When discussing if there are differences between self-regulation, metacognition, and self-regulated learning, Kaplan (2008) affirms that they are not distinct concepts. Rather, they are subtypes of the same general abstract phenomenon of self-regulated action. Hence, self-regulation itself is not a unitary construct: there is no one set of cognitive, metacognitive, motivational, and behavioral strategies that constitutes the desirable mode of engagement in every setting and task. There are many types of self-regulated action that are more or less appropriate for different tasks, in different domains, in different sociocultural contexts, and for different students. Importantly, these types of self-regulated action are inseparable from the purpose of engagement in the task. The purpose of engagement constitutes a comprehensive psychological framework within which different self-aspects, objects of regulation, and strategies are integrated to form the type of self-regulated action relevant for engagement in the task (p. 483).

The three components of Kaplan's psychological framework are directly related to the dimensions of self-regulation stated by Zimmerman (2000), for whom self-regulation encompasses not only the cognitive dimension but other ones:

- Cognitive, in which students plan their learning process by means of cognitive and metacognitive strategies.
- Affective, which relates to self-efficacy, motivation, emotional reactions, relevance of tasks, among other features.
- Behavioral, in which students analyze their effort, time management, etc.
- Contextual, regarding the environment around the students, which will affect their learning process.

We agree with Zimmerman's characterization because we believe all of those aspects will lead the students to be more reflective of the factors that may determine their success so that they can become the agents of their own learning

by dealing with those factors. This, at the same time, may develop the learners' autonomy necessary for their long life learning.

Self-regulation can be enhanced only through student-content and student-student interaction (Anderson, 2003), as discussed in Chapter 2. In relation to student-content interaction, this can be fostered both in online learning environments and computer mediated learning through processes that take into account the dimensions mentioned above. In this research study, both types of interaction occurred and will be described through the categories that emerged out of the analysis.

The following findings (Table 3) give account of the metacognitive strategies the participants applied when they used the learning environment *A Journey Through the US Culture*; those strategies were classified into the categories and subcategories presented below. These metacognitive strategies involve somehow the dimensions presented by Zimmerman (2005) and the aspects suggested by Kaplan (2008).

As we mentioned in Chapter 2, three kinds of metacognitive knowledge were described by Wenden (1991) following Flavell (1979): person, task, and strategy knowledge. The awareness the learners can have of these three factors will have a positive effect on the way they face language tasks and will therefore bring with it an improvement of their language learning.

Table 3. Learners' Strategies Used to Solve Listening Tasks

Category Metacognitive strategies	Subcategories
I. Learners are aware of task demands.	A. Focusing on specific textual and contextual information and using graphic and bibliographic resources.
	B. Using reading and writing as supportive strategies to do listening tasks.
II. Learners use strategic knowledge about themselves to regulate the learning process.	A. Planning, monitoring, and evaluating their learning process.
	B. Using strategies to anticipate content and solving problems.

Category Metacognitive strategies	Subcategories
III. Learners are aware that dialog, interaction, and joint work enhance their learning.	A. Resorting to classmates and teacher as social mediators in the learning process.

According to Wenden, person knowledge consists of general knowledge learners have about how learning takes place and how different factors like age, aptitude, and learning styles can influence their language learning. Person knowledge also includes what learners know about themselves as learners, and the beliefs they have about what leads to their success or failure in learning a language. Task knowledge refers to the knowledge learners have about the objectives, requirements, and characteristics of learning tasks, besides the knowledge of the procedures that are required to fulfill these tasks. Strategic knowledge is what learners know about strategies. More specifically, it has to do with knowing about which strategies are likely to be effective in achieving learning goals. It includes understanding how best to approach language learning. These kinds of metacognitive knowledge are similar to the ones we identified during the data analysis of our research. The first one we are going to discuss and exemplify is the learner's awareness of task demands. After that, we will deal with knowledge about the learners' awareness of their strategy use is appropriate to regulate their own learning, and finally we will discuss how learners were aware that dialog, interaction, and joint work enhanced their learning.

First Category: Learners are Aware of Task Demands

This first category evidences that students were aware that they had to use certain strategies in order to be able to cope with the listening tasks as they considered these were sometimes demanding because of their advanced language level and because some speakers in the listening tasks were natives who spoke English authentically and at a normal speed. Students pointed out that they had implemented the following general strategies: focusing on specific textual and contextual information, using graphic and bibliographic resources and resorting

to reading and writing as supportive strategies to do listening tasks. In order to analyze these findings, these strategies are described below as two subcategories that show learners' awareness of task demands:

Subcategory A: Learners are Aware They Need to Focus on Specific Textual and Contextual Information and Use Graphic and Bibliographic Resources

In this category we grouped those strategies related to the students' awareness concerning the specific actions they took to understand written, aural, and visual information in order to face the listening tasks appropriately. During the data analysis, we discovered that students relied on strategies to understand specific and contextual information such as determining the context to make suitable inferences, focusing their attention on specific oral information, and using graphic and bibliographic resources to understand and do the tasks.

Data revealed that in order to make inferences the learners identified the context, which according to Nunan (1999) refers to extralinguistic knowledge of the world; it is the linguistic and experiential situation in which the language occurs. The language must be presented in a context. Stories, family situations, real-life conversations, and characters, for instance, establish a context within which a message is transmitted and received and therefore understanding is improved. Conversely, when context is ignored, the language is presented abstractly, isolated from real-life situations, and therefore there is less possibility for students to understand and, in the long run, learn the language.

Context can be described from two different perspectives: linguistic and situational. The former refers to the linguistic elements that precede and follow a word, a phrase, a sentence or any piece of discourse and that help to interpret its meaning (Harris, 1952). The latter is related to the external world that helps understand the meaning of a piece of discourse going out of the text itself using elements such as paralinguistic features, the language user's social background and previous knowledge and experiences. This is called the 'context of situation' by Firth (1964 cited in Love, 1986). For him meaning is to be sought in actual speech-events embedded in particular contexts of situation. Both types of contexts are crucial when trying to make meaning out of texts.

As data revealed, students tended to identify the situational context and/or the semantic context when they listened to the audios. Their goal was to understand the situation in which the dialogues or speeches were situated. From there, they were able to make inferences based on the context without having the need to understand totally all the speakers' discourse. Some of the students did not rush to infer meaning or main ideas from a short part of the discourse, but decided to keep, for instance, an unknown word in mind while listening to a longer stretch of the speech to draw conclusions and fulfill the task:

1. … y en cuanto al *listening* sí igual hay mucha, hay palabras que uno no entiende pero uno ya sabe el contexto, si es económico, si es como, eh, si es acerca de la geografía ¿no? Eh, en el económico pues habían palabras tales como "ganadería", "pesca", el trabajo que hacen los leñadores; igual eran palabras, que en mi caso no entendía pero pues ya sabía más o menos de qué estaban hablando, entonces por contexto soluciones ese tipo de, de falencias en cuanto a vocabulario. (Sic. I, Dec. 2, 2004, C and R). (There are words in the audios that I was not able to understand, but I identified the context like, for example, when the speakers were talking about economy or geography. When one of the speakers referred to the economic aspects of a zone, he said the words "cattle," "fishing," and talked about the job woodcutters do. They were words I did not know, but somehow I knew what the speaker was talking about. Thus, we solved our problem with new vocabulary by identifying the context.)

2. …o sea entendimos el vocabulario, pero lo que no entendíamos tocó por contexto, entonces esperar a ver qué más se decía para tener la idea principal del texto. (I, Dec. 2, 2004, J and A). (We understood some vocabulary, but we had to deduce the meaning of the words we did not understand by identifying the context. We were expectant to listen to what speakers said to get the main idea of the whole speech.)

In the case of these participants, they accepted the fact that although they did not understand the whole transcript or speech because it contained unknown vocabulary, they mainly focused on the context as an alternative to make inferences of what they heard in order to complete the task. However, learners did

not only pay attention to the situational context of the story, dialogue, lecture, etc. but also to the linguistic context of the questions, the instructions and the tasks. For instance, to the instruction "From the list of names of animals given below choose two that are characteristic of Alaska and drag them into the map," learners would pay attention to key expressions such as "choose two that are characteristic of Alaska" and "drag them into the map" to be able to accomplish the task.

3. En el momento de escoger la respuesta más adecuada en cada actividad, las cosas a las que presté atención fueron el contexto de la pregunta y la información leída y escuchada. (L3, April 17, 2013, D). (At the moment I had to choose the correct answer for the task, I focused on the context and the information I had to read and listened to.)

One important finding is that students were not intimidated by task demands. On the contrary, they faced the listening tasks by recurring to strategies that they thought were useful for completing the task and those strategies worked for them. This fact seems to show that students became aware of the task knowledge as proposed by Wenden (1991), because students not only paid attention to the listening task, but also were conscious about what the task asked them to do, that is, to fulfill its goal and follow the instructions.

