Chapter 2: literature review

2.1 Second language acquisition theories

For decades, the learning and teaching of a foreign language has constantly been studied to keep up with the changes occurring in that particular time. Many theories and principles have been proposed, some remain valid nowadays, and others have been discarded. These theoretical foundations provide the necessary framework to carry out new research, to replicate it and to make decisions on what has already been said and done. This is exactly what SLA theories, hypothesis and principles will do in this thesis; they will offer guidance for the integration of technology in a language classroom.

2.1.1 The role of interaction.

Human learning is mediated through interaction with others; in interactions with parents, peers, friends, teachers, etc., students move into phases of thinking and speaking that they would not be able to go to alone (Vygostky, 1934/1962 as cited in Kreeft Peyton, 1999). In the mid 70’s, Wagner-Gough and Hatch were among the first second language researchers that began to consider the role conversation plays in the development of a foreign language in a students’ brain because oral interactions in authentic situations are crucial to language development (Wagner-Gough and Hatch, 1975). They showed how a learner participating in a conversation provides them with valuable opportunities to hear and produce the second or foreign language in ways that go beyond the mere practice of material that has been studied previously. Long (1996) uses interaction hypothesis to express that conversational interaction is the basis of language development; in other words, conversations are more than means to practice language, but a way in which learning takes place.

The interaction hypothesis is the negotiation of meaning, and especially negotiation work that triggers interactional adjustments by the native speaker (NS) or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways (Long, 1996, p. 151-152).
Meaning negotiation refers to how the learner’s attention is focused on an incongruity between what s/he knows about the target language, and what is actually happening in the second language. Gass (2003) points out that learning can take place during the interaction, or in the negotiation phase which can serve as an initial step so leaning can happen. In a conversation, NS or more fluent and competent speakers can facilitate the integration of less proficient speakers by adjusting their own language, this means that they can repeat, rephrase or constantly ask questions so the less proficient speaker can understand it.

In this sense, learners will be able to access to comprehensible input (Krashen, 1981). Krashen (1981) explains that students must understand the message that is being conveyed, but this utterance must be one step beyond the learner’s current linguistic competence (i). A learner of Italian may be able to understand “mi piace la machina rossa” (I like the red car), but if the teacher adds to the initial utterance “ma non mi piacciono le machine nere” (but I do not like black cars), the learner is faced with new information (i + 1) that leads to the construction of new knowledge, based on prior one.

Nowadays, this concept is seen as necessary but not by itself sufficient. Research done by Sato (1986) showed that it is possible for students to understand the input they are presented with, without necessarily improving their output. White (1987) mentions that incomprehensible input may be what is vital in SLA; she points out that it is incomprehensibility or comprehension difficulties that can provide the learner significant negative feedback that is necessary for L2 acquisition. Following this line of thought, Swain (1985) argues in her Comprehensible Output Hypothesis that in addition to comprehensible (or incomprehensible) input, comprehensible output is also necessary for L2 acquisition. This author mentions that while students may be able to comprehend the input they are receiving; this does not guarantee the acquisition of linguistic structures because it is likely they were paying more attention to the content and not the form. She adds that when learners have some
feedback on their utterances, have communicative demands put on them and are given the opportunity to modify their output, they will be somewhat obliged to make their output more comprehensible.

An additional factor to consider when it comes to interaction and comprehensive input is the affective filter. Motivation, self-confidence and anxiety are three variables that can affect learning. If a student has high motivations, is confident with what s/he knows and has low anxiety, s/he lowers the affective filter and is likely to succeed in foreign language learning. If the three variables are against him/her, learners raise the filter which acts as a barrier between the speaker and the listener, reducing the amount of comprehensible input received. Krashen (1981) further states that positive affect is necessary but not enough for language learning to occur; he adds that the affective filter can be lowered if teachers can provide a low anxiety environment that creates interest in what is being studied and that boosts learner’s self-confidence and self-esteem.

Interaction hypothesis points out the importance of students having the opportunity to engage in conversations with others, not only to practice what they have learned, but to acquire new knowledge and to have the social element that is important to language learning.

