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A Psycho-pedagogical Framework for an Effective ICT Integration in ELT: the Case of an ESP Course at EPSECG of Oran

Thesis submitted to the Department of English for the Degree of Doctorate in Psychopedagogy

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Declaration

I declare that the main text of the thesis is entirely my own work and that this thesis work has not been previously submitted for the award of a degree at Tlemcen University or any other institution of higher education.

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Tlemcen 5th October, 2015

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Dedications

My heartfelt thanks go to my dear parents Halfaoui Lotfi and Malika, my sister Nawal Souad and my brother Ilies, without whose unfailing love, support and patience over time and distance, I could not go that far. A warm and everlasting kiss to my little angels Mouhcine and Moncif whose smiles and little words shine upon me that a shining sun every morning. God bless you all.

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Abstract

The aim of this research work is an attempt to design a practical framework to integrate effectively ICT in ELT and more precisely in an ESP context, in this case EPSECG (*Ecole Préparatoire en Sciences Economiques, Commerciales et de Gestion d'Oran*), referred in this work as the: Preparatory School of Economic Sciences, Commerce and Management of Oran. For so doing, we try to account the underlying factors affecting its success and suggest an adequate plan of actions. We posit the following hypothesis: to ensure quality education in the 21st century in general and teaching English as a foreign language in particular using ICT, we need as practitioners to line up the triadic dimensions: the psychological, the pedagogical and the technological altogether. Hence, to increase the chances of successful academic achievement and to better respond to the learners' needs through the enhancement of their learning, ICT with its numerous applications offers a myriad of possibilities to teachers and learners alike to benefit from. However this may not be reaped unless due consideration regarding threefold underpinning factors is taken into account regarding teachers and learners alike: (1) their attitudes and perceptions as far as ICT educational value is concerned, and (2) their knowledge and experience concerning teaching/learning with technology. It seems to us as a prerequisite if ESP pedagogy is to be transformed and learning to be enhanced. Put together these factors define in a whole psycho-pedagogical framework for ICT integration in TEFL that we propose

Keywords: ICT Integration, Perception, Innovation, TELL, Educational Psychology.

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Key to Abbreviations

ACET: Association des Chefs d'Entreprises de la Willaya de Tlemcen

AR: Action Research

ARN: Academic Research Network ARN

ASCMC: Asynchronous Computer Mediated Communication

AT: ALGERIE TELECOM

BICS: Basic Interpersonal Communication Skills

CALL: Computer Assisted Language Learning

CALP: Cognitive Academic Language Proficiency

CMC: Computer Mediated Communication

CCI: Chamber of Commerce and Industry

CLT: Communicative Language Teaching

CMC: Computer Mediated Communication

CMS: Course Management System (CMS)

CK: Content knowledge

Cops: Communities of Practice

EFL: English as a Foreign Language

EIL: English for international communication

E-LEARNING: Electronic Learning

ELT: English Language Teaching

EOP: English for Occupational Purposes

ESP: English for Specific Purposes

EP: Exploratory Practice

EPSECG: Ecole Préparatoire en Sciences Economiques, Commerciales et de Gestion

GTA: Graduate Teaching Assistant

GRAMMS: Good Reporting of a Mixed Methods Study

ICT: Information and Computer Technology

IT: Information Technology

IEA: International Association for the Evaluation of Educational Achievement

L1: Mother Tongue, First language

L2: Second Language

ML: Mobile Learning

MALL: Mobile Assisted Language Learning

NNS: Non Native Speakers

NS: Native Speakers

PAOR: Plan, Act, Observe and Revise (Action Research Cycle)

PC: Personal Computer

PCK: Pedagogical Content Knowledge

PK : Pedagogical Knowledge

SAMR: Substitution, Augmentation, Modification, Restitution

SCMC: Synchronous Computer Mediated Communication

SIIA: Software & Information Industry Association

SLA: Second Language Acquisition

SMS: Short Message Service

STAR: Students, teachers, Access, Resources

SWOT: Solutions, Weaknesses, Opportunities, Threats

TBLT: Task-Based Language Teaching

TEFL: Teaching English as a Foreign Language

TELL: Technology Enhanced Language Learning

TCK: Technological Content Knowledge

TK: Technology Knowledge

TPACK: Technological Pedagogical Content Knowledge

TPK: Technological Pedagogical Knowledge

ZPD: Zone of Proximal Development

General Introduction

Researchers concur that teaching English through ICT tools should be framed not only around the tool; but mainly around the 21st century learners. In this present study effective integration of ICT in the TEFL context was explored from two angles: first from teachers' actual EFL teaching practices using ICT in the language classroom and second; from students' expectations using ICT in their learning experiences.

The present research study intends to figure out the underlying factors that influence the success of ICT integration in English teaching contexts, more specifically in the context of English for specific purposes, best exemplified at the preparatory school of economic sciences and management of Oran in Algeria,

English is compulsory throughout the two years of instruction shared out in 4hours a week. English alongside French constitute the foreign languages block which counts four times and which is of equal in importance to accounting and statistics, two major modules in the above subject area constituting the economics sciences block; alongside to that of mathematics and general culture. After finishing the two years program of instruction, learners are asked to sit for a national exam competition, and the most successful ones are offered the possibility to integrate one of the prestigious *Grandes Ecoles* according to their grades and academic achievements.

The business and economic environment which these prospective leaders endeavour to join requires a good mastery of English for international communication be it oral or written. As a consequence, it is necessary to provide relevant learning materials in conjunction to a fitting pedagogy to meet these communicative needs.

EPSECG alongside the majority of higher institutions in Algeria benefited from a national plan to favour teaching and learning through ICT. English retained a special attention since a special multimedia room as well as a language lab were granted to increase both teaching and learning effectiveness.

However, many studies caution against the naive assumption that might posit ICT able to resolve all and any teaching and learning difficulties, or even worst that teaching English through ICT might obviously be easier and pleasing to all types of learners and teachers alike.

On the other hand, lliving in a globalized world entails to be competitive in all aspects of life. Educators, including ESP teachers and ESP material developers, are asked to line up the different aspects of a successful learning experience that favors not only the enhancement of the linguistic aspects of a foreign language learning; but also the development of communicative skills, collaborative abilities, construction and sharing of knowledge; all what constitutes today's workplace challenges.

Communication has indeed become an essential skill in any professional environment. English language teaching in Algeria suffers an acute lack for effective use of the target language due to the poor opportunities of practice outside the realm of schools, and universities. ICT under the right circumstances can bridge the communicative gap and improve educational outcomes. As a consequence, it seems legitimate to raise the issues at stake linked to the integration of ICT in ESP.

It is therefore imperative to reconsider ingeniously our teaching practices so as to meet the specificities of the context at hand. On the other hand, it is recognized that culture, within any organization, shapes individuals' perceptions of innovations. Psychology not only informs education with the latest advances and research results, more importantly it contextualizes it. Peoples' reactions to environmental manifestations are encapsulated in their attitudes and manifested through their behavior.

The objective of this research study is the threefold:

- To show that a successful integration of ICT in the teaching of English as a foreign language more specifically in an ESP context cannot take place in isolation.
- To explain that the technological level of integration in our English language learning context is not sufficient to guarantee neither effective communication use nor efficient foreign language teaching to take place.

- To assert the importance of reconsidering the psychological and pedagogical factors which prove to be determinant in the teaching and learning of English for specific purposes through ICT?

The problematics that we put forward is therefore as follows:

The national plan to implement five preparatory schools of economics, commerce and management throughout the country, with the necessary infrastructure and human resources, aims at providing a qualitative training and tutoring to the future business and economic leaders of the country. Teaching English at EPSECG constitutes an interesting research experiment where technology, pedagogy and psychology melt together to take up the 21st century challenges together with that of the new economy, to which we intend to prepare Algeria's future leaders .

Parallel to this, if the last decade was that of blind optimism regarding the use of ICT in education, more specifically in the teaching and learning of a foreign language, the present one is that of plain realism due to the deceitful local experiences associated with ICT in the past. It is thought that what makes effective teaching and authentic learning is not related to the use of the latest technology *en vogue* only; but instead to our ability to understand the potential that may ICT brings to our educational context taking into account the pedagogical culturally-rooted practices and the psychological specificities of our teachers and learners alike.