Learners also relied on specific oral key information as they focused on relevant information from the listening tasks in a variety of ways: identifying key words and comparing them with the possible answers to the questions; keeping in mind the objective of the task, identifying the general idea and the detailed information about the task, and focusing on the semantic fields around which the topic was developed to understand the text completely. As can be noticed in the examples below, it was not necessary for some learners to understand all the information included in the listening tasks, but to focus on key information. In general, students generally use this strategy in academic and non-academic settings and it may have been transferred from the listening strategies used in the native language or learned in second language learning contexts.

4. [Para responder las actividades presto atención a] las palabras claves y el sentido que tenía la actividad de escucha para comparar con la que planteaban

las opciones de respuesta. (L. Nov. 11, 2004, L). (I pay attention to the key words to understand the activities and to make sense of the listening part. This helps me to choose the correct answer from the options given.)

5. [Estrategias que utilizo para solucionar dificultades] establecer cuál era el objetivo de la sección. (L. Nov. 11, 2004, L). (One of the strategies I use to solve difficulties is to understand the purpose of the task.) (Para responder las actividades presto atención a) la idea general de la región visitada. (L. Nov. 11, 2004, N). (I pay attention to the general idea about each cultural region to answer the activities.)

6. Traté de establecer campos semánticos, es decir no comprender palabras sino tratar de comprender la totalidad de la charla como un conjunto de expresiones que giran alrededor de un tema y apunten a un propósito definido. (L. Nov. 12, 2004, J). (I tried to identify semantic mapping. That is, I didn't try to understand each word in the audios, but to understand the conversation as a whole to identify the topic and the purpose.)

7. (Las cosas a las que presté atención fueron) la idea global y los detalles de la misma porque precisamente sobre ellos fueron la mayoría de las preguntas. (L1, Feb. 27, 2013, F). (The things I paid attention to were the global idea and the details about it because precisely all the questions dealt with them.)

8. Intenté prestar atención a los factores centrales, centrando la atención en palabras o frases claves que presentaran información esencial del asunto. (L3, April 17, 2013, K). (I tried to pay attention to the central factors, focusing on the key words and phrases that contained essential information about the topic.)

9. En el momento de escoger la respuesta más adecuada en cada actividad, las cosas a las que presté atención fueron nombres de personas y ciudades. Los verbos para relacionarlos con una región grupo ó persona en específico. (Sic. L3, April 17, 2013, Q). When choosing the most adequate answer in each activity, the things I paid attention to were the names of people and cities. The verbs to relate them with a specific region, group or person.)

Another finding related to this subcategory is that learners used graphic and bibliographic resources to carry out the demanding tasks. Students reported they used different graphic resources such as images and geographic maps as means to understand new vocabulary, make associations to retain information and establish relationships, and to recognize the different discourses as to accomplish the tasks more successfully. As Hardy and Jackson (2000) claim, even though images are considered a form of mental representation mainly connected with a visual phenomenon, they can also be produced in all sensory modalities: auditory (animal sounds, melodies), olfactory or kinesthetic (coming from the muscles in training, relaxation). Often mental images have been compared with mental pictures; however, mental images, in contrast to photographs, are very dynamic and constructive, with a high degree of plasticity, as these authors affirmed. Images are one of the main reasons why we can remember the past and predict the future. They can be used in the resolution of practical or theoretical problems as a means of assessment and verification of possible solutions and to restructure a problem. Mental images are frequently used to encode certain types of information that should be consolidated and that has been selected to be sent to long-term memory. For example, as Paivio (1986) asserts in his dual coding theory, concrete verbal information has an easily accessible image code and, therefore, it is remembered better than abstract verbal information, which must be encoded as words or as propositions only. The examples given below illustrate how students used graphic resources in order to solve some of the problems posed in the listening tasks by making associations and establishing relationships among relevant information to store it in their long-term memory in an easier way.

10. Las imágenes fueron de gran ayuda pues facilitaban una asociación adecuada. (L. Nov. 12, 2004, G). (The images in the software were very useful because they helped us to make appropriate associations.)

11. Presté atención a los gráficos ya que eran ayudas pertinentes para los temas que se estaban manejando. De esta forma era más fácil hacer relaciones. (L. Nov. 12, 2004, V). (I paid attention to the images because they were helpful to understand the topics we were studying. In this way, it was easier to make relations.)

12. E: ¿Hoy aprendieron algo nuevo?

V: Claro, todo, todo. Sí porque uno siempre ha escuchado los ríos de Estados Unidos y aquí encuentra unos nuevos, y además de eso, pues es muy importante que en el mapa uno podía relacionar y saber la ubicación exacta, de pronto con palabras no, sino con imágenes. (I, Dec. 2, 2004, V and L). (I knew about the names of the rivers of the US, and I found new ones on the maps. Images were important to know where those rivers were located in the map.)

13. [En el momento de elegir la respuesta más adecuada, las cosas a las que presté atención fueron] a las imágenes que aparecían junto al ícono de entrevista. (L1, Feb. 27, 2013, I). (When choosing the most appropriate answer, the things I paid more attention to were the images that illustrated each recording and that appeared next to the recording icon.)

Graphics (images, geographic maps, semantic maps, photographs, tables, etc.) are an essential feature of this hypermedia environment, which boosts the possibilities to learn some aspects of a foreign language such as vocabulary, socio-cultural content, and relationships among concepts. These can favor students with a visual learning style. However, there are also other multimodal features present in the environment such as audio, transcripts, and animations that could help learners with other types of learning styles.

As well as using all the resources available in the environment some of the participants reported having used the Internet as a useful resource that helped them complement the information provided, not only to fulfill the task but also to expand their world knowledge as a result of the curiosity raised by the learning environment. Another strategy students applied was using the dictionary as an additional resource to check the meaning of unknown words. The use of these strategies can be seen in the following excerpts.

14. En la parte de los mapas llegó una duda que no sabíamos dónde quedaba tal capital, entonces buscamos en el resto de mapas a ver si podíamos encontrar esa información, entonces fuimos a Internet, entonces, porque se podía, en esos momentos se podía y no teníamos, hubiéramos tenido un

atlas hubiéramos ido a un atlas, pero acá pues de pronto mucho más rápido era, era ir a Internet; es decir que el software nos, nos hizo ir más allá, a consultar, a, nos creó la curiosidad. (I, Dec. 2, 2004, C and R). (When we were seeing the maps, we did not know where a capital city was located. So, we started to look for this city on the maps and then we searched in the Internet because we didn't have an atlas. Finding the information on the web was fast. Therefore, the software motivated us to do further research. It created curiosity on us as learners.)

15. También nos tocaba ir algunas veces al diccionario. (I. Nov. 12, 2004, B). (We sometimes needed to use the dictionary.)

16. Utilizamos el diccionario para mirar el significado de las palabras. (L3 April 17, 2013, H). (We used the dictionary to look up the meaning of words.)

Based on the previous excerpts it can be affirmed that students developed another step towards autonomy due to the fact that when they chose to use other resources, not told by the teacher, they applied self-directed learning. That is, they decided on the tools that could help them to improve their learning, do the tasks, etc., and were responsible for decision making and independent action to be able to solve learning problems (Little, 1991).

Over all, based on students' awareness that the listening tasks of *A Journey Through the US Culture* were demanding, this category has shown how students were able to use specific textual and contextual information to make inferences and to understand general ideas when interacting with the hypertext. Another conclusion is that students not only depended on the listening material and their background knowledge to understand the tasks, but decided to use the Internet, the technological resources the hypermedia learning environment offered them such as maps and images, and bibliographical resources as the dictionary to direct their learning and complete the tasks. It implies that technology-based material becomes a powerful means to facilitate the learning process and the development of the listening skill. Moreover, the learning environment allowed them to put into practice metacognitive strategies in an autonomous way that they would have not probably used in the conventional classroom and that

would enable them to self-regulate their learning processes in new situations and contexts.

Subcategory B: Learners are Aware of the Use of Reading and Writing as Supportive Strategies to Do Listening Tasks

Given that one of the purposes of the learning environment was to integrate skills, we can affirm that this purpose was achieved by the students in the study, since they reported having relied on the use of several skills to fulfill the tasks. For instance, they read the questions posed before reading the instructions and listening to the material in order to have a preliminary idea of the tasks they needed to do and took notes to retain key information. By doing so, they could face more effectively the listening tasks once they noticed the task complexity. These are strategies learners can use in other academic contexts, when doing other activities related to academic, personal, and social situations, such as test taking and problem solving.