2.1.2 The importance of audience in language teaching.

In language use and language learning, considering the intended audience is of vital importance, particularly the relation between the learner and the audience because this determines the forms of language to be used. When we write a letter or an e-mail, we always keep our recipient in mind. Television shows like *Dora the explorer* and *Blue’s Clues* were developed for preschool children, while *CSI* and *Friends* are destined for adults. Hence, the content in those television shows is created and suitable for a specific intended audience. The personal pronouns in Spanish –*tú* and *usted-* and in French –*tu* and *vous-* (sometimes called referent honorifics), and their choice depends on the people who are involved in the utterances.
Audience is defined by Park (1982, as cited in Johnston, 1999) as either people external to the text or message or towards the actual text or message, and the audience implied there.

Linguistic messages are heavily influenced by addressees; the area of sociolinguistics stresses that the variation in audience accounts for a great deal of the social and stylistic choices. One of the theories that takes the audience as a central construct is “speech accommodation theory” by Giles (1970, as cited in Johnston, 1999). This theory is based on the premise that speakers adjust their language according to who they are talking or writing to. A speaker either converges to (moves towards) or diverges (moves away) from the addressee’s style. Research on this area is founded in the belief that audience is a crucial factor in foreign language learning, and that whether learner’s have a real audience available or not, affecting the rate and extent of language learning (Johnston, 1999).

Johnston (1999) points out that in many traditional language classes, students produce text for an “audience of one” and that their oral production is limited to classmates and the teacher. The recognition of the importance of audience in the language learning settings has reappraised on how teachers design their activities. For example, if the educator wishes to develop a creative writing activity where students use the recently learned vocabulary and grammatical structures, in addition to the instructions, the teacher has to create a situation in which s/he explicitly states the intended audience, and at best, be able to provide that audience to the students. In writing tasks, knowing the potential audience is key for students, because this determines word choice, structures to use or avoid (e.g. I ain’t going vs. I am not going) and other stylistic features.

Authentic audience is defined by Johnston (1999) as “an audience that is concerned exclusively with the meaning of the speaker’s message” (p. 60). With this idea, the language teachers is not considered to be authentic audience because, s/he is more interested in the form, as opposed to what is conveyed. The author mentions that there can be other criteria to define who is and is not an authentic
audience, but he argues that the proposed by him takes into account the audience’s intentions as much as of those of the producer.

If we consider Giles’ speech accommodation theory in the planning of our language lessons, we can give our students the opportunity to write for a real communicative purpose and not to obtain a grade for the “mastery” of language structures and vocabulary.

2.1.3 Authentic language and tasks.

Along the line of the use of authenticity in language classrooms, many researchers believe that students learn best if they can do activities in class that bear a resemblance to situations they will face in real life. Chapelle (1999) points out that these activities are commonly referred to as tasks; she further adds that there are several differences in defining this term, but that most concur with the fact that tasks must have goals and be carried out through the engagement of participants in a goal-oriented behavior. Tasks for language learners that require students to use the target language to accomplish an objective and that require communication in the foreign language can be labeled “authentic tasks”.

Chapelle (1999) mentions that it is difficult to pin point which activities are really authentic, as authenticity is a slippery term. To evaluate the authenticity of a task, one must evaluate the correspondence between the language learning task in the classroom and the tasks that the learner might possibly face outside the classroom. She mentions that a task based instruction in language learning is centered on three basic aspects, input, output and the interaction between the learner and interlocutor, concepts that were discussed in the two previous sections.

Second language tasks are meant to provide students with the opportunity to practice language similar to that used outside classrooms. If additionally to providing authentic language learning tasks, we can give our student an authentic audience for that task, the educational setting will be enhanced and it is more likely that learning can occur.
2.1.4 Ego permeability hypothesis.