The research study is organized into five distinct chapters. It will be made up of qualitative and quantitative data obtained from questionnaires to teachers and learners and regional economic actors, a learners' focus-group interview as well as a SWOT analysis of the language environment.

In the following part, the researcher will attempt to answer the research questions.

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT in general and ESP in particular?
2. How can we define a successful ICT integration in ELT?
3. What are the prevailing attributes of success related to ELT in general and ESP in particular?

4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?
5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG?

The ultimate goal that we attempt to attain is to enhance the teaching and learning of ELT (more precisely ESP) through ICT. For that, we posit the following hypotheses:

1. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of a reasoned and principled integration of ICT in English teaching/learning contexts.

2. Both learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.

3. Understanding the possible resistance to change related to ICT uses in ELT in general, and ESP context of EPSECG in particular, helps identifying the necessary strategy to follow in order to overcome the pedagogical and psychological obstacles.

4. Uncovering the type of language learners' ICT uses is important to meet their learning needs and preferences and propose adequate ESP activities.

5. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data (the environment, the learners and the teachers) and propose a practical framework that accounts for the evolving nature of teachers' and learners' pedagogical and psychological specificities.

The first chapter will tackle the review of the literature about the psychological, the pedagogical aspects of ICT in the English foreign language teaching and learning situations, more precisely in an ESP context of EPSECG will help us transcend the theoretical aspect of technology integration and attempt to match it to more

contextual EFL/ESP teaching and learning everyday concerns. For that we will try to explore what seems to us represent the necessary constituents for a successful ICT use, i.e. teachers' and learners attitudes towards ICT in teaching and learning, and pedagogical and methodological concerns for framework design.

Through the second chapter we will review the literature on the EF and ELT evolution in Algeria as well as go through an analysis of ICT in education from CALL to TELL we will attempt to go over a retrospective of the challenges that Algeria has gone through when attempting to integrate ICT in its educational systems this latest decade. At last, we will cover aspects of integrating ICT in ESP courses to bridge the communicative needs of learners. This part is important for the design of the framework in the last chapter. As a whole, this will constitute the situation analysis chapter.

The third chapter will tackle the presentation of the practical part of our research work as well as a presentation of the materials, instruments, and the procedure intended to be followed in terms of data collection, analysis and interpretation along with the sample population and the setting relative descriptions.

The fourth chapter will concentrate on the analysis and interpretation of the qualitative and quantitative data obtained from the previous phase of the research and includes a description of the environment using a swot analysis, as well as a thorough analysis of the different questionnaires of learners and teachers in terms of perceptions, attitudes when using ICT. The aim is to find out enablers and the motivations underlying it, as well as to attempt to understand the causes behind the resistance to ICT adoption in the language learning/teaching environment. Besides, a learners' focus-group interview was supplemented to unveil some blurred aspects of learners' use of ICT, to highlight some salient features and to clarify the whole picture. At last another research instrument was used which is the economic actors' questionnaire. However, it could not be analysed suitably because the return rate was insignificant.

The fifth chapter will be devoted to the psycho-pedagogical framework relying on the reviewed guidelines and the researcher will attempt to design an ICT-ESP based course on the basis of the research findings and outline the recommendations to prospective research works providing suggestions.

Chapter One:

Review of Literature

1.1. Introduction

The main issue which we attempt to explore through this research work relates to the variables which bring about an effective integration of ICT in the EFL context, and more precisely in the ESP context of an Algerian higher educational institution, namely EPSECG.

The real added-values of Innovations in foreign language classrooms have always been a subject of a heated debate. For more than a decade, the center of attention was on the benefits of technology *per se* instead of digging out the actual important part of the iceberg, i.e., the human and contextual factors which make it possible.

Reviewing the literature about the ICT psychological and the pedagogical related aspects in the English Foreign language teaching and learning in general and more precisely in the ESP context of EPSECG will help us transcend the theoretical aspects of technology integration and match them to more contextual teaching and learning everyday concerns.

1.2. The Theoretical Background

Psychology aims at investigating the unconscious side of the human mind. Individuals are unique in their perceptions of themselves; their society, and their culture; their reactions to environmental manifestations are encapsulated in their attitudes and manifested through their behavior. On the other hand, education is tightly linked to advances of psychology which not only informs it with the latest advances; but more importantly contextualizes effectively its research studies to better reflect individuals' process of interpreting their environment and responding to it.

Parallel to this, Innovation is specific literature is culturally considered as any attempt done to enhancing a situation through modifying partly or wholly any part of it. Innovation entails changes that affect the way people live, react, evolve and perceive the future. Technological innovation, for instance --once adopted by the

society-- affects people live in more than an aspect making them change their way of communicating, entertaining, and consuming in general.

ICT has certainly revolutionized the way people access information, however; how it is adopted, integrated or implemented in any of aspects of life is subject of people's understanding and perceptions of both its limits and possibilities. Our goal to design framework is first and foremost to decipher the interplay of the different variables that may influence teachers and learners to maximize the potential benefits of technologies in language learning/teaching contexts favoring by this way more meaningful language learning experiences.

1.3. The Differences between a Model & a Framework

A model describes the rationale of the different processes that one goes through to achieve a goal. It is part of a more global organizational structure (I.e., the framework) that embodies the general necessary information needed to respond to a problem enabling a set of procedures and action plans to meet the objective at hand. An effective framework creates an organizational environment in which people think, act and collaborate together to achieve common objectives and resolve common issues.

We need to reflect on the implications that ICT integration may engender from pedagogical and psychological point of views, affecting both how teaching and learning occur. According to the *Contextualist Approach* of Psychology (Mcguire, 1983) research is seen as being *"a discovery process to identify the unique set of circumstances under which the predicted relationships emerge or fail to emerge"* (cited in Stenstrom& Iyer, 2012).

In their research paper entitled "*An organizing framework for psychological research"* Stenstrom, & Iyer (2012) explain that a framework stands as:

"A useful visual explanatory tool to illustrate these same concepts, to show the central topics in psychology, and to show the interrelationships amongst the various disciplines within psychology (….) It can even help explain the connections between basic and applied branches of psychology… is also (stand as a) an explanatory tool

to illustrate the connections between psychology and related fields like sociology and anthropology".

(Stenstrom, & Iyer, 2012)

A framework is therefore helpful for both the analysis of the current context and also as a helping tool for the design of an adequate roadmap for future enterprise when adopting a new technology in the context of foreign language studies.

It seems necessary to concentrate first on the theoretical aspect of the framework, or rather the underlying philosophy that brings it out. The primary aim is to depict the whole picture to attempt to understand the far reaching issues which define the context under study. Then, to go over the related factors that make up the issue at hand. Nonetheless as Goodyear (1999) noted when describing the theoretical underpinning of Open Distance learning projects:

"Philosophy is left implicit or is only rarely discussed, or is held to be too remote from the hard day-to-day problems of making an educational innovation work to justify spending time on it".

(Goodyear, 1999)

By philosophy we intend the general approach guiding the daily teaching activities, the implemented methods guiding a course design or more specifically the learners' psychological–related concerns which we have to manage as we go through the course' paths.

The need of a framework when integrating any innovation in the language classroom resides on one hand in: its ability to point out to the areas where possible weaknesses, threats or other problems may arise and the ability to rapidly responding to them. In our research work, pedagogical and psychological considerations will be explored in view of designing a psycho-pedagogical framework and reaping the benefits of ICT in the language learning context. It seems to us important to consider the following aspects:

- The changing roles of educators when integrating technology
- The changing language teaching/ learning objectives
- The changing pedagogical challenges when integrating ICT
- The psychological challenges when integrating ICT in existing educational practices (issues related acceptance/ resistance to change, attitudes, perceptions regarding the educational added value, motivation, anxiety)

As noted Britain and Liber (2004)

"Technology brings new opportunities for managing complexity, where there were previously none. The choices we make affect both the pedagogy and the flexibility available to learners."

