

Chapter 1: introduction

As you are reading this, thousands, if not millions of students of all ages, are in language classrooms all over the world. All these students and teachers are engaging in lessons for different purposes and reasons. What all these have in common, other than the fact that they are learning a second or foreign language, is that they are trying to figure out the best way to teach/learn so that they can reach their specific learning objectives.

But what is entailed in the term “learning”? And what is teaching?

1.1 Defining learning

These two terms are difficult to define because they are so broad in scope. Through time, various authors and researchers have created diverse definitions of “learning” and “teaching” according to the school they adhere to, their experience, beliefs and philosophy. These different views about learning and teaching have merit and should not be discarded, but rather evaluated according to the appropriateness and possible implementation they might have in our lives. Finding a definition that satisfies *all* the ideas and convictions is hard; however, Shuell (1986) offers one that somewhat merges the different ideas and common points of other authors: learning is defined as “an enduring change in behavior, or in the capacity to behave in a given fashion, which results from practice or other forms of experience” (p. 412). Although this explanation is not attributed to any particular learning theory, it can be analyzed from the behaviorist, cognitivist and constructivist perspective.

According to behaviorists, learning takes place with stimuli, a response, the association between them and constant reinforcement. The definition offered by Shuell (1986) refers to an enduring change in the individuals’ behavior. The fact that it is enduring could mean that the stimuli and the response are constantly occurring so that the change that is taking place can be reinforced, generating durability over time.

Cognitivism is interested in the mental processes that are involved in the generation of knowledge. Snelbecker (1983, as cited in Ertmer & Newby, 1993) mentions that with cognitivism, a great emphasis was given to “the *more complex cognitive processes such as thinking, problem solving, language, concept formation and information processing*” (p.11); These processes can be identified in Shuell’s (1986) definition as the “capacity to behave in a given fashion, which results from practice or other forms of experience” (p. 412). An individual’s experience can be acquired from the way s/he retrieves, understands, organizes and assimilates the information s/he receives; also from the way that s/he faces and solves problems and in the meta-cognitive processes that take place in order to form concepts. All these experiences have an impact on the conduct and behavior of human beings, altering it in one way or another.

The constructivist perspective considers that meaning is created from experiences and interaction and that knowledge evolves and is produced day to day. With the information we as individuals obtain through mental filters, our reality and personal interpretations of the world are constructed. Shuell’s interpretation of learning explains that the enduring changes in behavior are produced through practice and experience; this is to say that the individual is building a change in his/her conduct or behavior due to a particular situation that generated it.

The concept of learning is broad and can be seen from different perspectives; however, for the purpose of this thesis, and considering the previously mentioned views, learning will be defined as a lifelong process in which information and experiences are transformed into knowledge, abilities, skills, behaviors and attitudes. The learning process does not necessarily occur exclusively in formal settings like schools and classrooms; for learning to take place it does not require academic degrees or diplomas (although these have a high social value), sometimes it happens unconsciously. It is a process that is constantly changing and it requires practice, reflection and interaction with the environment and the people that surround us.

1.2 Defining teaching

A term that goes hand in hand with learning is its immediate counterpart: teaching. As the concept of learning, teaching can be just as complicated to define; almost everything can be taught. One can teach someone geography, chemistry or French, and how to ride a bike, to knit, or to cook. These *teachings* share the common ground that a change is produced in the individual's cognitive schemes in the form of new (or the improvement of the existing) knowledge or abilities, if this change does not occur, it is not considered teaching, but rather a simple skill demonstration.

Concretely, from an academic stand point, Moreno (2003) expresses that teaching is the process that entails promoting intentionally and systematically the learning process and that it must be originated in the student. This process is progressive, dynamic, and produces a methodical transformation of the individual. Teaching has a starting point and pedagogical foundations that generate learning objectives. These goals define the content that will be taught, the methodology, strategies and techniques that will be used to accomplish the planned and desired transformations of the one who is receiving the instruction. These objectives not only guide the teaching process but also steer the teacher's task and serve as a way to evaluate teaching efficiency (Lontiev, 1991).

For the purpose of this thesis and by merging the definitions proposed by Moreno (2003) and Lontiev (1991), "teaching" will be defined as the process of creating the necessary conditions to produce new knowledge, skills and abilities; that should give students the tools to be critical and autonomous as to lead their own education.

1.3 Teaching in the 21st century: the tech era

As defined by Stiglitz (2002), globalization is "the closer integration of the countries and peoples of the world brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and people across borders" (p.9). Countries and nations are constantly in contact because of trade, tourism

and political reasons. According to The International Organization for Migration (2008), there are over 214 million migrants, which is equivalent to 3.1 per cent of the total world population or that of Brazil, the fifth most populous country in the world. This means that regardless of the numerous economic, political and cultural outcomes that migration brings about; one of the major issues it raises is people interaction, which leads to foreign language teaching. As globalization expands, so does the demand for people to speak different languages.