This particular hypothesis is based on the understanding that people project different aspects of themselves according to how the person wishes others to perceive them. It argues that some people – particularly adults - find it hard to learn a foreign language because they are unwilling to give up control over their self-presentation and somewhat giving up this control is necessary in the language learning process (Hudson & Bruckman, 2002; Guiora, 1972). This has a very close relationship with the concept of face and facework. Samovar, Porter & McDaniel (2010) define face as how a person wishes to be perceived by others; this is a result of social interaction and can be lost or gained. Facework is “the construction and communication of face” (Samovar, et al., 2010, p. 217). Ting-Toomey (2005) asseverates that people strive to “maintain and negotiate face in all communication situations” (p.75). This is also true during the process of learning a new language.

Celce-Murci, Brinton & Goodwin (2000) further state that ego boundaries (as well as motivation and attitude) can place restrictions on the cognitive processes entailed in language learning. Because language students may not have the same control over the foreign language as over their native languages, they become inhibited about using the new language, and speaking in this new language becomes a face threatening act (FTA). A FTA is defined by Brown and Levinson (1978) as an act that inherently goes against the face wants of the addressee or speaker. Ego Permeability hypothesis suggests that improved linguistic performance can be obtained in a foreign language through situations that lower inhibitions, or Krashen’s (1981) affective filter, in order to save learner’s face. Language production in a low-inhibition environment, likely contributes toward deeper and more meaningful learning.

2.2 People and technology

Throughout humanity, many technological revolutions have taken place in the different areas of life; the social, cultural, economical and political circles have been affected one way or another, some
have been developed, others have had setbacks. Hernandez Rojas (2009) mentions that since the end of the last century, we are in the midst of a new type of revolution that is originating what is called the information society (IS).

2.2.1 Information society.

The IS is characterized by a phase of social development in which information is obtained, created, shared, used and processed, based on the use of different types of informatics resources that can be applied from any geographical standpoint (Hernandez Rojas, 2009). However, Karvalics (2007) points out that with the case of abstract concepts such as IS, short definitions, like the one provided by Hernandez Rojas (2009), can emphasize a particular aspect or hidden preconceptions. Karvalics (2007) compiled different conceptions of IS that demonstrate diverse views on the same concept. Some define IS as “a new type of society, where the possession of information (and not material wealth) is the driving force behind its transformation and development [...] (and where) human intellectual creativity flourishes”; others as “a society where [...] information is used as an economic resource, the community harnesses/exploits it, and behind it all an industry develops which produces the necessary information” (Karvalics, 2007, p.10). As Karvalics (2007) points out, some revolve around the resources used and generated, others around products or industries. The different conceptions of the same term reveal that in order to pick a position, one must consider the most important factor and decide on a definition that goes accordingly.

For the purpose of this thesis, the IS will be considered as a society that is based on the creation, distribution, access and use of information that is significant for social, economical, cultural and political purposes. Additionally, we shall reckon, as Hernandez Rojas (2009) points out, the digital information in the IS as becoming “the most valuable merchandise due to its key role in human activity, and the development and transformations of societies” (p. 18).
2.2.2 IS in education.

Looking back at the history of education, it seems that the curricular and educational proposals and purposes have been modified constantly to match up with the technological advancements happening in that particular time (e.g. the use of the overhead projector). Pozo (1996, as cited in Hernandez Rojas, 2009) argues that different societies generate their own “learning cultures”, hence the case of the IS seems to have created new and complex educational demands.

2.2.2.1 Main challenges that the information society poses for education.

Monereo and Pozo (2001) mention that there are at least five focal challenges that the IS has set for education. The first one is the predominance of symbolic information in productive sectors. The authors stress that in the IS, the production of symbols and systems that allow us to manipulate and administrate material resources has become increasingly important. Hernandez Rojas (2009) adds that the raw matter of a person’s professional activity is basically information that must be communicated, interchanged, assimilated and transformed into “individual and shared knowledge” (p. 19).

The second great challenge is that information has a very short expiration date. The flow of information that the different disciplines create is quickly renewed; this has made us become what Monereo and Pozo (2001, Hernandez Rojas, 2009) call “permanent learners” or “informivores” (p. 19) that need a constant feed of up to date information.