1. Leer detenidamente las preguntas y repasar algunas veces los *listening* debido a que cierta información suele escaparse. (L. Nov, 12, 2004, J). (I read carefully the questions and listened to the audios several times because sometimes some information is difficult to grasp.)

2. Utilizamos por ahí una estrategia que fue empezar a ver las preguntas y enfocar la atención, escuchábamos las preguntas y enfocábamos la atención del *listening* a las respuestas pues porque como era, pues no era muy largo, pero pues siempre, entonces más que todo mirábamos, captábamos era lo que nos estaban preguntando. (I, Dec. 2, 2004, V and L). (I remember using a strategy which was to read the questions and focus our attention. We listened to the questions and focused our attention on the answers to the listening, because as it was, well not very long but a bit, then we mainly looked at and tried to grasp what we were being asked.)

The students asserted that they read the questions but also other written information that was available on the screen, such as the transcripts of the recordings

provided in the learning environment and the key information supplied in the semantic maps they were expected to complete. Since the students were also to read questions prior to the tour around each cultural region in order to activate their prior knowledge or to prepare them for the forthcoming contents, they found this activity useful to acquire some vocabulary that could help them succeed in the listening task as they had realized that the tasks were somewhat demanding. This is one of the benefits that the software offers the learner.

3. Para realizar las actividades propuestas utilicé las siguientes estrategias: Comprensión de lo leído. (L3, April 17, 2013, Q). (In order to do the activities proposed, I used the following strategies: checking if I understood what I had read.)

4. … mirábamos en los otros ejercicios de escritura y encontrábamos similitud en el vocabulario. (L3, April 17, 2013, H). (We looked at the other writing exercises and found out similarities in the vocabulary used.)

Students also expressed that they not only read the instructions carefully, but also took notes as a strategy to retain most of the relevant information needed to do the tasks proposed in the software.

5. Tome nota de los aspectos importantes. Escuché el texto varias veces. (L. Nov. 12, 2004, G). (I took notes of the important aspects I heard. I listened to the audios several times.)

6. Utilicé los apuntes de la información del hipertexto para comprender y hacer relaciones en cuanto al audio. (L. Nov. 11, 2004, N). (I used the notes I had taken when listening to the audios to better understand and make relations between my notes and the audios.)

7. Nosotras la vez pasada, ya habíamos visto la zona Mormona y procuramos, o sea tomamos apuntes del *listening* para poder contestar el mapa semántico. (I. Dec. 1, 2004, V and G). (We took notes when we studied the Mormon zone to complete the information in the semantic map.)

8. [Hice la actividad] escribiendo la información en mi cuaderno y repitiéndola constantemente. (L1, Feb. 27, 2013, E). (I did the task writing down the information and repeating [the recording] constantly.)

9. De lo que aprendí hoy, pude utilizar o más bien reconocer que para los *listening* es necesario tomar nota para poder retener la mayoría de la información importante. (L1, Feb. 27, 2013, F). (Of what I learned today, I could realize that taking notes is necessary to retain most of the important information.)

10. … tomé notas de datos que creía relevantes y luego realizé las actividades, las notas me fueron de gran ayuda para recordar el orden de las palabras necesarias para realizar las actividades y después escuchaba de nuevo el *listening* de cada estado para comprobar las respuestas. (Sic. L1, Feb. 27, 2013, K). (I took note of the information I believed was relevant and then I did the activities. The notes were helpful to remember the order of the words in the recording to do the activities and then I listened to the recording again to verify the answers.)

11. [Lo que hice fue] tomar apuntes acerca de los hechos relevantes narrados y compararlos con la información del texto inicial. (L3, April 17, 2013, D). (What I did was to take notes about the relevant facts and compare them with the information in the initial [recorded] text.)

We observed that due to the length and difficulty of the audios, learners took notes to do the activities proposed and to complete the semantic maps. Students also affirmed they compared their notes with the audio transcripts to confirm understanding, and read the instructions several times to understand what they had to do. As Weir (1993) states, joint listening and writing requires an ability to extract main points to summarize the whole text as well as an ability to extract relevant key points from a text on a specific idea or topic, involving the coordination of related information. In the excerpts included above, main points correspond to relevant facts and specific ideas that are related to important details; although our students did not specify which kind of words or expressions they wrote, those relevant data generally referred to content words.

These results are somehow related to a study carried out by Carrell (1997) in which she found that under test conditions where students are tested immediately on the content, second language listening note-takers tend to take down the content words used by the lecturer, using abbreviations or symbolizing but virtually not paraphrasing. While students tend to use other types of notations, including words in their native or another language, they tend not to write down English functions or structure words, many of which are predictable from context, but to use arrows to link ideas in the notes. Carrell (1997) also found that they make little use of lists, and attempt to signal emphasized information by underlining particular words or using circles or boxes around particular words. Even though in our study it could be noticed that the students took notes of relevant information using content words, we cannot tell if they used the same strategies Carrell describes.

A significant conclusion drawn from this subcategory is that participants took advantage of note-taking when using computer-based material, giving importance in this way to writing strategies even though they were using technological resources. That is to say, just because technology was incorporated in the EFL classroom, it did not mean that students reduced opportunities to use their abilities to capture key information in written and graphic form. In this particular study, learners used handwriting authentically as when taking notes in other educational contexts so that they could complete the demands proposed by the tasks. One of the main contributions of *A Journey Through the US Culture* is that it included authentic tasks such as lectures and tour guide speeches in such a way that students responded naturally to them by taking notes as when doing so in other similar real life situations. In this way, writing and also reading became useful to face language needs through the virtual trip to the United States turning into meaningful strategies during their learning process. Students' actions led us to conclude that they were strategic when they did the listening activities. This strategic knowledge works not only in different face-to-face academic contexts but also in the learning process of a foreign language through hypermedia environments.

Second Category: Learners Use Strategic Knowledge About Themselves to Regulate the Learning Process

Data shows that the participants in this study used strategic knowledge about themselves to regulate their learning process. This finding is closely related to Wenden's (1991) argument about the three kinds of metacognitive learning, one of them being strategic knowledge. This knowledge is understood as the knowledge one should have about the personal features that may foster or hinder the success in one's learning process. Being aware of those characteristics can help learners to plan better the steps to develop a language learning task: e.g. whether to listen to the entire aural text or to take notes using abbreviations; whether to monitor their performance while doing the task or at the end of the task completion. In regards to students' strategic knowledge about themselves, we found the following subcategories from the data analysis.

Subcategory A: Learners Plan, Monitor, and Evaluate Their Learning Process

We grouped in this category those strategies that emerged from students' initiative to plan, administer, monitor, evaluate, and reflect about their learning process based on the knowledge of themselves as learners and of the contextual factors that may affect their learning process.

The most significant and frequent strategy was students' planning the best way to improve their comprehension and learning processes. For instance, as part of the planning process, some of them decided to take notes to answer the questions and to summarize the information. Some other students decided to relate the readings available to the listening tasks in order to do the activities proposed in the environment, and they opted for listening to the audios and reading the transcripts several times. Furthermore, some other participants resorted to comparing their answers with their partner's to check the answers and monitor their learning. On the other hand, students with difficulties to understand the audios decided to read the short scripts first and afterwards the long ones. They did it before listening to or while listening to the audios in order to gain some previous knowledge to cope with the demands of the listening task. All of these strategies were applied by the students according to the personal

learning features they were aware of. We suppose this strategic knowledge can lead students to develop their autonomy as they were able to select appropriate methods and techniques in order to improve their learning taking into account their personal knowledge (Holec, 1981; Flavell, 1979). In the examples below, it can be evidenced that the students chose the strategies that best suited their needs, and decided how and when they would use them:

1. … porque yo siempre he sido una persona más, no egocéntrica sino que me ha gustado trabajar solo, pero, pero con, pero trabajar en grupo es bueno porque uno con dos mentes, dos cabezas que están pensando y una duda que uno tenga pues el compañero puede ser de mucha ayuda para aclararla. (I. Dec. 2, 2004, J and A). (I've been a person who has always liked to work by myself, but it was good when I worked in pairs to do the tasks in the software because the two of us thought of how doing the tasks correctly. When I had a doubt, my partner helped me to clarify the information I had heard in the audios.)

2. Pues, yo, yo a nivel de informática noqueado, es decir no tengo mucho conocimiento sobre este tipo de programa… y R sí lo tenía, entonces yo le aprendí a él muchas cosas. (I, Dec. 1, 2004, C). (I do not have too much knowledge about technology and software, while my partner does.)

3. Conocer estrategias de estudio diferentes de las mías que podrían ser eficaces en mi propio proceso de aprendizaje. (L. Nov. 12, 2004, J). (I was able to learn different learning strategies from the ones I use and I became aware of the fact that they could be effective for my own learning process.)