(Britain and Liber, 2004)

In sum, we may synthesize that the design of a framework needs to be understood in relation to concrete educational dimensions, namely, learning and teaching respectively.

1.4. Pedagogical Variables

1.4.1. The Objective

Our primary goal when attempting to design a psycho pedagogical framework for an effective use of ICT in foreign language learning is first and foremost to decipher the interplay of the different variables that may influence teachers and learners to maximize the potential benefits of technologies in language learning/teaching contexts favoring by this way more meaningful and relevant language learning experiences.

In this part, we begin by explaining what a pedagogical framework is and its importance when attempting to design a workable framework for an effective ICT integration in a specific language learning context.

According to Britain and Oleg (2004), there are four key objectives when designing an ICT-based pedagogical framework: first, fitting the environment where learning and teaching take place; second, easing the use of the teaching and learning materials; and finally enhancing the skills of teachers in the use of innovative methods and techniques to reach the desired goals. The design of a pedagogical framework when integrating ICT is then mainly the concern of educators within their institutional environment.

1.4.2. Pedagogical Approach

The framework stands as a set of principled actions that might help the educator to fit the right methodology to the existing variables including: learners, the institutional context, and the expected outcomes. Thus, in our attempt to define what a pedagogical framework might be when teaching a foreign language using ICT, the following questions ought to be raised:

- How should teaching and learning occur?
- Which role should teachers embody within the 21st century educational principles?
- Who are 21st century learners, what are their specificities?
- How do they learn?

For educators, this implies a shift in the tenets of their profession, more specifically teachers have to embody the role of facilitators and displaying a new set of skills, creating challenging environments for learning to occur, favoring individuals' construction of knowledge, and providing guidelines for self-paced learning rather than exposing lectures in a unidirectional way which is most prevalent in educational contexts (Brownstein 2001).

It is then more convenient to consider the idea of a paradigm shift from a change in focus:

- Shift focus from teaching to learning;
- Shift focus from intention to results and
- Shift focus from working in isolation to working in collaboration.

In their conclusions Kadiyala and Crynes (2000) (cited in Lebrun, 2002) effective pedagogical methods should be framed “around” the tool and coherent with both the objectives and the methods. Most of the research on technology for education agrees on the following findings (Lebrun, Vigano, 1995):

1. The real potential for education cannot be found from a technological approach alone; the computer per se superimposed on traditional forms of teaching cannot improve the quality or productivity of teaching.
2. The benefits one can hope for in the use of technology (in coherent methodologies that are more individualized and more participative) should not be expected only inside the reduced cognitive sphere of knowledge to be recited out “parrot-fashion”.
3. Introducing these new technologies will not automatically bring about new forms of teaching and learning.
4. Introducing these new technologies will not automatically bring about new forms of teaching and learning.

(Cited in Lebrun, 2004)

Lebrun (2004) confirms the idea of the pedagogical approach in his paper entitled “*Quality towards an Expected Harmony: Pedagogy and Innovation Speaking* Together About Technology” presented at the *Networked Learning Conference* through the following quotation:

“Work to promote human actions like the development of pedagogical setup (and this will prove to be true for innovation activities at an institutional level) needs to refer to meso-level (teaching) organization of objectives, methods and tools. A good teaching system aligns the teaching method and assessment to the learning activities stated in the objectives, so that all aspects of this system are in accord in supporting appropriate student learning.”

(Lebrun, 2004)

The driving force to these in-depth reforms requires a willingness to evolve, to act differently and to professionally and learn continually. Bagley and Hunter

(1992) propose eight shifts for a synergy between ICT uses and what they call a “restructuring” reform:

a. A shift from whole-class to small group instruction;
b. A shift from lecture and recitation to facilitation and coaching;
c. A shift from working with better students to working with all students;
d. A shift toward more engaged students;
e. A shift from assessment based on test performance to assessment based on products, progress and effort;
f. A shift from a competitive to a cooperative social structure;
g. A shift from all learners learning the same things to different students learning different things;
h. A shift from verbal thinking to the integration of visual and verbal thinking.

Bonstingl (1995) summarizes this shift in focus in the following table:

OLD PARADIGM OF TEACHING AND TESTING	**NEW PARADIGM OF CONTINUOUS LEARNING AND IMPROVEMENT**
External validation of truth and the "one right answer" for every question asked by teacher, text, test.	External and internal truths are discovered through teachers' and students' questioning together.
Testing as the primary means of assessing results of the learning process.	Testing, when appropriate, to help modify (improve) the teaching-learning process. Other modes include process portfolios, exhibitions, performances, etc.

Instruction is set up to generate (right) answers.	Instruction is set up to generate better and better questions, followed by student inquiry into some of the areas of those questions. Student performances demonstrate improve understanding of the nature of the questions and some of the ways they might be solved.
Teachers are expected to know everything about their subjects. They give students data and information; students memorize it, then forget most of it.	Teachers are experts in their field. But more importantly, they are the most enthusiastic and dedicated learners in the classroom. Students learn from teachers, other students, the community and other sources, and incorporate these learnings into their lives, applying their insights as appropriate to real-life challenges.

Table 1: Adapted from The Quality Paradigm Shift in Education , by John Jay Bonstingl 1995

1.4.3. Constructivism and Language Teaching

Biggs (1999) favors the constructivist view of learning when this latter is supported by ICT, the principles of this theory of learning stress the importance that

exist between humans, their experiences and their perceptions and play an important role in the student's cognitive development.

Social constructivism which Vygotsky's advocated (1978) suggests that knowledge is first constructed in a social context and is then appropriated by individuals (Bruning et al., 1999; Eggan & Kauchak, 2004). It presupposes that culture plays an important role in shaping individuals' learning paths, and each learner is unique, complex and multidimensional with specific needs as remarked by (Wertsch, 1997).

On the other hand, when integrating ICT in the teaching/learning process, it may mean for learners to discover other ways to access information, resolve problems, work in collaboration, etc, increasing by this way opportunities to learn. It seems then more valuable to investigate teaching through ICT from learners' perspectives, exploring the whole learning process when supported by technological.

1.4.4. Learner-centered Teaching

While there is broad agreement that today's students need different skills than were perhaps taught to previous generations, and that cross-disciplinary skills such as writing, critical thinking, self-initiative, group collaboration, and technological literacy are essential to success in higher education, modern workplaces, and adult life, there is still a great deal of debate about 21st century skills-from what skills are most important to how such skills should be taught to their appropriate role in public education.

Effective learning embodies necessary competences and skills to resolve real world problems. It encapsulates communication and negotiation techniques, cooperation and social construction of knowledge, problem-solving strategies, multitasking, leading strategies, anticipating solutions, creating visions. As a consequence, to create real opportunities for effective learning to take place, we should not only provide access to en vogue resources but most importantly to design educational pathways that fit actual 21st century challenges.

Learner-centred psychological principles provide on one hand important aspects for the design of a psycho-pedagogical framework for effective ICT integration in foreign language in general and ESP context in particular. On the other hand, close attention is turned to teachers' perceptions and attitudes towards ICT integration in their practice, in terms of enablers and resistance.

1.5. Psychological Variables

In the following section we will attempt to give an overview about the different psychological concepts as well as a try to design a framework about how they interact and influence each other to make people change.

1.5.1. Attitudes and Perceptions in Language Learning

It seems more valuable to investigate teaching through ICT from learners' perspectives, exploring the whole learning process when supported by technological innovations in addition to surveying their underneath psychological characteristics. In psychology, Perception is seen as the result of a reasoning process. Individuals search for ways to decrypt the message at hand, connect it to referring stored information, and consequently infer a logic which enables them to reach a conclusion or obtain a result. An attitude tends to be a long term phenomenon that has its roots in previous lived or shared experiences, a culture, a professional organization, an academic or a classroom context. A context is then a catalyst of all these psychological variables to melt and shape our acts and decipher our perceptions.

The role of attitudes on the language process should be taken into consideration, because attitudes of students towards language are closely associated with the success or failure in language learning. The studies of Gardner and Lambert (1976) emphasize the importance of attitude in foreign language learning. Chambers (1999) clarifies by stating that:

"Pupils do not come to the foreign languages classroom as *tabulae rasae*. They bring with them some attitudes born of conversations shared with family, friends, the media and personal experience of the target language community."