The third key challenge education is facing in regards to IS, is that information is uncertain and unattainable. It goes beyond the fact that a person can posses large sums of information, but rather that once this information is gathered, we do not know what to do with it, or how to deal with it. Hernandez Rojas (2009) says that a person must face up to this information with the appropriate resources, so s/he can filter, select and evaluate the information in an effective and smart way.

The risk of substituting knowledge with information is the fourth challenge mentioned by Monereo and Pozo (2001). This means that with the simplification of messages and communication
canals, we are at risk of learning information that is too informal, due to the fact that a great deal of it is learned in informal settings, under no or minimal supervision.

The last main challenge is that not all information is relevant. In the IS, it is imperative that students (an in general, everyone) know how to identify and select the points of view with the appropriate foundations and support in order to explain any concept (Monereo and Pozo, 2001). The authors mention that this is in addition to the ability students must acquire to contrast dissimilar ideas, to critically analyze the source’s arguments and to be able to rationally justify the reasons for their choice.

These challenges, like Hernandez Rojas (2009) points out, are demanding students of all ages to obtain a series of skills that will allow them to constantly learn in a way that is strategic and negotiable, in other words learn to learn. Hernandez Rojas (2009) adds that we are no longer in a point where learning takes place with repetition; nowadays, learning occurs through the constant construction of meaning and ideas. If we add cognitive, meta-cognitive strategies and collaborative learning, it is possible that the information are students are receiving, becomes internalized knowledge.

2.2.3 Information and communication technologies (ICTs).

ICTs play a key role in the IS, they are the means to create and divulge information (Tello, 2007 as cited in Hernandez Rojas, 2009); the concept of ICTs includes any telecommunication device, its hardware, software and networks (e.g. radio, cell phones, computers, satellite systems, television etc.).

2.2.3.1 ICTs in education.

Twining (2002) distinguishes three uses that are given to computers in a classroom: 1) as a form of support to the content students are learning, 2) as a form of extending the knowledge if the student’s learning processes are changed and 3) as a transforming tool without which learning practices would not be able to take place. The author comments that in most scenarios, the first use is the most common in classrooms practices; the second and third one are rarely developed.
In order to incorporate ICTs in an educational setting, the Organization for Economic Cooperation & Development (OECD), through the Centre for Educational Research & Innovation (2001) mention that the key question to ask is what parts of the teaching-learning process can be most usefully enabled by ICTs. The Centre for Educational Research & Innovation (2001) points out that ICTs can have a profound impact on several areas of the education process such as the learning environments, the content of the learning, student empowerment and forms of communication. These will be explained next.

ICTs can impact the learning environment when they blur the traditional settings in which education takes place (e.g. at school, in a library, in a classroom), and enable the students to learn in different places –physically and virtually-, and times; this way learners and educators choose when and where to teach/learn and are not “tied down” to all being present in the same room.

With the implementation of ICTs, the content of instruction can be enhanced because learners and teachers have easy, constant and independent access to a great amount of information. In this respect, we must refer to one of the challenges by Monereo & Pozo (2001), students and teachers must have the skills to manipulate and understand all the information they are acquiring, one of the ways to control this is by providing students list of websites that have been selected according to predetermined criteria fit to the learner’s profile (Centre for Educational Research & Innovation, 2001).

The Centre for Educational Research & Innovation (2001) establishes that students can be empowered by ICTs by giving them the power of choice and “potentially more engaging and effective means of learning” (p. 22). ICTs can be a way to include in the classroom different cognitive and learning styles and preferences. ICTs offer communication the opportunity to happen in multidirectional ways (e.g. one-to-one, many-to-many etc.). This is particularly useful in language lessons, as communication is the primary goal. Having ICTs in a language class to foster communication allows the students to be in contact with native or more proficient speakers of the target language and to learn
about the culture without ever having to leave the room. Furthermore, the Centre for Educational Research & Innovation (2001) offers different situations in teaching that cannot be done without technology and others that can be done better with technology.