4. Revisé muchas veces el texto [script] para identificar el nuevo vocabulario, para después compararlo con el audio. (L. Nov. 12, 2004, V). (I read the text [script] more than once to identify the new vocabulary to later compare it to the audios.)

5. … para mí fue valioso tratar de comprender el texto [la grabación] en su totalidad y luego escucharlo de nuevo para mayor seguridad en mis respuestas.

(L. Nov. 12, 2004, A). (It was valuable to try to understand the text [the recording] and to listen to them to make sure I had the correct answers.)

6. Comencé escuchando los *listenings* más pequeños. (L. Dec. 2, 2004, R). (I started by listening to the shortest audios first.)

7. Mi estrategia fue tomar nota de las preguntas previamente para hallar más fácilmente las respuestas en el *listening*. (L. Dec. 2, 2004, G). (My strategy was to write the questions before listening to the audios in order to find the answers easily.)

8. Mi estrategia fue sintetizar toda la información en palabras que para mí funcionaran como elemento mnemotécnico. (L. Nov. 12, 2004, J). (As a strategy, I summarized the information with brief words.)

9. Mi estrategia fue recordar el hipertexto leído y comparar mis posibles respuestas con las de mi compañero de trabajo. (L. Dec. 2, 2004, A). (My strategy was to remember the information in the hypertext and compare my answers to my classmate's.)

These answers suggest that learners planned, monitored, and evaluated their learning as they knew what strategies worked best for them to learn new content. Their answers indicate that they planned how to solve the task individually and in group. The particular ways to regulate their own learning seem to indicate that they were aware of the strategies they incorporated to their learning process. They were resourceful and took what they considered were the most pertinent strategies. This finding leads us to assert that students were autonomous to learn through personal choices and to regulate their learning process when they interacted with the learning environment instead of waiting for the teacher to tell them what to do and how to do it. Another key aspect encompassed in the development of autonomy is the fact that the students determined and controlled their own learning objectives:

10. Establecí mi objetivo, que era responder correctamente y dar una explicación en voz alta junto a mi compañera acerca de porque escogimos esas

respuestas. (Sic. L1, Feb. 27, 2013, I). (I set my learning objective which was to answer appropriately and give an explanation aloud regarding the reason why we chose those answers, together with my peer.)

11. Decidí prestar mayor atención al audio y así poder aclarar las inquietudes que me presentaba los cuestionarios, siempre dialogando con lo que mi compañero había comprendido y poder concertar. (Sic. L1, Feb. 27, 2013, K). (I decided to pay more attention to the recording so as to be able to clarify my doubts about the activities, discussing with my peer what he/she had understood to get to an agreement.)

The data collected showed that the use of the software helped students to take control of their own learning as evidenced in their capacity to reflect critically and take control over their learning process (Little, 1991). Students also showed they were able to develop awareness of the steps and processes they followed in order to be able to comprehend the texts and perform the tasks. All these features can help us to affirm that the software fostered autonomy in the students.

It can be noticed that the implementation of the software fulfilled some of the principles to be considered when intending to develop student autonomy (Little, 1981), namely learner empowerment so that they could take charge of their own learning. In this case, learner reflection, was enhanced by the teacher-researcher's guidance so that students could reflect on the strategies they used during the activities, their difficulties, strengths, their own objectives, etc. through the reflective log entries that they had to write down in Spanish periodically. As can be noticed in the excerpts, students used several strategies in a cyclical way according to the task requirements instead of using them all at the same time. They were able to plan, monitor, and self-assess their performance cyclically. Strategy deployment during comprehension is not a serial process; skilled listeners engage in a coordinated, systematic cycle of predicting, elaborating, making inferences, and monitoring based on global comprehension, world knowledge, and plausibility (Vandergrift et al, 2002).

To sum up, the results of our study coincide with Goh's (1997), since students evidenced a high degree of metacognitive awareness. They were conscious of their learning process and the demands of listening to English as a foreign

language, and held specific beliefs about the factors that could enhance or impair their listening comprehension.

Subcategory B: Learners Use Strategies to Anticipate Contents and Solve Problems

Data show that learners were able to compare prior and new knowledge when they worked with *A Journey Through the US Culture*. The most outstanding strategy was the comparison between the declarative knowledge learners had acquired before this experience and the new declarative knowledge they acquired through the learning environment. In other words, in order to anticipate the contents that they were going to find in the software and to do the activities appropriately, they had in mind the cultural contents of the United States that they had already learned before exploring the hypermedia. Thus, they updated their knowledge level. It is worth mentioning that declarative knowledge involves historical facts, real life situations, scientific truths, and, in general, factual events.

1. Era una combinación de lo que uno ya había visto, con el conocimiento general; eh, por ejemplo preguntaban sobre "Berkeley" y no, no recordábamos eh, exactamente sí lo habíamos visto en el texto o en las imágenes, pero sabíamos que era una universidad; entonces en algunos casos también uno asocia lo que ha visto, pero pues a mí me parece que siempre va a ser una combinación de las dos cosas y e, esta es una región fácil ¿no?, es más difícil cuando veamos, pues pienso ¿no?, otra región como, como que uno no está tan acostumbrado ni conoce tanto.(I, Dec. 2, 2004, R). (With the software, we compared the knowledge we already had with additional information. For instance, there was a question about "Berkeley," and we did not remember if we had read about it in the text or if it had appeared in one of the images. We were sure it was the name of a University, though. Therefore, we were able to associate contents with the prior knowledge we had acquired.)

2. … el *listening* y el, el test excelente, el test era muy claro y muy fácil porque son fechas que de pronto, así, como que uno tiene una serie de conocimientos previos acerca de ese tipo de celebraciones en Estados Unidos y eso sirve mucho en el desarrollo del test. (Sic. I. Dec. 2, 2004, J y A). (The listening

activities and the listening comprehension test were excellent. The test was clear and easy because it inquired about some dates. I realized I had some prior knowledge about some celebrations of the US which helped me a lot to answer the test.)

3. Relacioné la información que conocía sobre lo escuchado. En cierta forma esperaba cierto tipo de información. (L. Dec. 2, 2004, L). (I related the information I knew to the information in the audios. When listening to the material, I was expecting to hear some information I had already learned.)

4. Para responder las actividades presté atención a mi conocimiento previo y los detalles dados en la grabación. (L. Nov. 11, 2004, L). (To answer the activities, I paid attention to the prior knowledge I had acquired and to details in the recordings.)

5. Intenté relacionar la información que conocía acerca de la historia con lo que el audio ofrecía. (L 3 April 17, 2013, K)/ (I tried to associate the information I knew about the story with the information given in the audio.)

The previous examples taken from data show that learners activated their prior knowledge when they began to interact with the hypermedia in order to better understand the new knowledge. Their comments reflect a sense of familiarity with a great part of the material that the virtual trip provided. Comments also suggest that learners felt safe and comfortable because the hypermedia environment gave them a context into which they assimilated the new information. One distinctive discovery with these comments is that students recognized that they had learned new content despite the fact that sometimes they already knew, to certain extent, part of the information:

6. Lo apliqué así: con mi compañera tomamos en cuenta la información que considerábamos pertinente para poder responder los cuestionarios, discutíamos cada una de las preguntas, y además reflexionábamos de la información que conocíamos con anterioridad. En un principio no podía reconocer ciertas cosas, pero al relacionarme con el tema fui descubriendo y comprendiendo más información…Cómo resolví esas dificultades? Para

esto decidí reconocer la información a través del diálogo con mi compañera, poder analizar y comprender los diálogos, a la vez usamos estrategias de reflexión para conocer la información, y recordar lo que sabemos acerca del tema. (L1, March 13, 2013, K) (The way I applied it: my peer and I took into account the information we considered relevant to respond the questionnaire, we discussed each question and besides we reflected on prior information we knew. At the beginning I did not know some things, but when I saw the information I started to discover and understand more information. How did I solve the difficulties? I decided to recognize the information through dialoguing with my partner to be able to analyze and understand the dialogues. At the same time, we used reflection strategies to learn the information and remember what we know about the topic.)

7. De lo que aprendí hoy, pude utilizar gran variedad de información, que a la vez me permitió recordar información de la historia de los Estados Unidos acerca del desarrollo cultural de los nativos americanos; hacer un contraste con la ubicación de territorios agrícolas, origen de acciones sociales y muestra de irrumpimiento en la estructura social. (Sic. Log 1, March 13, 2013, K). (Of what I learned today, I was able to use a great variety of information, which in turn allowed me to remember information of the history of the United States about the cultural development of Native Americans, to contrast it with the location of agricultural lands, the origin of social actions and the evidence of their influence on social structure.)