When teaching a language, teachers must consider different factors that affect the language learning process such as the students' cognitive style, learning style, age, metacognition, motivation, culture, personality, aptitude, attitude, tolerance towards ambiguity, type of work preferences and so on. Recently, another component has been added to the language learning equation: technology. The 2010 Statistical Abstract done by the U.S.A. Census Bureau (2010) reports that Internet use at home has gone from 18 per cent in 1997 to 62 per cent in 2007, and that seven out of ten American households used the Internet in 2009. The Kaiser Family Foundation (2010) in its report "*Generation M²: Media in the Lives of 8- to 18-Year-Olds*" on the daily use of media among children and teenagers found that those aged 8 to 18 years old spend an average of 7 hours and 38 minutes a day on-line; this means that youngsters are connected to the internet for whatever reason, over 53 hours a week. This equals "almost the amount of time most adults spend at work each day, except that young people use media seven days a week instead of five" (The Kaiser Family Foundation, 2010, p.2).

The situation in Latin America is no different. comScore Media Metrix (2010), an online audience measurement company, reported that in this part of the continent, the global audience over 15 accessing the internet from home or work, grew 21 per cent from May 2009 to May 2010. This represents 18 million new web users. In Mexico, the number of internet users is growing nearly at the same pace as in Latin America. During the 2009-2010 period, Mexico added 2.8 million users, increasing 20 per cent. comScore (2010) estimates that the country has roughly 28.5 million internet users, this

number includes those users under 15 and those who access the World Wide Web from other locations than home or work, for example shared or public computers and Internet Cafes. Out of the total internet users in Mexico, 67 per cent is under the age of 35, compared to the worldwide average of 53 per cent. In regards to the time spent online, comScore (2010) highlights that Mexican young users spend far more time online than many other young internet users worldwide. The company points out that the average Mexican 15-24 year old user will spend 32.7 hours online per month, almost 8 more hours than the worldwide average for that same age group.

The Nielsen Company (2010), a market research company, reveals in *“What Americans do online: social media and games dominate the activity”*, that social networking is the number one activity online, having grown 43 per cent as compared to 2009. This means that Americans spend one third of their time online, networking and communicating through social networking sites (over 906 millions of hours a month). The second activity where most time is spent is online gaming (up to 10 per cent as compared to 2009); the third place is e-mailing (down 28 per cent). Not only do internet users take part in social networks, but also over 44 per cent of the adult users publish their thoughts, respond to others', post their pictures and share files. Moreover, in 2005, 57 per cent of all the teenagers that went online could be considered as “content creators” (Richardson, 2008). According to Technorati.com (2010), a blog tracking services, and The Nielsen Company (2011), a publicly held global information, media and advertising research company, as of February 16th, 2011 there are over 165 million blogs, - about 67,000 per day- which people use “to create personal journals of their lives, build resource sites with colleagues, or filter the news of the day for audiences large and small with no need to know how to encode pages or transfer files” (Richardson, 2008, p. 2).

But it is not just blogs, Richardson (2008) states that in the last two years, multimedia publishing has exploded; over 100,000 videos are being uploaded to *YouTube.com* every day. Millions of photos, files and audios are online and available to anyone with an internet connection, making the web

a “vast storehouse of information” (p.2). A few years ago, online publishing was limited to those who had a working knowledge of HTML codes and internet protocols; nowadays it became so simple that just about anyone can collaborate with the creation of information, and can learn about his/herself and about the world we all live in.

In this era, changes that are transforming the way we relate to technology are under way; in this day and age, we are not limited to consume information; on the contrary, we are in a “society of authorship”. This term was proposed by Rushkoff (2004) to mean that teachers and students have the ability to contribute with ideas, thoughts, experiences, feelings, views, opinions and literally, with whatever goes through their minds, while contributing to the “larger body of knowledge that is the internet” (Richardson, 2008, p.4).

The inclusion of different technologies in the educational area gives educators the possibility of going beyond the classroom walls and of changing the way they approach, envision and conceive the teaching-learning process. The potential these tools have, profoundly impact on our own learning and the learning of others. “Without question, our ability to easily publish content online and to connect to vast networks of passionate learners will force us to rethink the way we communicate with our constituents, the way we deliver our curriculum, and the expectations we have of our students” (Richardson, 2008, p.5).

The figures and statistics that were mentioned show how widespread these sites and web tools are. If millions of people (many, students) are already spending many hours a day on these sites, it seems reasonable to take advantage of them for more than just conversation and networking. These sites offer valuable opportunities to engage students, to promote participation, to enhance motivation and to improve language skills.

Today, language learners and teachers are surrounded by the innovative, versatile and varied learning opportunities that the web provides. However, while many of these programs are not being

used to their fullest potential –or they are not being used at all, many teachers around the globe are facing the everyday task of keeping up with technology and finding a way to integrate some of the available tools into their language classes. The tools available online are changing constantly, although there are some that remain accessible over a significant period of time, others evolve, disappear or are regularly out of service.

1.4 Objective

This thesis reviews second language acquisition theories so as to build a basis for creating a computer assisted language learning (CALL) environment that delivers benefits, focuses on specific learning goals, and caters to the students' diverse learning styles. The provided theoretical basis is intended to aid educators to choose and implement the best and most appropriate web tools in their language classrooms. The standards set by the International Society for Technology in Education (ISTE) to implement technology in schools for ensuring quality of instructional experiences for students will be explored to broaden the framework. This thesis also provides a comprehensive check list of theoretical requirements in order to choose an internet tool, in addition to examples of use of the checklist, implementation, lesson plans and teacher evaluation of software/web tools.