[In education, the following] cannot be done without technology:

- Learning can take place anytime, anywhere due to the dematerialization of time and space.
- Access to learning for everyone, resulting in mass-education.
- Internet access to ever growing collections of educational resources and services.
- Input for task-based learning using fast search and retrieval software, or for research work.
- Learning on demand;
- Peer-group teaching/learning through distance via ICTs.

[In education, the following] can be done better with technology:

- Students and teachers have the choice to select their preferred learning style.
- Customized and personalized learning materials and services are available.
- The possibility of individualized tacking and recording of learning processes.
- Pupils have the opportunity of self-assessment and the monitoring of their learning performance.
- [The possibility of] interactive communications between participants and influencers in the learning process.
- Interactive access to educational resources. (p.23)

Hernandez Rojas (2009) recognizes that the numerous benefits that ICTs can bring to the classroom rely heavily on the fact that ICTs have certain characteristics that no other type of technology can offer. Coll (2004) and Hernandez Rojas (2009) offer seven characteristics of ICTs that make them
relevant to the educational process: formality, interactivity, dynamism, multimedia, hypermedia, connectivity and mediation.

*Formality* is the first characteristic and it refers to explicit planning of actions, favoring conscience and metacognition. *Interactivity* is how ICTs allow a more active and contingent relations upon information; the user can choose the rhythm s/he wishes to work in and this can have an impact on the person’s motivation and self-esteem. *Dynamism* means that ICTs give the possibility of interacting with virtual realities, simulations of real situations. *Multimedia* allows integration, complementation and transit between systems and representation formats. *Hypermedia* permits to establish relations between information, while it facilitates learner autonomy, and allows inter and intra text communication. *Connectivity* refers to how ICTs let teachers and learners work on line, opening new ways of collaborative learning and facilitating the amount and quality of pedagogical help offered.

The last characteristic mentioned by Coll (2004) and Hernandez Rojas (2009) is mediation, and this means that the opportunities of thought and the interconnection between the thoughts of teachers and students can be amplified.

The different attributes and possibilities offered by ICTs, makes it seem they are here to stay, however it is important to understand that their mere implementation in a classroom will not result in significant and dramatic changes in the results of the education process (Hernandez Rojas, 2009).

Hernandez Rojas (2009) stresses that what can, and will contribute to innovate education practices will be the fact that there must be a conscious, reasonable and thought out conceptualization on which are the best ways to introduce and implement ICTs in a school, what specific pedagogical contexts should be enhanced by ICTs, how evaluation should take place, what specific types of activities should be carried out by teachers and students using ICTs, what infrastructure is needed and what are the costs of implementation.
2.2.3.2 Considerations while implementing ICTs in a classroom.

To ensure the highest probability of success, when attempting to implement ICTs in a school setting, there are different two main types of considerations that need to be thought over: the pedagogical feature, and the technological one. Generally speaking, the pedagogical considerations are those that relate to the actual form of instruction (e.g. proposed methodology, content adjustments, assessment criteria, etc.) and the impact that ICTs can have on the didactic triangle teacher-students-content. The technological considerations refer to the infrastructure that is need for ICTs and the different international standards for their implementation.

Hernandez Rojas (2009), mentions that in a purely technical situation, there are three main aspects that need to be considered for the appropriate implementation of ICTs in a classroom: 1) the school and academic context, in this point technological and human resources must be taken into account, as well as the informatics and organization culture of these (people and technology); 2) the actual innovation project, school administrators and teachers must discuss to what extent the implementation is possible considering the needed and available resources, as well as the adjustments that might need to happen in the classroom practices so that the project can be put into practice; and 3) the characteristics of the innovators (e.g. teachers, technicians in audio, video, etc.), that will help the ICT project, that will install the needed platforms, will give guidance on how to use them and will possibly make up the technological aspects of the job.

In regards to the pedagogical considerations, we must begin with the premise that any particular ICT will not work to its full potential if educators and school administrators do not find the way to explode it appropriately and completely. If this is not done, it is likely that the ICT resource will be underused. In this line, Coll (2004) and Mauri and Onrubia (2008, as cited in Hernandez Rojas, 2009) mention that it is not in ICTs and what they can offer, that we should put all our hopes of innovation in
education; it should be put on the *proper implementation* of ICTs with a thorough analysis of where in the education process, would they work best.