(Chambers, 1999: 25)

As Gardner (2005) attested, motivation can be a way of understanding learner attitudes, perceptions, and beliefs. Learners' attitudes have often been addressed in the literature in relation to: (1) the learning situation (often encompassing the instructor as well as the instructional techniques used, and (2) the target community.

On the other hand, positive attitudes refer to the degree of involvement and motivation to do some effort is considered to enhance learning; whereas, negative attitudes can impede learning. However, learners' attitudes are subject to change and can evolve as they overcome some difficulties.

1.5.2. Behavior and Motivation

The individual's behavior is defined as the observable response in a given situation; it is determined by the intentions of individuals--their explicit motivations to perform or not an act. According to moral values, human behavior may also depend upon the common, usual, unusual, acceptable or unacceptable behavior of others. Humans evaluate the acceptability of behavior using social norms.

The theory of planned behavior is a theory about the link between attitudes and behaviours. The concept was proposed by Icek Ajzen (1985) through his article "From intentions to actions: A theory of planned behavior." It emphasizes that human behaviors are governed not only by personal attitudes, but also by social pressures and a sense of control. Subjective norms, on the other hand, are seen as a combination of perceived expectations from relevant individuals or groups along with intentions to comply with these expectations. The relevance and importance of some people in our close circle affect the extent of our intentions.

The Behavioral Decision Theory which was introduced by the American psychologist Ward Edwards in 1954 was one of the first models to highlight the importance of subjective values and beliefs in judgments and decision-making. In other words, *"the person's perception that most people who are important to him or her think he should or should not perform the behavior in question"* (Ajzen &

Fishbein, 1975).

Conversely, motivation to learn is influenced by the individual's emotional states, beliefs, interests and goals. Students' beliefs about themselves as learners and the nature of learning have a marked influence on motivation. According to Gardner's motivation theory (1972, 2001) motivation to learn L2 is composed of three components: motivational intensity, desire to learn, and attitudes toward learning the language. However in his revised socio educational model, Gardner (2001) presents four components, namely: external influences, individual differences, language acquisition contexts and outcomes.

1.5.3. Perceptions, Attitudes, Behaviors in Innovation Dissemination

Psychology aims at investigating scientifically (through case studies, interviews, introspective methods, observation, qualitative methods) the unconscious side of the human mind including cognition and affect.

Innovation, on the other hand is culturally considered as any attempt done at a personal or group level for enhancing a situation through modifying partly or wholly any aspect that determines it. By this way, it necessarily exerts its influence through sequential changes that affect the way people react, evolve and perceive the future.

Woodrow (1992) asserts that any successful transformation in educational practice requires the development of positive user attitude toward new technology. The development of teachers' positive attitudes toward ICT is very significant factor not only for increasing computer integration but also for avoiding teacher's resistance to ICT use (Watson, 1998).

According to Rogers (1995) one of the major factors affecting people's attitudes toward a new technology is related to the features of the technology itself. Rogers's points out five basic features of technology that affect its acceptance and subsequent adoption: relative advantage, compatibility, complexity, *observability and trialibility*. In another hand, In the 300th release of IT MAG , a national IT magazine devoted to the obstacles that the Algerian society has encountered in its quest of ICT appropriation process, the editor in chief Abderrafik Khenifssa reminds the

reader with a quotation of Christensen (1997) in his book "The Innovator's Solution" who once commented the effects of innovation in societies saying in French that "*c'est leur usage stratégique qui a un effet de rupture. »* Otherwise it is not the technology itself which influences society and the way people live; but mainly they understanding of its potentials and limits, the creative use they manifest that makes the difference and influences their live.

As far as ICT integration in classrooms settings is concerned, Zzhao and Cziko (2001: 27) affirm that three conditions are necessary for teachers: (1) teachers should believe in the effectiveness of technology, (2) teachers should believe that the use of technology will not cause any disturbances; and finally (3) teachers should believe that they have control over technology. Besides, it is necessary for teachers to have the appropriate skills, knowledge and attitudes to integrate ICT into the curriculum. That is teachers should become important agents of change within the classroom arena. This result is similar to that stated by Zhao, Pugh, Sheldon and Byers (2002: 511): *"… teachers need to know the affordances and curricular goals. They also need to know how to use technologies".*

1.6. ICT Integration

1.6.1. Use Vs Integration

ICT Integration in education may mean many things to many people. Technology integration, as defined by the National Forum on Education Statistics (2005, part 8), "*is the incorporation of technology resources and technology-based practices into the daily routines, work, and management of schools".* However, it seems important to distinguish the differences that exist between ICT integration and ICT use. Aditi Rao (2013) made a concise comparison between these two activities:

"Using Technology"	Technology Integration
• Technology usage is random, arbitrary and often afterthought.	• Technology usage is planned and purposeful.
• Technology is rare and sporadically used in the classroom, used for the sake of using technology	• Technology is a routine part of the classroom environment and used to support curricular content and learning objectives
Technology is used: • mostly by teacher to instruct learners on content. • more to complete lower order thinking tasks. • by learners and they use it primarily for working alone. • to facilitate activities that are feasible or easier to complete without technology. • to deliver information and is peripheral to the learning activity.	Technology is used: • to engage students and is used mostly by them. The focus on using technologies is to create and develop new thinking processes. More instructional time is spent using technology to learn. • to encourage higher order thinking skills • to facilitate collaboration in and out of the classroom • to facilitate activities that would otherwise be difficult or impossible. • to construct and build knowledge. It is essential to the learning activity.

Table 2: Using Technology vs Integrating Technology by Aditi Rao (2013)

To assess the success of this later all should agree on the same definition otherwise the meaning of success is subject to individual interpretations.

1.6.2. Prerequisites for ICT Integration in Classroom Context

According to Jackson (2003), *"the first step in determining how to integrate technology into your curriculum is to take a quick assessment of where you are in terms of technology".* For her, *"better you understand the lay of the land, the better you'll know what you need to do to jump-start technology use in your class."* For that, she developed the "STAR" approach to technology assessment:

- **Students' skills and attitudes**: What can students already do with computers and what's their attitude toward technology?

- **Teachers' skills and attitudes**: What can teachers already do with computers and what's their attitude toward technology?
- **Access**: How much computer time can you and your students get each week in the educational setting?
- **Resources**: What kinds of ICT hardware and software are available?

(Jackson, 2003)

Joel Smith and Susan Ambrose (2004: 23) of Carnegie Mellon University raised fundamental questions to help educators think in a systematic way about how and when to incorporate any new pedagogical strategy, including media, into instruction. The following questions are as follow:

1. What is the educational *need, problem, or gap* for which use of new media might potentially enhance learning?
2. Would the application of new media *assess students' prior knowledge* and either provides the instructor with relevant information about students' knowledge and skill level or provide help to students in acquiring the necessary prerequisite knowledge and skills if their prior knowledge is weak?
3. Would the use of new media *enhance students' organization* of information given that organization determines retrieval and flexible use?
4. Would the use of new media actively *engage students in purposeful practice* that promotes deeper learning so that students focus on underlying principles, theories, models, and processes, and not the superficial features of problems?
5. Would the application of new media *provide frequent, timely, and constructive feedback*, given that learning requires accurate information on one's misconceptions, misunderstandings, and weaknesses?
6. Would the application of new media help *learners develop the proficiency they need to* acquire the skills of selective monitoring, evaluating, and adjusting their learning strategies*? Some call these meta-cognitive skills.*
7. Would the use of new media adjust to students' individual differences given that students are increasingly diverse in their educational backgrounds and preferred methods of learning?

(italics appear in the original quotation)

According to the researchers, if you can answer "yes" to one or more of the above questions when considering using a particular strategy or a new media, then your selection has a chance of making a difference in learning.