1.5 Justification of the study

Motteram & Sharma (2009) indicate that some students feel excitement when they find technology in their classrooms and classes; furthermore, governments are making considerable investments in information and communication technologies (ICTs) so that schools can make use of them, but why merge learning and technology? Reich & Daccord (2008) offer four simple reasons to answer this complex question:

- Whoever is doing most of the talking/typing is doing most of the learning. Computers and what they offer enable students to be *responsible* for their own learning.

- The more input channels we use to acquire new information, the more likely we are to learn and remember it. Students can access/manipulate/interact with information in different ways, catering to the dissimilar learning needs in a classroom.
- We can bring the world into our classrooms. By using the internet, our students can be in contact with material that is authentic and culturally diverse.
- Technology can make things easier... *sometimes*. If the tools in the classrooms work properly, the class can run smoothly and things work out; however, a simple thunderstorm can make the internet fail and the lesson plan come tumbling down. Backup options are recommended when weaving technology in lesson plans.

The previous are some of the reasons why teachers might want to try to integrate these technologies in language lessons. In addition, the Centre for Educational Research and Innovation (2001) provides a list of things that cannot be done *without* technology and things that can be done *better* with technology. In regard to the latter, they point out that with technology, learning can take place anytime, anywhere, because time and space have been dematerialized; the internet gives access to collections of educational resources and services that are ever growing. Concerning the former, with cutting edge technology, there are personalized learning materials, interactive access to educational resources, as well as individualized tracking and recording of learning processes, self-assessment and monitoring of learner performance and interactive communications between participants.

Overall, Reich & Daccord (2008) indicate that the best use of technology comes when “teachers are doing less of the teaching and students do more of the learning” (p. xvii). Activities and assignments that are student-centered with a technological component empower them, foster creativity and let them take charge of their own learning. In the e-learning model students not only work individually, but also get engaged with collaborative learning to gather information, resolve issues and create a final

product that has the possibility of being published online, with the further chance of reaching a wider public.

In addition of the reasons mentioned above, the implementation of Web tools in classrooms can be a solution to monotonous instruction as they can be engaging so enhancing the students' interest; it can also be a way to exploit all the authentic resources available; moreover, it can cater to all the different learning needs and styles; further, students' creativity can be developed and significant learning can be reached.

1.6 Research questions

This thesis aims to answer the following research questions:

1. What is the information society (IS) and information and communications technology (ICTS)? Do these (ICTS) aid or hinder foreign language learning?
2. What are some of the conditions that are needed for successful learning to take place using technology as part of the methodology in a foreign language classroom?
3. Which second language acquisition (SLA) theories should be looked at and considered to insure the successful implementation of web tools in the foreign language classroom?
4. How can we merge SLA theories with the practice of computer assisted language learning (CALL)?

1.7 Contribution to the field

This thesis is intended to contribute to the area of education and applied linguistics because it generates a valuable tool for teachers interested in language teaching and technology, even if they do not have a background in linguistics. In particular, it aids the "first-time" teachers who are graduate students with extensive knowledge of the target language, culture and literature; and the professionals in other fields who are native speakers of the target language, but are not trained as language teachers, to acquire the basic knowledge in second language acquisition theory and use it to select the most

appropriate Web 2.0 resources to reach their set objectives. It will help teachers with experience merge SLA theory and practice in their classrooms in order to incorporate the technological components in a harmonious way to enhance and boost their teaching practice.

1.8 Limitations of this study

Despite the possible usefulness this thesis and its outcome hope to offer, some limitations exist. All of the tools that will be involved in the thesis require having access to computers with an internet connection, microphone, webcam or a language lab with these specifications. The teachers who implement these tools and students, who will use them, need to have working knowledge about how to perform internet searches, and the basics of online publishing. Although several SLA theories will be reviewed, it is possible that other relevant ones are not included due to lack of literature and sources.

1.9 Organization of this thesis

The organization of the thesis is as follows. After chapter one which provided the overall introduction to the research addressed in this thesis, is chapter two, dedicated to the literature review. Chapter two is divided into two main sections: SLA theories, and people and technology. The first component, SLA theories, provides a detailed review of the pertinent literature relating to the theoretical principles needed in order to understand and select technology based tools for the language classroom. People and technology, discusses the information society and its main challenges in education; it also explores ICTS, their pedagogical and technical considerations, the international technology standards and technology integration in the classrooms. Concepts such as Web 2.0 and e-creation tools for web projects are surveyed.

In chapter three, the detailed methodology used in this study will be presented. Chapter four includes the results, examples of the usage of the checklists and an analysis of the data obtained. Chapter five presents the conclusions drawn from the meticulous discussion of the outcomes, as well as recommendations. In the appendix, all the instruments used in this study can be reviewed; this section

includes the ISTE National Educational Technology Standards and Performance Indicators for teachers and students.