In the pedagogical dimension, Hernandez Rojas (2009) brings up the fact that ICTs need to be accompanied by a didactical design that allows teachers and students to create a suited environment so that the potentialities of ICTs can be fulfilled. He adds that it is imperative to develop pedagogical curricular suggestions that area truly innovative, where the use of ICTs is crucial and the settings where they are used could not be set out without them; he also adds that ICTs should be implemented in a way that truly allows the reinforcement of traditional educational practices so that the ICT is not nullified and it does not turn into something that hinders education and eventually becomes a problem.

In regards to the pedagogical consideration mentioned by Hernandez Rojas (2009), teachers nowadays require additional competences that go beyond knowing teaching techniques. Díaz Barriga, Padilla Magaña & Morán Ramirez (2009) explicitly state that a teacher in the 21st century must be:

A highly competitive professional [that can] participate in teams to design and implement innovative learning environments. That is to say, teachers are expected to be trained to take part in complex simulations in different areas of knowledge that allow students to learn and put to test a wide range of competences so they can face real life issues and situations. Consequently, teachers are expected to use in a creative, profound and pertinent manner all types of communication media and ICTs, this, so their full potential be taken advantage of, whether it be communicative, informative or motivational. (p.73-74)

The development of the necessary competences to be up to date with the current teaching demands is of high importance to organizations such as the UNESCO that developed the ICT Competence Framework for Teachers (ICT-CFT) (2008). The main goal of the ICT-CFT is to improve teacher practice by combining ICT skills, pedagogy, curriculum and school organization. The Implementation Guidelines developed by the ICT-CFT mention that:
To live, learn, and work successfully in an increasingly complex, information-rich and knowledge-based society, students and teachers must utilize technology effectively. Within a sound educational setting, technology can enable students to become:

• Proficient information technology users
• Information seekers, analyzers, and evaluators
• Problem solvers and decision makers
• Creative and effective users of productivity tools
• Communicators, collaborators, publishers, and producers
• Informed, responsible, and contributing citizen (p. 1).

With the goal stated by the UNESCO and the ICT-CFT (2008) and what technology should enable students to do, in order to implement ICTs and the use of technology in the classroom, there are additional aspects that figure in to this equation. ICTs and technology cannot be put into effect in an educational setting if certain standards are not met. The development of standards of technology began in 1998 with the International Society for Technology in Education (ISTE) that has the goal of providing “leadership and service to improve teaching, learning and school leadership by advancing the effective use of technology in PK-12 and teacher education” (ISTE, 2010). The ISTE developed a series of technology standards for students, teachers and administrators. A standard is defined by Cennamo, Ross & Ertmer (2010) as “a degree or level of requirement, excellence, or attainment expected of an individual or organization” (p. 12-13). The technological standards explicitly state what teachers and students need to be effective users of ICTs.

The ISTE National Educational Technology Standards and performance for teachers (NETS-T) (2008) provides a framework for educators so they can have a smooth transition from schools in the industrial age to the digital era. It defines the necessary and basic concepts, knowledge, skills, abilities, attitudes and facts needed for applying technology in classrooms. The ISTE NETS-T sets the standards as
teachers “design, implement and assess learning experience to engage students and improve learning; enrich professional practice; provide positive models for students (...).” The NETS-T is divided into five main sections that cover the development of students’ creativity, the design of digital learning experiences, the modeling of real life working and learning situations, the promotion of responsibility and personal and profession growth. The complete standards and performance indicators can be seen in Appendix 1.

The NETS for students (NETS-S) (2007) are “what students should know and be able to do to learn effectively and live productively in an increasing digital world” (NETS-S, 2007). These standards are very closely related to the main goal set by the UNESCO’s ICT-CFT (2008). The NETS-S state the necessary and expected abilities that students should acquire and develop in regards to technology; they should be capable of being creative and innovative in the way they solve problems and make decisions; to communicate and work in teams, collaborating towards a common goal; use the information that is available to them, utilize it to carry out research and think critically of the outcomes; to use technology effectively, consciously and productively. The complete standards for students can be seen in Appendix 2.