1.6.3. Types of Technology Integration

It is sometimes difficult to describe how technology can impact learning because of the broad umbrella that the term covers in terms of tools and teaching and learning related practices. Hereafter some of the numerous technological tools which could impact both learning and teaching:

- Mobile and handheld devices:
- Interactive whiteboards
- Media creation like podcasts, videos, or slideshows
- Collaborative online tools like wikis
- Computer mediated communication tools (CMCs) (including SCMC and ASCMC)
- Social media

ICT integration in teaching and learning can take place through different manners, henceforth some of the most important ones:

- Online Learning,
- Blended learning,
- Web-based projects, and research
- Flipped classroom teaching
- Project-based activities incorporating technology.

The figure below illustrates blended learning in accordance to online learning and in class learning:

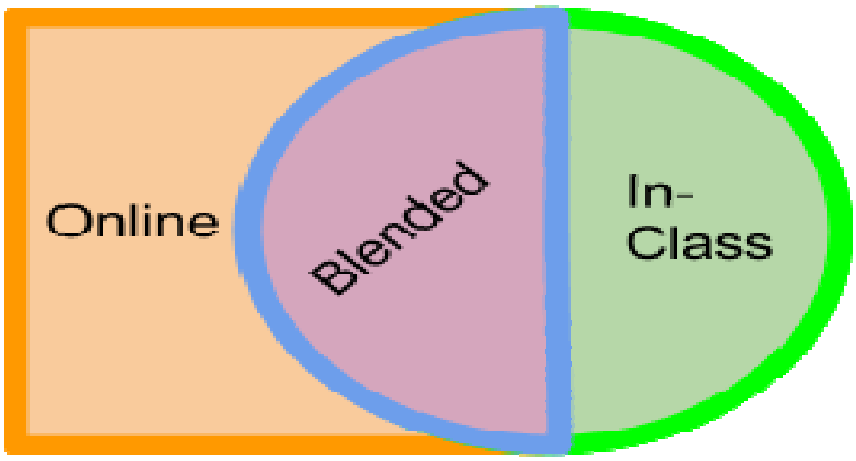

Figure 1: Blended Learning

Retrieved from**:** http://www.tiki-toki.com/timeline/entry/265506/HISTORY-OF-CALL/#vars!panel=2616197!

The figure below illustrates The Flipped Classroom teaching

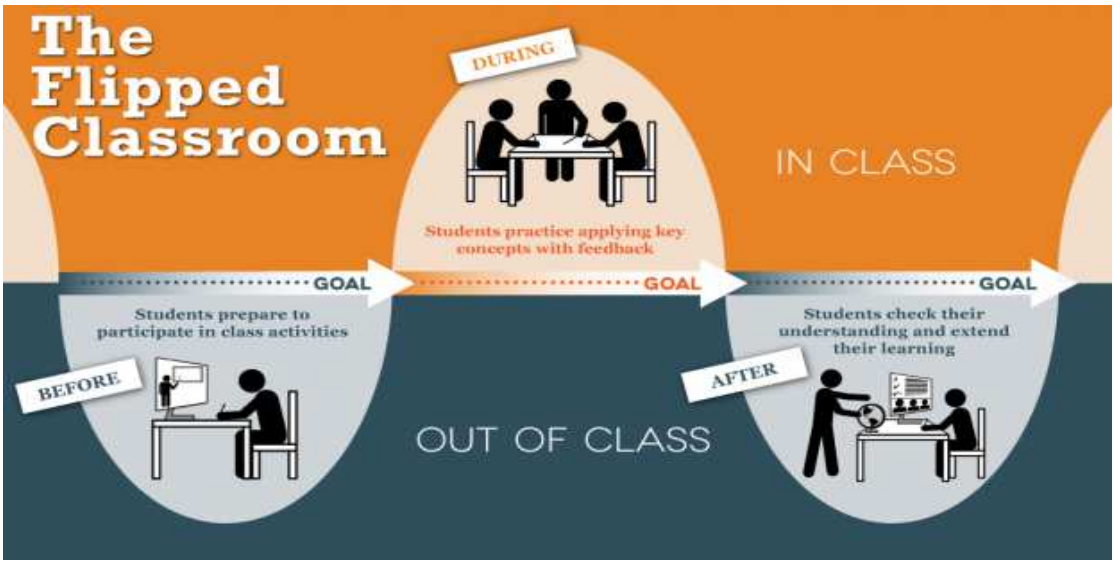

Figure 2: The Flipped Classroom

Retrieved from:

https://learningsciences.utexas.edu/sites/default/files/flippedflowmodel.png

1.6.4. Levels of Technology Integration

We refer to levels of ICT integration the way an educator introduces technology in one or many aspects of the lesson using a specific tool to meet a particular course objective. The level of integration is subject to individual and contextual-related factors including technological level of comfort, background pedagogical and technological knowledge, to cite a few. In her blog, "What Does 'Technology Integration' Mean?" Mary Beth Hertz shares four levels of classroom technology integration she has observed in schools, namely: sparse, basic, comfortable, and seamless. Other variables are explained and are related to the school's internal organization of technological use and availability of ICT tools.

1.6.4.1. The SAMR Model of ICT Integration

According to Catapano in her blog article entitled "The 4 Stages of Technology Integration: Supporting Student Growth":

"Technological integration in the classroom should take place along a sliding scale; a spectrum of integration …Instead of completely redefining instruction, technology in the classroom can be incorporated in any range of ways that suit an educator's comfort level"

That spectrum is summarized with the letters SAMR, which stands for Substitution**,** Augmentation**,** Modification, and Redefinition. These represent four different degrees of technological integration into learning, from slightly supplementing instruction to completely redefining it. One of the positive points of the model is that it allows students to learn with technological tools along with their conventional learning tools. For that, it is not just a scale of technology integration, but it is also a scale of pedagogic commitment. Tools ought to assist teachers in accomplishing their teaching objectives through an adequate application of pedagogical principles. This is possible through real professional involvement.

Substitution: Modern technology allows you to learn in the same way with the latest tools of technology, instead of using conventional learning styles that are not effective. At this stage of technology integration, technology acts merely as a replacement for traditional methods of instruction. This means that while technology

is being used, it does not actually change the method of teaching, but only replaces it. For example: Word processing is a great example of substitution, for while it replaces the old pen-and-paper method of writing down information, it does little to fundamentally change the manner of recording information with words.

Augmentation: At this stage, ICT does not change the entire way of the conventional learning process instead updated its features. Augmentation takes the advantages of technology somehow further. Instead of merely substituting a traditional tool for an electronic one, it also functionally changes it. The augmentation level is reached when technology results in some enhancement of teaching and learning, but doesn't transform how the process happens. For example: using word processing as a type of augmentation when learners use the specific tools of the Word processing program – like copy and paste, search, spell check, etc.

Modification: It allows the students to learn in a new manner with the improved tools of technology. Now instead of merely adding augmented features to instruction, modification represents the level at which teaching tasks are partially or entirely redesigned based on technological tools. For example, where teachers have students watch videos excerpts at home and instruction occurs during class. This way, the teaching remain the basis of instruction, the technological tools offer new opportunities.

Redefinition: Beyond modifying existent teaching methods, technology offers the opportunity to completely create new methods of instruction. These tasks would not have been possible prior to technological integration. Redefinition takes place when technology use engenders the creation of new teaching and learning processes that were not conceivable before. For example, assisting different students to transcend their learning styles, and work differently through cooperation and collaboration on web-research projects using video conferencing and social media, for instance.