Anticipating the contents that were presented in the hypermedia environment, as the examples indicate, was a helpful strategy because learners expected or looked ahead to find possible familiar cultural contents in the audios. The fact that they actually confirmed that the audios included part of their prior knowledge helped them to regulate their learning process by remembering information, making associations, comparing facts, and even reflecting about how to do the listening tasks correctly. Anticipation was, in consequence, a determinant factor to learn and solve problems. Additionally, it is worth mentioning that, as data revealed, anticipating constituted a kind of strategic knowledge about themselves, for it is clear in the examples that students were aware of the advantage of having this knowledge and never hesitated to use it.

Third Category: Learners are Aware that Dialog, Interaction, and Joint Work Enhance Their Learning

One way in which our students took into account the learning context—the fourth dimension of self-regulation—was the collaborative work done while facing the listening tasks in the learning environment established in *A Journey Through the US Culture*. Having or getting knowledge of the partner's learning, skills, and strategies and sharing responsibilities in task development can also foster self-regulation and become an asset when joining efforts to improve learning. Thus, working collaboratively definitively becomes a strategic decision for students to self-regulate their learning. In our study, in particular, students worked in pairs, and this modality gave them the possibility to clarify information and to increment collaborative learning. Moreover, it allowed them to ask their classmates for clarification and to learn, to interchange ideas, to negotiate meaning, and to come into agreement. The participants pointed out teamwork as a definite strategy to promote reflection about each other's strengths, styles or strategies and how they could take advantage of those strategies to complete tasks and enhance their learning.

Joint work to revise individual work, clarify doubts, help each other, and develop more confidence in their learning skills are some of the benefits that students could get from the collaborative strategy we promoted when implementing the learning environment. In addition, we could evidence that self-assurance was enhanced when students could confirm they had certain knowledge they could contribute to task development.

In general, students valued the interaction, the dialogue they could hold while navigating through the different cultural zones. In this way, we promoted the key element of learning highlighted by Vygotsky (1978b)—interaction. The following excerpts taken from the data show the importance of interaction as a fundamental social practice to promote meaningful learning:

1. Sí, igualmente entre las dos es fácil que lo que una no entiende, lo entiende la otra, e intentar tomar apuntes, cada una toma apuntes por su lado, y luego entre las dos se revisa para poder resolver. (I. Dec. 2, 2004, L). (When we work together, one of us might not understand the information while the

other might. Equally, each one takes notes separately and later we compare them to do the task.)

2. … porque yo siempre he sido una persona más, no egocéntrica sino que me ha gustado trabajar solo, pero, pero con, pero trabajar en grupo es bueno porque uno con dos mentes, dos cabezas que están pensando y una duda que uno tenga pues el compañero puedes ser de mucha ayuda para aclararla, o si uno cree que una respuesta, si uno no tiene la certeza de una respuesta pues hay otra persona que pudo haber escuchado y se pueden poner de acuerdo o clarificar, o sea es muy, ayuda mucho. (I, Dec. 2, 2004, J and A). (I've been a person who has always liked to work by myself, but it was good when I worked in pairs to do the tasks in the software because the two of us thought of how doing the tasks correctly. When I had a doubt, my partner helped me to clarify the information I had heard in the audios. When I was not sure about the answers, my partner was next to me to help me with the information and he and I agreed on the correct answer. I mean, working in pairs was very helpful.)

3. Pues, yo, yo a nivel de informática noqueado, es decir no tengo mucho conocimiento sobre este tipo de programa… y R sí lo tenía, entonces yo le aprendí a él muchas cosas. Pero por ejemplo me sorprendió que no sabía por ejemplo una palabra, que yo sabía, de vocabulario, en este caso "españoles" "Spaniards", entonces pues surgen siempre cosas que uno complementa con la otra persona.(I, Dec. 1, 2004, C). (I do not have too much knowledge about technology and software, while my partner does. Thus, I learned many things from him. Another thing is that my partner did not know the meaning of the word "Spaniards" and I did. Therefore, we complemented our knowledge with each other.)

4. Interesante; ya que se genera diálogo, intercambio de ideas, conceptos previos y opiniones sobre los temas que se están viendo. (L. Nov. 11, 2004, N). (It was interesting because the software generates dialogue and allows us to interchange our ideas, prior concepts, and opinions about the topics we are studying.)

5. Como que uno aprende a conocer los procesos que el otro maneja… entonces esto debe ser por esto, y como conocer que es como más analítico o algo así. (I. Nov. 12, 2004, B). (I was able to discover the learning processes that my partner uses. For instance, when working on the maps, I was aware that one of us was more analytical, and it helped us to understand the contents.)

6. Conocer estrategias de estudio diferentes de las mías que podrían ser eficaces en mi propio proceso de aprendizaje. (L. Nov. 12, 2004, J). (I was able to learn different learning strategies from the ones I use and I became aware of the fact that they could be effective for my own learning process.)

7. [Lo que me causó esa dificultad fue] mi falta de aprender y buscar nuevas palabras por qué sin ellas no puede comprender totalmente una conversación, lectura, etc… [resolví esas dificultades] discutiendo y preguntándole a mi compañero acerca de esas palabras que desconocía. (Sic. L1, Feb. 27, 2013, F). (What caused those difficulties was my lack of learning and not looking up new words because that did not allow me to understand a conversation, a reading completely, etc. I overcame the difficulties discussing with my peer and asking him about the words I did not know.)

8. Le pregunte a mi compañera sobre el vocabulario que no entendía. (Sic. L3 April 17, 2013, H). (I asked my partner about the vocabulary I did not understand.)

These quotes can be analyzed under Vygotsky's theory of social interaction. For him, (Williams & Burden, 1997) the individual is born in a social world, and learning occurs through interaction with other people. Knowledge is socially constructed, rather than received because "human nature presupposes a specific social nature and a process by which children grow into the intellectual life of those around them" (Vygotsky, 1978a, p. 88). It is through interaction with others that we give meaning to the world. The secret of good learning lies in the social interaction between two or more people with different levels of skill and knowledge and the role of the individual who has more knowledge is to find ways to help others to learn. This is what Vygotsky calls the Zone of Proximal Development, which consists of the distance between the real level of development,

determined by the ability to independently solve a problem, and the level of potential development, determined through the resolution of a problem under the guidance of an adult or in collaboration with another more capable peer (Vygotsky, 1978b).Thus, educational experience involves the help of another subject (the professor, a more capable student, etc.) because human development is not based only on the subject-object relationship, but on the triad subject-mediator-object. It is then a mediated relationship, i.e., there is a third party mediator, which helps the process that the subject is doing.

In this sense, *A Journey Through the US Culture* is a hypermedia learning environment through which students learn by means of social interaction, where the student is the subject who learns, the foreign language and culture the object of study, and the software (listening tasks and activities) and the classmates and teacher the mediators. In other words, students not only depended on the teacher as a possible mediator to learn, but also on those classmates they worked collaboratively with and who possessed a higher level of knowledge. The data provided above clearly show that some of the learners who had certain difficulties or limitations to develop the tasks in the virtual environment relied on their peers by verifying and sharing what they had learned. As can be seen, mutual dialogue became a relevant learning social strategy through which students improved their learning in terms of the listening skill. For instance, the participants reported that dialogue as well as joint work was mainly based on interchanging ideas, asking questions, and comparing note-taking. Moreover, students also recognized that they had not only interchanged ideas about the contents of the cultural regions of the United States, but had also helped each other with the knowledge of technology and software use. These findings ratify the idea that through dialog and interaction in cognitive development, as claimed by Vygostky (1978b), learning and intellect are authentically constructed through social interaction.

An additional analysis of the data provided on the previous page shows that interaction and dialog as integral components of the learning process promote other remarkable benefits and even values, including a sense of belonging to a group or a community, as in this case when students recognized the necessity to work with the other; a sense of sharing and mutual support, instead of a sense of competition and individualism; and a sense of tolerance and respect to what the others can say and offer. As researchers, we consider that these other benefits

can only be possible when learners are invited to work in groups and when they have the opportunity to interact with each other in the English classroom. The methodology used when implementing *A Journey Through the US Culture* helped them to strengthen their social skills during the social construction of their own knowledge.

The findings related to the enhancement of learning through social interaction lead us to observe that in agreement with the principles of the communicative approach in EFL education, language, as seen in this research experience, is learned through a meaningful interactive process. Messages and meaning negotiation take place within a context (in this case the virtual trip to the United States) and through an interchange of ideas and opinions among individuals. Although students might construct meaning individually, it will only become "communicative" when social interaction occurs. What we mean with these words is that learning a foreign language, as in the case of the participants involved in this study, must essentially be a social process of meaning construction. The research experience reveals that interaction in the learning of a foreign language is achieved when the focus of learning is meaning construction rather than grammar or linguistic structures. Undoubtedly, *A Journey Through the US Culture* helped participants to become aware of the importance of social interaction and dialogue to construct meaning as they were able to complete the tasks proposed in the virtual environment.