These NETS for teachers and students provide a solid framework of what are the expected competences. The ISTE and UNESCO share common points such as the importance of collaborative learning and critical thinking. These two points are vital to develop technological abilities. What the NETS and the UNESCO are proposing, are ways of clarifying the level of technological proficiency that is expected of students and teachers (Cennamo et al., 2010).

2.2.4 The big shifts in rethinking-reexamining content, curriculum & teaching practices.

Richardson (2009) suggests that now that students and teachers are using information and ICTs to work collaboratively, to have personalized learning and active participation, has lead to the technologies demanding the reexamination of the way we think, our teaching practices, the content and
curriculum, as well as how we are developing our professional lives. He points out that ten major shifts are occurring in education that should be considered to teach students in the best possible way.

1. - **Open content.** Schools usually considered (some still do), a course book as the sole means to obtain content for a class and sometimes, additional photocopies were added from different sources. If students or teachers wished to further their knowledge, they could always visit the school or community library, go through index cards, select a book or newspaper and find what they were looking for. Nowadays everything is just a click away. Not only can we find what we are looking for (and also we are not looking for!) almost instantly, but we can create information. What Richardson (2009) refers to as open content is the ability ICTs provide for collaborative spaces, creating “open-source-type” (p. 132) classrooms in which everyone can work together on the curriculum.

2. - **Many teachers and 24/7 learning.** With ICTs not only do we have access to a vast amount of information, but to a great deal of teachers. The ability to interact with teachers online whenever, wherever, has made learning possible anytime, anyplace. With this, the relationship between students and teachers changes, students no longer just receives the information the teacher can provide, s/he can be an active participant of the teaching-learning process.

3. - **The social, collaborative construction of meaningful knowledge.** Richardson (2009) points out that for many generations when a student was assigned a task, s/he was asked to do it individually, to turn it in for the teacher to grade and that was it. The job was done. With the use of ICTs, students can now produce work collaboratively and have a real and authentic audience (see section 2.1.2); the task can have a real meaning and consumed by others outside the classroom walls. Richardson (2009) adds that information that is published this way takes a new social context where students see their work as something to be added to and/or refined by others, and not finished.

4. - **Teaching is conversation, not lecture.** Teaching is no longer conceived as an activity where the teacher stands in front of 25 students and talks to the “sponge” their student’s brain is. Everyone
has something to say, everyone knows something. Students learn by doing, and if learning a foreign language is the objective, how do we expect them to do it if they do not talk? As part of collaborative learning, conversing among peers is a good way to acquire knowledge and practice those previously learned structures.

5. - **Know “where” learning.** With all the information and teachers available through ICTs, it is important that our students know where to go to find what they are looking for. They also need to be able to identify which of these sources are reliable and how to use them to their full potential.

6. - **Readers are no longer just readers.** Richardson (2009) expresses that with printed sources such as books, we have the security that what we are reading has been checked and edited by a group of knowledgeable people. With the texts available online, we cannot be sure of this, so readers must become “critical consumers of information” (p. 134). Readers now become the editors of texts and need to have the literacy skills to distinguish what information is trustworthy, and which one is not. These two shifts (number five and six) are closely related to the competences proposed by NETS for students and teachers, as well as by the challenges by Monereo & Pozo (2007).

7. - **The web as a notebook or portfolio.** With the possibility of publishing our and the student’s work online, the web has become a paperless portfolio. These portfolios can include valuable information, thoughts, and ideas enhanced by video, audio and images. This portfolio also has the benefit that it can be a way to keep track of students’ work and their development as learners.