The figure below summarizes the spectrum of ICT integration:

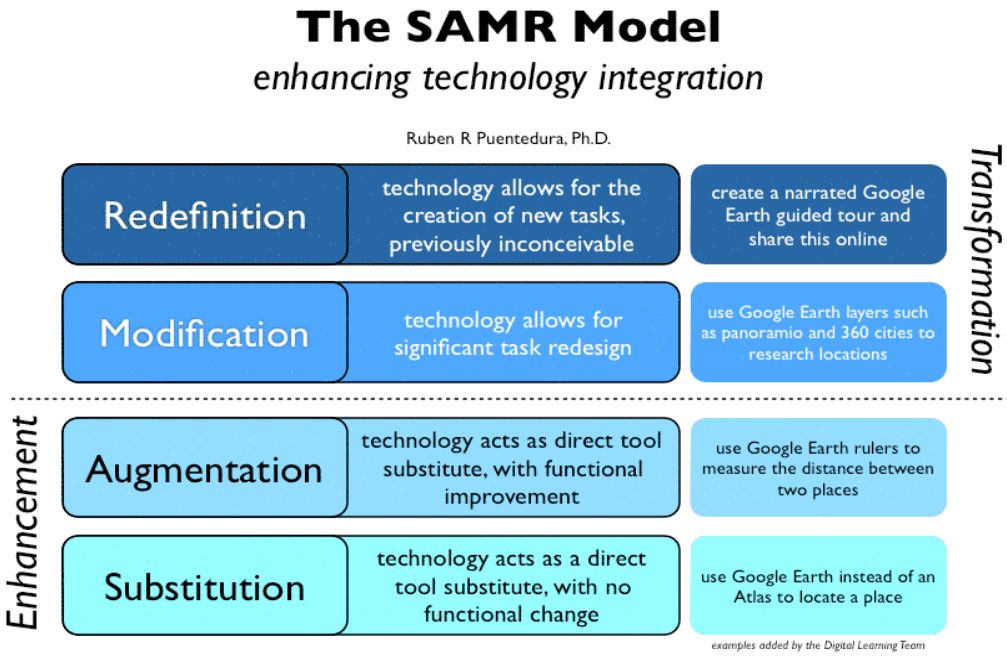

Figure 3: ICT Four Stages of Integration using the SAMR Model

In sum, there are endless opportunities for technological incorporation, and endless opportunities to enhance students' learning. Depending on the technological degree of comfort, teachers may opt for gradual ICT integration in their practice in a creative more constructivist way, redefining by this way their instruction. Others may feel it more appropriate to substitute, augment, or modify partly their teaching practice gaining more confidence and engaging in a more sustainable innovative educational approach. The table below shows the different comfort levels of ICT integration as described in the TELL and CALL literature.

Level 1	I am aware that the district has technology available but I do not use it. I am uncomfortable using technology myself and with students.
Level 2	I can do simple tasks on the computer as long as they are not too difficult or take to long for me to figure out. I can use the computer as long as someone sets it up for me and is there to support me if I have problems, questions, or need support.

Level 3	I am comfortable using the technology in school, however I still ask for help. I use technology for my own personal use as well as written and oral presentations.
Level 4	I realize that technology in school can and does affect student achievement as well as the curriculum. I feel comfortable managing the technology, files I create, and the hard copies. I have started to use technology with my students.
Level 5	I frequently use technology with my students as an instructional tool both in the lab and my classroom. I see technology as another tool just like paper and pencil. I use new ways of enriching our curriculum with our available technology.
Level 6	I explore, evaluate, and use technology for my work and personal use. I share student work and enjoy collaborating with others to share new and innovative instructional uses for technology. I enjoy learning from my students.

Table3: Comfort Levels with Technology

The table below illustrates technology integration according to comfort levels:

L 1	I have my students go to the computer lab. The lab assistant or another teacher guides them in the lab and I am able to grade papers, prepare lesson plans, or other work that needs to be done while monitoring my students. I have not included technology as part of the curriculum.
L 2	I have the students use the applications or programs on the computers in the classroom and lab, but they are a stand-alone program and supplement the curriculum. In the lab they may also work on a project that the computer assistant or another teacher developed.
L 3	I use the computer in my classroom while connected to a projection devise (TV or projector) to present, demonstrate, and model expectations, lessons, and/or how to use a program or application. My students use technology for writing projects. I use interesting software, internet sites, and support materials as part of my curriculum.
L 4	I know how to enrich my district's curriculum using the available technology that is provided. My students are using the technology as another tool that is available for them to use in the classroom or lab. I have found ways to adapt our existing technology to fit the curriculum and align with state standards.
L 5	I have an interest in creating new pieces to the curriculum that involves and motivates students. I am aware of how other teachers of my grade level or content area are using technology as part of the curriculum. I have invented strategies and techniques to use our technology to support, enrich, and help with daily instruction.

L 6	My students and I are able to create and use integrated projects using technology as part or all of the curriculum. I collaborate with others who teach the same grade level or content area so we are not reinventing the wheel. I am forming partnerships with businesses, parents, and community members to seek new ways of teaching and learning that integrates technology.

Table 4: Integrating Technology in the Classroom in accordance to Comfort Levels

Retrieved from:
https://aztea.wikispaces.com/file/view/Comfort+Levels+with+Technology.doc

Teachers who are accustomed to the blackboard, textbook, and lecture tools are reluctant to introducing new tools for learning and using technology in the classroom. On the other hand, students continue to show a strong preference for traditional teaching; they will make the ICT-based teaching transition more readily if their teachers can find ways of restructuring the traditional format.

Jumping straight to modification or re-definition stages may create significant frustration for both teachers and students, creating frustration or deception. Consequently, both teachers and learners may fail to grasp the educational benefits underneath this innovative approach. Instead, rather than jumping up the ladder, teachers are urged to process gradually and reflect on each action they undertake. They are asked to progress in accordance to an appropriate pace that satisfies both parties' expectations, needs and degree of readiness.

In the two first stages actual transformation of teaching does not take place. The role of the teacher as an agent of change does not appear plainly; no paradigm shift occurs, no innovative teaching practice is actually displayed. The framework of ICT integration is around the tool and not around the teacher. If enhancement of learning takes place it is mainly due to the potentials of the tool rather than the

teacher's ingenuity to create opportunities for learning to take place. When ICT integration is done through stage 3 and/or 4, actual innovative teaching takes place, the teacher transforms opportunities of learning to actual effective experiences of learning.

1.6.4.2. The TPACK Model of ICT Integration

Teachers should have an overall knowledge about the different technological tools and have a clear understanding about their respective uses either to support their teaching practice or help them develop their learners' overall skills and competences, in our case language learning aspects.

Morin (2010) model of ICT integration is pedagogically based, and calls upon the teachers' necessary competences to teach effectively through technology. According to the author this goes through a 6 stages process: He named them as follows:

1. La connaissance technologique (namely technological knowledge)
2. Les TIC pour la didactique ; (namely ICT for didactics)
3. Les TIC pour la prestation en classe ; (namely ICT for class teaching)
4. Les TIC pour communiquer ; (namely ICT for communication)
5. Les TIC pour la collaboration ; (namely ICT for collaboration)
6. Les TIC pour l'apprentissage/Intégration (namely CT for learning)

(Morin, 2010, adapted)

In the same vein, in order to be able to teach effectively with technology, teachers need three types of knowledge: subject-related content knowledge, technological knowledge and pedagogical knowledge. These areas of knowledge refer to the acronym of TPACK and define Koehler and Michra's *(2009*) framework of ICT integration. It aims at understanding and describing the kinds of knowledge needed by a teacher for effective pedagogical practice in a technology enhanced learning environment. In this respect, *they said:*

"TPACK is the basis of effective teaching with technology, requiring an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help resolve some of the problems that students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge to develop new epistemologies or strengthen old ones"

(Koehler & Mishra, 2009)

According to Devita Villanueva (2013) in her article entitled *"using technology" vs "technology integration"* in education *"in order to be able to teach effectively with technology, teachers need technological pedagogical content knowledge (TPACK)."* The TPACK framework highlights complex relationships that exist between content, pedagogy and technology knowledge areas and may be a useful organizational structure for defining what it is that teachers need to know to integrate technology effectively (Archambault & Crippen, 2009).

TPACK consists of 7 different knowledge areas: (i) content knowledge (ck), (ii) pedagogical knowledge (PK), (iii) technology knowledge (TK), (iv) pedagogical content knowledge (PCK), (v) technological content knowledge (TCK), (vi) technological pedagogical knowledge (TPK), and (vii) technological pedagogical content knowledge (TPCK). All of these knowledge areas are considered within a particular contextual framework.

1. ***Technology knowledge (TK):*** Technology knowledge, refer to digital technologies such as laptops, the internet, and software applications. TK does however go beyond digital literacy to having knowledge of how to change the purpose of existing technologies so that they can be used in a technology enhanced learning environment (Harris, 2008).
2. ***Content knowledge (CK):*** It includes knowledge of concepts, theories, about knowledge (Shulman, 1986) necessary to teach a subject area.