The following chapter will present the conclusions drawn based on the data analysis, the pedagogical implications of the study, some limitations and some ideas to carry out further research.

Conclusions, Pedagogical Implications, Limitations, and Further Research

In this section the conclusions in relation to each one of the research questions are presented separately. With respect to the first research question, how do participants perceive the methodological proposal developed in the hypermedia environment *A Journey Through the US Culture*? The following conclusions were drawn.

Computer-based materials are definitely a motivating factor to learn English as a foreign language as it was reported in the first category. As could be seen, the learning environment raised learners' high interest not only in the virtual trip to the United States, but also in improving their listening skills with the integration of other skills such as reading and writing. This result must be related to the fact that young learners are quite familiar with computer applications and technological devices in their regular lives. So, they found it interesting that their daily interaction with technology outside the classroom was somehow similar to their interaction with the hypermedia environment.

The fact that this Hypermedia material offered the students the possibility of planning their own route along the trip, based on their interests, previous knowledge, or curiosity, seemed to increase their levels of excitement to learn in more significant terms. This certainly made *A Journey Through the US Culture* a creative pedagogical instructional material because EFL learners found this trip an enriching experience to get to know relevant aspects of the foreign culture. Learners analyzed and compared it to their own culture so as to become better users of the language. The data reveal that learners developed intrinsic motivation driven by their interest in doing the tasks and by the curiosity that initially existed within them. They were not pressured by external factors such as the

teacher's demands to finish the exploration of the virtual environment at strict allotted times and due dates to submit assignments, or formal evaluations. By contrast, the virtual trip meant for learners an opportunity to discover and enjoy the English learning process in a more autonomous way, even when they worked on the reflection logs or participated in the interviews, because their answers were not to be graded. It was a stimulating activity that changed the daily conventional teaching model in the classroom.

Findings seem to indicate that motivation is closely linked to the need of creating and designing diverse computer-based materials for learners belonging to the Digital Age. In consequence, a reliable conclusion related to subcategory B is that EFL learners need to be provided with additional materials that might complement the conventional use of textbooks, story books, and CDs in the classroom. This assertion does not mean that conventional materials are less important. We rather claim that textbooks and any other type of printed material should be accompanied by computer-based material, taking into account that most of our students are gradually gaining computer literacy. For instance, they do many of their own daily life activities through computer and technological devices, such as surfing on the Internet, playing computer games, writing e-mails, reading e-books, using dictionaries on the web, having access to free on-line web pages to practice grammar and pronunciation, downloading music and movies, making cell phone calls, and chatting with friends through Facebook, Twitter, Messenger, Skype, and WhatsApp®. All these interesting devices, applications, and social networks do not only make their lives easier to communicate, but fun and practical. Therefore, there is a main requirement for English teachers to incorporate computer-based material in their classes in order to be avant-guard with what learners do in the real world. The use of multimedia resources, naming images, video, texts, sound, hyperlinks, animation, and technological applications, among others, mediated by computers, such as the ones included in *A Journey Through the US Culture*, assures interest in learning a foreign language in a more up-to-date manner, similar to the many ways students normally interact with technology outside the English classroom.

As a computer-based material, *A Journey Through the US Culture* helped EFL participants to foster the intercultural competence as depicted in the second category that emerged from the data. As has been explained, learners pointed out the importance of the cultural content that the hypermedia learning environment

offered them to learn and discover. They were able to identify unknown cultural information, to complement and enrich the information they partially knew, and/or to reconsider the information they mistakenly knew. In other words, learners, as proposed by Byram, acquired meaningful knowledge about the culture of the United States, being this aspect one of the main components to become intercultural. Likewise, learners started to enhance the skill of discovery and the skill of comparing as they were challenged to explore the hypermedia material, and compared their prior knowledge about the culture of the United States to the new one. Furthermore, some of the participants were able to compare the American culture to their own culture in relation to the economy, traditions, and cultural development of Native Americans. Also, the participants created positive attitudes when they approached the cultural contents provided in *A Journey Through the US Culture*, since their curiosity, openness, motivation, and interest constituted radical factors to strengthen their intercultural competence. Rather than receiving the cultural contents from the teacher through lecture sessions or teacher-centered instruction, the participants were exposed to discover the cultural content by themselves, depending on their own capacities, skills, attitudes, and decision-making. This result is a major achievement of this research.

A Journey Through the US Culture is equally a resource that promotes EFL learners' cooperative and collaborative learning. Instead of having students pay attention to the teacher's explanation or to do individual listening tasks, this hypermedia learning environment led learners to work in pairs in order to help each other. They shared knowledge, verified their level of understanding, and built social skills, such as asking questions to each other, listening to their partners with respect, giving and accepting opinions, and distributing academic duty. As was shown in the data, students valued teamwork as they worked together through mutual interaction to solve the tasks (collaborative learning). In other cases, they took different roles in a separate way to do the tasks (cooperative learning). *A Journey Through the US Culture* is a material that succeeded in replacing students' competitive and non-cooperative attitudes for cooperative and friendly learning environments.

Another conclusion coming from the third category (the hypermedia learning environment develops the acquisition of linguistic knowledge and integration of language skills) is that *A Journey Through the US Culture* gave students possibilities to improve their language skills—listening, speaking, reading, and

writing— through an authentic communicative approach. They were eager to understand and listen to the audios, to read the posted information about the main American cultural regions, to speak about the topics presented through the trip when they were working in pairs, and to take notes and write an essay at the end of the experience. Although the main emphasis was to help EFL learners to foster their listening skills, we as teacher-researchers were widely aware that language skills cannot be practiced separately in real communication. In this sense, the focal skill, listening, was supported by the integration of other language skills, and this made the learning environment more authentic and real to the participants, even though it was a virtual trip.

In comparison to other research studies on the enhancement of EFL learners' listening skill and intercultural competence, as presented in the State of the Art section, we conclude that *A Journey Through the US Culture* is an original and creative material designed by the research group. Most of the published research mentioned in Chapter 2 promote the development of the listening skill and intercultural competence through the use of already existing applications, naming the Internet, the e-mail, and chatting. Just a few ones have implemented blogs. By contrast, the listening activities and the journey through the American Culture in our hypermedia environment were our invention and design. Consequently, the impact of this work relies on the fact that we not only carried out a research study, but designed the material itself and validated its pedagogical contributions to the EFL area.

All in all, *A Journey Through the US Culture* is a computer-based material that increased motivation, developed language skills integration, fostered intercultural competence, promoted cooperative and collaborative learning, and contributed to improve EFL learners' communicative competence during the research procedure. Based on this significant pedagogical impact in the context where the implementation was carried out, *A Journey Through the US Culture* is a material that can be useful for language learners at different stances. It is not only a means to improve language competence, but a means to promote intercultural communicative competence and cooperation in an enjoyable way, as it overcomes the conventional teaching practices that often take place in the EFL classroom.

Concerning the second research question, How do students with an intermediate English level face listening tasks when using the hypermedia *A Journey*

Through the US Culture?, we observed that they used a series of strategies meta-cognitive and social in nature. Categories 1 and 2 are essentially metacognitive.

The first category refers to the fact that learners became aware of task demands. This situation incited them to use specific textual and contextual information (first subcategory) as a strategy to understand the main point. Participants acknowledged having considered the linguistic context to make inferences at the word and the sentence levels and the situational context to get the core of the cultural information presented. Such was the case when they identified vocabulary related to agricultural products and inferred that the listening task was about presenting the economic production of a cultural region of the United States. They also mentioned having focused their attention on specific oral information and key aspects such as the purpose of each section and each text, the general idea of texts, and key words to understand the meaning of the listening activities to answer correctly.

One of the main conclusions of this fact is that students created awareness of task development through the hypertext. In doing so, they did not necessarily have to understand the whole speech; nevertheless they were able to do the whole tasks successfully through these strategies. Likewise, we might conclude that although the tasks were sometimes demanding, learners did not give up that easy as they affirmed having resorted to additional graphic resources such as images, maps, and pictures from the software itself and bibliographic resources such as dictionaries, and the Internet (visual aids) that allowed them to understand and infer the information. That is to say, they associated the visual material that the hypertext was showing them and other resources with the aural material that they were listening to. The wise use of these resources constitutes an important metacognitive strategy on the part of students because they not only depended on the aural material to face the tasks.