8. - **Writing is no longer limited to texts.** Richardson (2009) suggests that writing is no longer limited to the production of actual texts, he considers audio, video, music, digital photography as writing, anything that can be published can be writing. Levine (2004, as cited in Richardson, 2009) uses the term “rip, mix and learn” to refer to the process of taking content from different sources and combining it to create a meaningful text that not only has letters, but has non-text messages and interpretations.
9. **Mastery is the product, not the test.** In traditional lessons, the mastery of a subject is usually awarded by tests. With ICTs, students and teachers can show mastery in different areas not just by scoring high in a test but by creating materials and resources using the information they have learned. This gives students the opportunity to put into practice the new knowledge they have acquired, and not just memorize it.

10. **Contribution, not completion, as the ultimate goal.** ICTs allow teachers and students to contribute their ideas and knowledge to the large body of knowledge that is the web. Richardson (2009) proposes that instead of handing in assignment after assignment to be graded by the teacher and the possibly put in the bin, students can now look at their work in a different way by realizing that it is not just for them, for the teacher, or for classmates, it can be available literally, for the world. It can be useful.

Richardson (2009) goes on by adding that these ten shifts create additional challenges for educators, their role in the classroom and for the whole educational system. These shifts demand that teachers become connectors of content and people, facilitators and mediators of the vast amount of information available. This brings us back to the competences and standards that teachers and students need to acquire to successfully use ICTs.

**2.2.5 Web 2.0.**

A particular feature of ICTs is the Web 2.0. Anderson (2007) documents that the Web 2.0 term was coined by Dale Dougherty, vice-president of O’Reilly Media Inc in 2004; Dougherty, in his text “*What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software*”, began to use the term but it was proposed for the business arena. Anderson (2007), however, identified features that can be associated with social software technologies such as participation, user contribution and richer user experiences.
Thomson (2008) states that nowadays, Web 2.0 is used to describe different web sites and online applications that allow people to create and share information and material. The key elements in Web 2.0 are creation and collaboration. The sites and online tools that are considered to be Web 2.0 require no knowledge in web design, binary language or publishing skills, as they generally consist of a text box and a publish button. This type of technology makes it easy to communicate information between a specific group of people or open to the World Wide Web audience.

### 2.2.5.1 Difference between Web 2.0 and Web 1.0.

Web 2.0 can be considered an upgrade or an improvement of Web 1.0. Anderson (2007) mentions that Web 2.0 should be seen as a consequence of a Web that has been fully implemented, rather than cumulative changes in the way people can use the web. The main and most distinct difference between Web 1.0 and Web 2.0 is the *interactivity* that Web 2.0 offers its users. Web 2.0 allows users to be creators of resources and to share this new information with others, or collaborate on similar projects, this contrasts Web 1.0 where users are passive receivers of information and do not have the possibility of leaving a digital print. Some of the common Web 2.0 tools are wikis, blogs, and social network technologies, popular Web 2.0 tools are *YouTube.com*, *Flickr*, *Facebook*, *Twitter*, *MySpace* etc.

### 2.2.5.2 E-creation tools.

One of the most powerful types of Web 2.0 tools for language teachers are e-creation tools. Lantolf & Thorne (2006, as cited in Erben, Ban & Castañeda, 2009) agree with the statement above by mentioning that it is of vital importance that students come in contact with the target language through authentic interaction and through the creation of materials with the constant use of the language they are learning. E-creation tools are software or applications that allow students to publish their original work. In some cases these tools were developed for other areas, but can be successfully adapted to foreign language classrooms (Erben et al., 2009). With tools such as these, the role the teacher plays is
that of a planner and monitor. The teacher selects the content that needs to be learned or practiced, picks the appropriate e-creation tool, plans the activity and organizes the classroom so that the technology enhanced task can be executed.

When a foreign language takes part in the e-creation tools, the teacher must create activities considering different factors, this means to go beyond a project-based approach. Erben et al. (2009) points out that some students may need direct instruction, modeling, independent work, question guides. The authors propose to face these different needs by using a process approach; this is to guide learners on how to work, revise and edit their assignments so that students feel that the process is as important as the final project, and students do this while they develop their language skills through social interaction and by the use of technology. The amount and type of language guide that students need is up to the teacher, but Erben et al. (2009) suggest that teachers create hyperlinks with glossaries, online dictionaries and other graphic organizers that can guide and students accomplish their goals.