3. ***Pedagogical knowledge (PK*)**: It includes basic and general knowledge about how students learn, teaching approaches, methods of assessment and knowledge of different theories about learning (Harris et al., 2009; Shulman, 1986). However, his type of knowledge alone is not sufficient for teaching purposes.

4. ***Pedagogical content knowledge (PCK):*** Pedagogical content knowledge is knowledge about how to combine pedagogy and content effectively (shulman, 1986).

5. ***Technological content knowledge (TCK):*** It refers to knowledge about how technology may be used to provide new ways of teaching content (Niess, 2005).

6. ***Technological pedagogical knowledge (TPK)****:* It refers to the necessary knowledge a teacher should possess about the limits and possibilities of some ICT tools to support some of the learning objectives. In other words it refers to the affordances and constraints of technology as an enabler of different teaching approaches (Mishra & Koehler, 2006). The use of CMC tools to help non-native students develop some aspects of their communicative competence in English as a foreign language. Making the best pedagogical use of these ICT tools supposes a thorough knowledge about the opportunities and limitations of these later. This kind of knowledge is important in proposing tailored pedagogical activities.

7. ***Technological pedagogical content knowledge (TPCK):*** Technological pedagogical content knowledge refers to the knowledge and understanding of the interplay between CK, PK and TK when using technology for teaching and learning (Schmidt, Thompson, Koehler, Shin, & Mishra, 2009). It includes an understanding of the complexity of relationships between students, teachers, content, practices and technologies (Archambault & Crippen, 2009). In other words, the teacher should develop a holistic approach when using ICT with their learners and integrate all sorts of the cited knowledge areas in both pedagogy, technology and general knowledge to meet students' different styles of learning

The TPACK knowledge areas are summarized as follow:

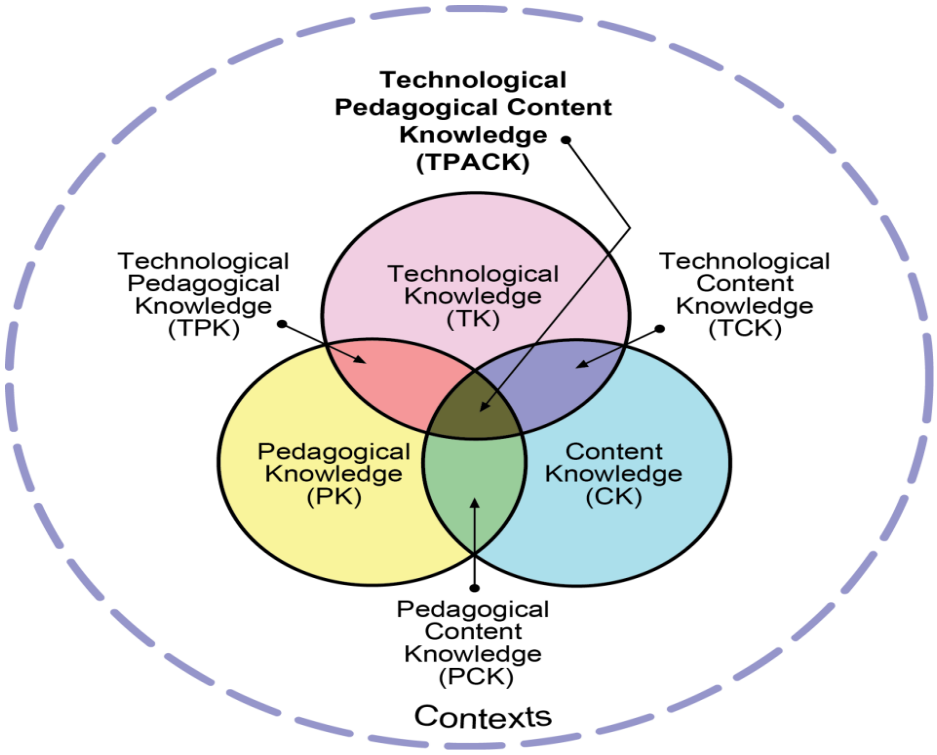

Figure 4: TPACK Knowledge Areas

1.7. Conclusion

For effective ICT integration to occur, it is not necessary for a *complete* paradigm shift to occur. It is, however, necessary to evaluate objectively our practices, and specify clear pedagogical objectives so as to design an adequate framework that assists educators to meet both their educational goals beside that of learners.

Our understanding of successful/ effective ICT integration is then subjective if not related to our academic expectations. According to Mark Schneiderman (2004), Director of Education Policy at the Software & Information Industry Association (SIIA):

"Education technology is neither inherently effective nor inherently ineffective; instead, its degree of effectiveness depends upon the congruence among the goals

of instruction, characteristics of the learners, design of the software, and educator training and decision-making, among other factors"

(Schneiderman, 2004)

Sometimes it is necessary for teachers to go beyond the two first stages of ICT integration (substitution and augmentation) if one is to expect learners to acquire high level skills/ competences. Teachers are asked to overcome what may represent for them possible obstacles in order to seize the greatest potentials of technology and benefit their learners. They may chose to completely or partially modify their teaching practices or redefine their whole educational approaches to better support underlying ICT- added values in teaching and learning.

The design of our framework has to reflect a balance between the peculiarities of the innovation per se and the complexities of the teaching and learning contexts within which we work. It is suggested that the design of our framework should be grounded in educational, psychological, organisational and innovation theories. It is then necessary to outline these principles that impact effective ICT integration in the ESP context of EPSECG. The assumption is that it is a prerequisite element at providing the appropriate structuring framework. Once done, the framework should shift its function and stands as an evaluation tool for prospective technological systems integration in the foreign language studies context.

Chapter Two

Situation Analysis

Chapter Two: Situation Analysis

2.1. Introduction

In this chapter, we will, first, thoroughly examine ELT and ICT; then, we will review the actual situation of ELT and ICT in Algeria and examine the different ICT initiatives in Algerian educational settings. The aim of this section is threefold:

- To understand the potentials and limitations of both domains in the Algerian context in terms positive and negative experiences ;
- To look for the practical implications of such experiences socially and educationally and;
- To draw conclusions for future projects.

2.2. Issues Related to Teaching and Learning

In this part of the section we define concepts of learning, teaching from a psycho-educational point of view.

In their pursuit of curriculum goals through their guidance and assistance, teachers more often focuses their efforts on what they can learn through conscious, deliberate effort provoking changes in behavior or understanding

Defining learning in this way often means that teaching equates learning (Gardner, 1999, 2006).From an educational psychology point of view two theories are relevant to what happens in classroom settings where teaching and learning take place. Behaviorism views learning as changes through overt behavior; constructivism on the other hand, sees learning as changes in thinking due to individual experiences as a response to the environment. Learning is a continual process of already acquired behaviors that individuals develop throughout a lifespan.

Outcomes of these changes in behavior may or may not appear during a classroom session. It would be erroneous to consider that what is taught is equivalent to what is learned. Learning is constrained by the surrounding environment and requires cognitive and supra-cognitive aspects that are proper to individuals affecting understanding in general. In a foreign language classroom context for instance, teaching cannot be reduced to input/ output transfer of information. Language is not

only produced and perceived, it is socially situated, constructed and negotiated involving the collaborative work of each individual to overcome misunderstanding and allow effective communication to occur.

On the other hand, much learning occurs outside the realm of the classroom. It is then necessary not to focus our attention to the restricted realm of the classroom and the possible changes/ or not that occur there. With the advent of technology in our daily life activities, language and social activities are prolonged and enriched outside the physical classroom context, before PC's monitors and through other channels of communications, including computer mediated communication channels and social networks handheld technology devices or smart phones, to cite a few. The language teacher is then urged to take part of this newly-defined cultural microcosm and adapt pedagogically by extending learning beyond the traditional classroom setting bringing adequate content and activities to learners eager to consume media-based learning materials.