The second subcategory suggests that students also used reading and writing strategies as support for the development of listening activities. At moments when they thought that the tasks were somehow difficult, they decided to take notes of important details and read instructions carefully to make sure they were doing right. As argued before, this was an authentic way to face the tasks because personal note-taking and reading for clarification are strategic steps to self-regulate learning in many academic situations. We also conclude that learners combined writing strategies with listening strategies in their effort to

construct meaning communicatively within the context of *A Journey Through the US Culture*. A clear example of this combination of strategies is when learners compared their notes. First, they took notes to what they were listening to; then, they exchanged ideas and confirmed information as they read and spoke about the notes they had taken. This fact shows how learners' resorted individual strategies to not only understand the task, but to make crucial decisions to self-regulate what they learned.

The conclusion in regards to the second category is that students were able to use strategic knowledge. Therefore, they used procedural strategies that allowed them to plan, monitor, evaluate, and reflect upon their own learning such as when they thought that it was better to take notes rather than only listening to the audios or when they decided to relate the reading sections to the information given in the audios. These steps were clear examples of monitoring and planning their learning at the moment they faced the tasks. This is one of the most salient achievements of the study because it shows that students not only worked independently to solve the listening tasks, but had the power to make personal decisions on what strategies they would use to develop the task easier and more goal-oriented. It is our understanding that technology-based material necessarily encourages learners to look for convenient and useful metacognitive strategies on their own initiative, promoting in this way self-regulation learning, awareness of the way they face tasks, and autonomy. Hence, with this type of material, learners do not necessarily depend on the teacher's decision and guidance. On the contrary, they become direct agents of what they learn and how they learn.

Within this category, it is also necessary to conclude that anticipating was a helpful strategy because they constructed new knowledge based on the previous knowledge they had. It was a motivating strategy to feel more connected with the context in which the listening activities were set because they felt safe and were able to identify information that they did not know about before.

Another conclusion comes from the third category: learners are aware that dialog, interaction, and joint work enhance their learning. This indicates that in addition to the use of metacognitive strategies, students also implemented social strategies as a powerful means to learn with others and from others. *A Journey Through the US Culture* enabled learners to establish social and communicative bonds during the learning process as they interacted and constructed knowledge with their classmates through mutual exchange of information and viewpoints.

In fact, peer work facilitated the development of social strategies such as the mutual reflection upon the students' learning processes, learning styles, and cognitive strategies of which they could take advantage. Furthermore, the software fostered peer scaffolding and negotiation of meaning to come into agreement.

On the other hand, as it occurred in the research carried out by Clavijo, Quintana and Quintero (2011), in this study we found a complementary relationship in two ways: between linguistic knowledge and technological knowledge as tools that allowed and enriched students participation and between school context and social learning environment. According to Zhao and Lai (2008) there are four dimensions in which technology and second language development relate to each other: technology as a way to have exposure to the language, technology as a way to qualify the use of language and feedback, technology as a source that facilitates authentic communication, and technology as a way to promote autonomy. As it was evidenced in this project, learning was promoted through technology in these four dimensions, although the authentic communication that was expected to be promoted between teacher and students through the environment's e-mail communication could not be achieved due to technical problems.

Likewise, in our research the complementation between the technological component and foreign language development took place due to the fact that collaborative learning, both technological knowledge and linguistic knowledge allowed learners to build interaction.

The conclusions addressed above suggest in a broad sense that the environment is a means to enhance listening skills and a scenario that encourages learners to make use of metacognitive strategies, that is to say, it helps students to become aware of how to learn content in a more purposeful way.

Pedagogical Implications

Based on this research experience and its results, several implications could be mentioned:

The use of hypermedia applications like the one used in this research experience can benefit the students' learning process because it can foster autonomous

work to explore the different paths of the tool according to their own pace, interests, and learning strategies.

Using peer work as a methodology to face computer-based listening tasks cannot only facilitate the development of this skill, but can also enhance previous cultural and linguistic knowledge. Peer work helps them to confront their beliefs and stereotypes about other cultures and, at the same time, to enrich their vision of the world through dialogic processes. Learners working together can reshape their understanding of a foreign culture as well as develop their intercultural competence.

The variety of texts—monologues, dialogues, lectures, interviews, talk shows, and simulated lessons and trips—and the different listening tasks—information transfer activities, multiple choice, matching, classification, sequential order, inference-making exercises, and semantic maps—can foster the development of higher order thinking skills and increase the student's motivation to engage in active listening practice. However, care should be taken not to overwhelm students with long authentic monologues which do not follow a script so as not to discourage them and overload them cognitively.

Some of the strategies used by the students in this study evidence that they frequently the linguistic and sociolinguistic knowledge they have acquired along their university studies to make sense of the new knowledge and incorporate it in their schemata. Some others unveil the concern the students have as future pedagogues of a foreign language about the use of metacognition as an essential process in language learning.

Bearing all the above implications in mind, designing computer-based listening activities can assure a motivating, dynamic, and effective learning environment that fosters collaborative/ cooperative work, the development of listening skills, and intercultural competence as well as the awareness of cognitive and metacognitive processes.

Limitations

A first limitation related to the first research question is that although *A Journey Through the US Culture* fostered EFL learners' intercultural competence, it is fair to say that the level of critical intercultural competence as suggested by Byram

was not completely developed. Even though learners' evidenced having acquired cultural knowledge, developed skills (of comparing and of discovery), and created positive attitudes towards unknown cultural contexts, the data collected do not reveal that learners reached a good level of critical position about the cultural contents they encountered. This situation probably happened because the hypermedia learning environment mainly focuses on a virtual trip that includes surface cultural information: tourist places, geography, food, economy, important people, and festivals of each cultural region. Although our initial intention was to have students assume a critical and reflective position by asking them what they thought about the cultural information, students mainly reported what they had learned, but did not provide solid critical opinions about the target culture. Therefore, it is necessary for future implementations of the hypermedia environment to think of possibilities to help learners become more critical intercultural learners, and if possible, include more aspects of deep culture. One way could be to ask students to write notes about their impressions or to ask direct questions about the positive and negative aspects of the cultural information they find along the trip.

Another limitation is that the hypermedia learning environment still requires several revisions in terms of sound, images, listening tasks extent, and the length of various texts. The technical limitations result being part of the process to improve the proposal and offer learners a better version in the future.

Further Research

According to Clavijo, Quintana and Quintero (2011), from the social perspective of learning and by means of the use of ICTs, it is possible to foster online collaborative work and reconsider the teacher's role to base his/her pedagogic performance on virtual learning environments. In fact, research has focused on how students improve the foreign language and interact with technology and computer-based material, but little has been explored about teachers' pedagogical performance with digital resources. This can be a topic of interest for further research.

Intercultural communicative competence development requires further research in EFL education. It is a fact that we are still far away from preparing students to be more critical intercultural beings. Although many research studies

have been directed to foster intercultural awareness, most of those attempts focus on surface elements of culture only. There is the necessity to investigate how EFL learners can be prepared to address complex meanings of culture in order to help them to become not only receivers of general cultural information, but critical agents of cultural conflicts, differences, ideologies, and deviations to the cultural norms. Similarly, it is still essential to find methodological ways to develop intercultural competence through ICT resources in such a way that technology serves as a means to accomplish this goal.

In the same way, the integration of culture and language needs further exploration due to the fact that there is little attention to incorporate cultural content in language teaching. Orientations to teach only grammar forms and communicative functions still prevail in the EFL classroom because both teachers and students are more concerned about the development of the language competences than about the cultural competence. As Byram (1997), Kramsch (1993), and Prieto (1998) indicate, language cannot be seen as separated from culture because one depends on the other. Thus, the integration of these two aspects, and if possible with the aid of digital materials, required more systematic investigation.

EFL learners still need to be trained to use learning strategies (cognitive, metacognitive, and social) when learning English not only in the regular language classrooms, but when interacting with other digital material. Even though many teachers facilitate the learning process with the support of TIC, the implementation of learning strategies to deal with technological resources requires close attention. Teachers often ask students to do language activities that imply using the Internet, but they almost never provide them with a learning plan or strategy to do the tasks online. Taking into account that learners often work individually and more autonomously when computer-based learning is provided, they have to be given learning strategies to self-direct their learning in a more purposeful way. It would be interesting, for instance, to investigate how learning strategies influence learning in situations when the students are asked to work with webpages, YouTube videos, the e-mail, blogs, platforms, or courses on line; since the teacher is not there to solve their doubts and problems.

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Appendix A

CONSENT FORM

Respetados estudiantes:

Algunos profesores del Departamento de Lenguas de la Universidad Pedagógica Nacional estamos llevando a cabo un proceso investigativo, como parte del equipo de trabajo del proyecto "Exploración de dos propuestas hipermediales para el desarrollo de la comprensión auditiva en Inglés", inscrito en el Centro de Investigaciones de la Universidad Pedagógica (CIUP).

El propósito central del proyecto es la comprensión de cómo un estudiante de inglés como lengua extranjera desarrolla y mejora su habilidad auditiva, en el aprendizaje individual y colectivo, dentro de ambientes hipermediales. El proyecto investigativo busca explorar dos propuestas hipermediales específicas, dedicadas al desarrollo de la capacidad auditiva del estudiante, determinando la efectividad y pertinencia, y señalando ventajas y desventajas de las mismas; al mismo tiempo que proporcionar al usuario la oportunidad de explorar aspectos culturales de dos extensas comunidades angloparlantes, la inglesa y la norteamericana.

Para el desarrollo del proyecto en su etapa actual se hace necesaria la exploración de las ya mencionadas propuestas hipermediales, para lo cual se planea realizar durante el semestre en curso, una serie de sesiones donde estudiantes del Departamento de Lenguas de la universidad hagan uso del software desarrollado, y nos ayuden con sus observaciones y comentarios a enriquecer y validar los resultados de la investigación. La recolección de dichas observaciones

y comentarios se realizará a través de la aplicación de encuestas y entrevistas con los usuarios del software que voluntariamente acepten participar en el proceso, a quienes se les garantizarán los siguientes aspectos:

1. No se hará uso de su nombre propio en los reportes de la investigación, si usted así lo desea.
2. La información que usted suministre durante su participación será tratada con total confidencialidad.
3. Dicha información no será modificada o adulterada, por lo cual estará usted en el derecho de verificar que ella sea consignada verazmente en los instrumentos gráficos de recolección de datos.
4. Ninguna participación que usted haga dentro del proceso investigativo afectará sus calificaciones finales y/o parciales en ninguna materia.

Agradecemos su autorización para contar con usted como participante de nuestro proyecto.

Cordialmente,

ESPERANZA VERA RODRÍGUEZ
Coordinadora de la Investigación

Nombre _____

Firma _____

Fecha_____

Appendix B

ENTREVISTA

Profesor entrevistador, favor sentarse al lado del estudiante para romper un poco la formalidad.

INTRODUCCIÓN

Buenas tardes, mi nombre es_____, soy profesor del Departamento, y miembro del equipo que diseñó el software que ustedes usaron hoy. Me gustaría hacerle algunas preguntas acerca de cómo le pareció *A Journey Through the us Culture* y cómo le fue con él. ¿De acuerdo? Bueno, comencemos.

CUERPO DE LA ENTREVISTA

1. ¿Qué zona visitaste hoy?
2. ¿Cómo te pareció?
3. ¿Y en cuanto a los *listening*, las lecturas....?
4. ¿Qué te llamó la atención? (Si se centran en lo técnico, dejarlo terminar pero hacerlo enfocar en los contenidos)
5. ¿Aprendiste algo nuevo hoy?
6. ¿Cómo te pareció la información de cada zona?

SI CUALQUIERA DE LAS SIGUIENTES PREGUNTAS YA HA SIDO RESPONDIDA, NO REPETIRLA

7. ¿Cómo te pareció la información de cada zona?
8. ¿Cómo te parecio el trabajo con las actividades propuestas?
9. ¿Cómo te pareció el trabajo con el mapa semántico?
10. De acuerdo con tu nivel de lengua, ¿cómo te pareció el nivel de lengua utilizado por los hablantes en cada zona?
11. ¿Cómo te fue en la sesión de hoy? ¿Por qué? ¿Tuviste alguna dificultad para resolver las tareas propuestas? ¿Cuál pudo haber sido el problema? (Parafrasear lo que dice el estudiante para permitir que elabore un poco más sus respuestas)
12. ¿Qué te causó esa dificultad ¿Por qué?
13. ¿Cómo resolviste esas dificultades? ¿Cómo te pareció la experiencia de trabajar en grupo con el software? Me pareció…
14. ¿Pudiste mejorar o aprender a algo partir de esa interacción con tu compañero?

CIERRE

15. ¿Qué expectativas tienes para la próxima sesión?
16. ¿Te gustaría añadir alguna otra cosa acerca de tu experiencia con *A Journey trhough the US Culture* el día de hoy?

¿Qué? _____

_____

Muchas gracias por tu colaboración, te aseguramos estricta confidencialidad con tus respuestas.

Appendix C

A JOURNEY THROUGH THE US CULTURE

STUDENT LOG Nº _____   **Fecha :** _____

NOMBRE _____

1. La(s) region(es) cultural(es) que visité fue (fueron) _____
    _____
    _____
    _____

2. Lo qué me llamó la atención de la sección del hipertexto que visité el día de
    hoy fue_____
    _____
    _____

3. En el día de hoy (para comprender los audios) utilicé las siguientes es-
    trategias _____
    _____
    _____

4. Para realizar las actividades propuestas utilicé las siguientes estrategias
    _____
    _____
    _____

5. Las actividades propuestas me parecieron _____

_____

_____

_____

porque_____

_____

_____

6. En el momento de elegir la respuesta más adecuada en cada actividad, las
cosas a las que presté atención fueron _____

_____

_____

_____

7. Considero que los mapas semánticos _____

_____

_____

_____

porque_____

_____

_____

_____

8. Considero que las transcripciones de los audios _____

_____

_____

_____

porque_____

_____

_____

_____

9. La actividad de producción escrita me pareció _____

_____

_____

_____

10. Para mi nivel de lengua, el inglés utilizado por los hablantes en cada zona fue _____
_____
_____

11. Considero que mi desempeño en la sesión de hoy fue _____
_____
_____
_____

porque_____
_____
_____
_____

12. Mis dificultades fueron: _____
_____
_____
_____

13. Esta(s) dificultad(es) fue(ron) causada(s) por_____
_____
_____
_____

porque_____
_____
_____
_____

14. La(s) estrategia(s) que utilicé para solucionar mi(s) dificultad(es) fue(ron) _____
_____
_____
_____
_____
_____

15. La experiencia de trabajar en grupo con el software me pareció _____
_____
_____
_____

16. A partir de esa interacción con mi compañero pude _____
_____
_____
_____

17. Para el trabajo con la próxima zona pienso _____
_____
_____
_____

Biodata

Luz Dary Arias Soto holds a Ph.D. in English Philology from Universidad Nacional de Educación a Distancia, Madrid (Spain), a M. A. in TESOL from SUNY at Stony Brook, USA, and a B. A. degree in English and Spanish from Universidad Pedagógica Nacional (UPN). She was awarded a Fulbright scholarship to do her master studies in the USA. Currently, she is a member of the research group Hypermedia, Testing, and Teaching English (1999-2016). She is an associate teacher at Universidad Pedagógica Nacional, and has published several English textbooks, books and articles in indexed journals related to teaching English, teaching professional development, and the inclusion of ICT in the EFL education.

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Esperanza Vera Rodríguez holds a M.Sc. in Information Technology Applied to Education from Universidad Pedagógica Nacional and a B. A. in Philology and Languages from Universidad Nacional de Colombia. She was an ELT consultant in test design for National high school and ECAES Examinations (now Saber PRO), and has co-authored some online didactic games, three research books and some articles related to the fields of language learning, teaching and

evaluation and the use of ICTs in these fields in indexed journals. She is an associate teacher at Universidad Pedagógica Nacional. She was the founder and leader of the research group called Hypermedia, Testing, and Teaching English (1999-2013). Currently, she is the leader again.

Author index

Subject index

D

H

The increasingly interconnected and knowledge-driven 21st century world calls for groundbreaking changes in language teaching and learning. To convey this objective, the authors of this book cogently fuse key elements within a sound pedagogical proposal that has been carefully designed to demystify the study of intercultural competence in its traditional settings. Not only does their study fine-tune strategies for the development of critical cultural awareness, but it also unveils paths to authentic interaction, critical thinking, and cooperative, collaborative, and self-regulated learning experiences that evolve in an adaptive learner-centered setting. The scenario chosen to expand students' communicative boundaries is a hypermedia learning environment that invites learners to travel throughout the United States with a dual focus in mind: the development of listening skills and intercultural competence, as well as nurturing a pluralistic view of the learning of English mediated through the use of technologies.

Additionally, the study strives to provide groundwork to less restrictive approaches for the inclusion of effective computer-assisted language learning in the classroom, demonstrating that an interdisciplinary integration of agents and knowledge for efficient design and practice is possible. A unique aspect of this book is that it illustrates a myriad of features underpinning the design of the hypertext, which was entirely created and validated by the authors.

All in all, this qualitative case study encompasses a wide range of strategic learning stances in the EFL classroom, and acts in response to the needs of learners (and instructors) seeking a critical and analytical process of understanding and examining culture. I suggest that this book be used as a reference for language and interdisciplinary courses, as well as professional development programs that combine studies of language skills development and culture.

Liliana Cuesta Medina, PhD