The challenge for teachers is to continually fine-tune to learners' needs through adjusting their teaching approach to empower them through knowledge construction or skill- building in situations beyond the ones in which they are acquired. For that interesting is to consider the learners readiness or motivations to learn because it is what would certainly either enhance or hinder the change in behavior to occur (example of autonomous learning to take place) or a new knowledge to be constructed or modified.

Teaching and learning is a tandem where psychological, pedagogical and cultural variables melt together imposing a kind of continual adjustment to balance between the evolving needs of learners and the requirements of the curriculum goals. Conversely, to ensure that more flexible access to learning opportunities appropriate redesign of the learning environment as well as a reconsideration of the underlying factors (psychological and pedagogical)impose themselves; it is necessary to seek innovative approaches, which ensure more effective and truly sustainable learning.

2.2.1. ELT in Algeria

From a sociolinguistic point of view, English is considered a foreign language in Algeria, a country that counts more than 38 million inhabitants (2014 national statistics) who speak, Arabic and Berber, as two native languages (Berber is mainly the mother tongue of some specific ethnic minorities). French as a second language, inherited from the past years of the French colony that lasted 132 years (1830-1962) is considered the main language for business, higher education technical and scientific instruction, and research.

English is the main foreign language and is studied through all instructional levels from primary education to higher education, including, vocational trainings.

Until university level the teaching time average for foreign languages, including English, is that of 3 hours per week, across all instructional levels. However in higher educational institutions (universities and preparatory schools included) the total hours of English teaching are as follows:

- 4 hours/ week in preparatory schools;
- 2 hours/ week during the whole university curricula for scientific and technical areas of specialization and;
- All instruction hours done in English during the whole university in Anglo-Saxon (foreign) languages departments.

English language teaching in Algeria suffers an acute lack for effective communication in the target language due to the poor opportunities to practice the language outside the realm of schools and universities.

2.2.2. ESP in Algeria

Choosing a foreign language to be taught in schools depends on what people would gain from this investment. Learning English is viewed as an investment to enable people to access the resources represented by the English language.

English for Specific Purposes (ESP) is a branch of applied linguistics that focuses on relating the teaching and learning process to learners' needs (Widdowson, 1981). In other words teachers are required to uncover the needs of

students in terms of actual needs and prospective needs that these later are to be encountered during their future communicative events. In this respect, Hutchinson and Waters (1987: 19) note, "*ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning"*

As an illustration, teachers at EPSECG are called to meet the communicative and linguistic needs of students so as to enable them to grasp the English language content for economics that is presented to empower them in terms of communicative skills and specific language needed to resolve practical communicative problems during future workplace communicative activities like presentation and writing of business reports, negotiation, interviews, etc. ESP instruction in the context of the EPSECG stands as a bridge between General English and English for Occupational purposes EOP, and English as an International Language EIL.

In the Algerian context, the English language ability prevents many young Algerians from conducting their jobs effectively when working in multinational companies or when being in charge of international affairs. This causes many companies to avoid hiring young graduates in different fields of work or alternatively propose ESP programs to train their new recruits

What is available now mostly consists of the theoretical framework of the ESP approach with different applications conducted outside Algeria. Defining the ESP objectives constitutes the basis for an adequate ESP curriculum that suits the specificities of the socio economic situation of the country. At present, instructors introduce the ESP program for the English language courses simply by selecting materials from available commercial texts in different areas of specialization along with material designed for teaching English for general use or collecting different materials from the web in a handout.

In their account, Hutchinson and Waters (1987) note that there is not a clear-cut a language learning context and a future communicative context of work , the aim is simply to prepare individuals to be communicatively competent when being employed. In that respect they say:

"People can work and study simultaneously; it is also likely that in many cases the language learnt for immediate use in a study environment will be used later when the student takes up, or returns to, a job"

(Hutchinson and Waters, 1987:16)

There are three abilities necessary for successful communication in a professional target setting. Cummins (1979) theorized a dichotomy between basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP). The former refers to the language skills used in the everyday informal language used with friends, family and co-workers. The latter refers to a language proficiency required to make sense of and use academic language.

On the other hand, to identify academic skills that may be transferable to most workplace occupational setting requires an inventory of all possible occupations, identification of academic language skills, cross-referenced with the general communicative objectives in the workplace. Responding to the learners' needs may be of two types according to Hutchinson and Waters' (1987) target needs and learning needs, ESP is then concerned with turning learners into users" (Carter, 1983: 134) empowering them with the necessary skills and competences to meet their current and future communicative needs. At this level one should ask the following questions: Which proficiency level of reading, writing, listening and speaking skills in English language are required in the workplace, and for performing what kind of activities?

However because of time shortage, lack of adequate resources, national curriculum constraints and an absence of collaboration between educationalists and economic stakeholders, these objectives seem overambitious and high communicative objectives could hardly be met. If appropriately integrated in the language classroom, technological tools could complement what a teacher does, and extends the classroom time by giving further practice outside the classroom, giving students more time listening to, practicing and deepening their learning of English (Mendoza , 2012)

2.2.3. EIL: English as an International Language

EIL differs from General English and English for Special Purposes (ESP) it is not limited to any specific domain or field. Other terms used more or less interchangeably with EIL: English as a global language (e.g. Crystal 1997) and English as a world language EIL refers to functions of English not to the given form of the language. It is mainly functional and multicultural. Thus it is concerned with the use of English by people of different nations and different cultures in order to communicate with one another. Campbell et al.(1980) note; *"A major principle of EIL is that when speakers of more than one country or culture interact, more than one set of social and cultural assumptions will be in operation"(*cited in Talebinezhad, (2001). Mckay (2002), in her book entitled *Teaching English as an International Language*, makes use of term and defines it like this:

"International English can be used both in a local sense between speakers of diverse cultures and languages within one country and in a global sense between speakers from different countries."

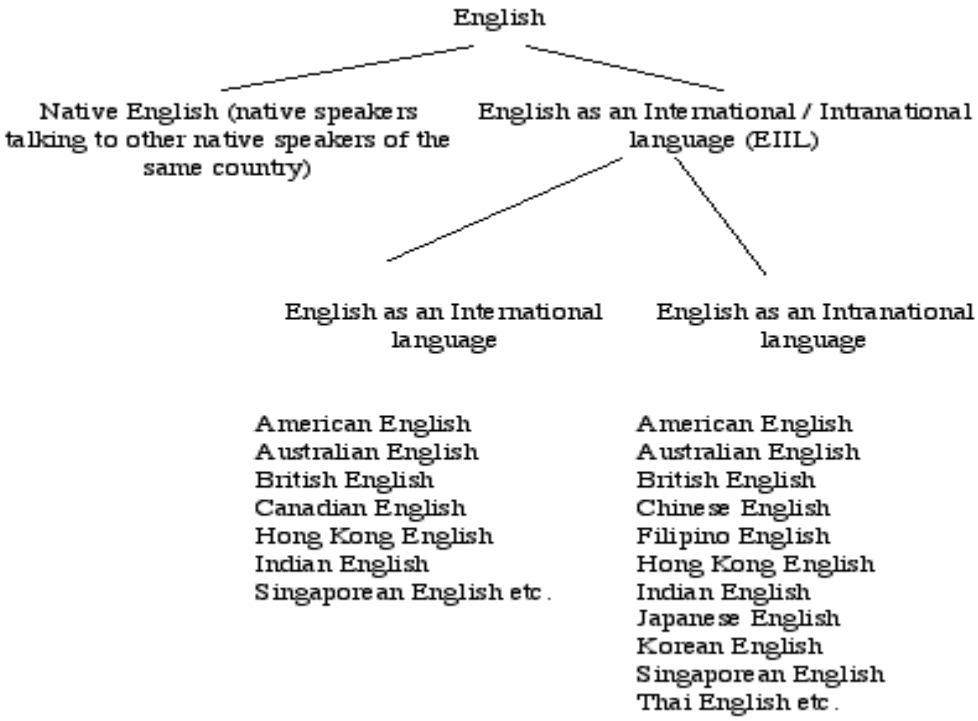

Figure 5: The New Distinction in English Instruction

Retrieved from https://bop.unibe.ch/linguistik-online/article/view/921/1606

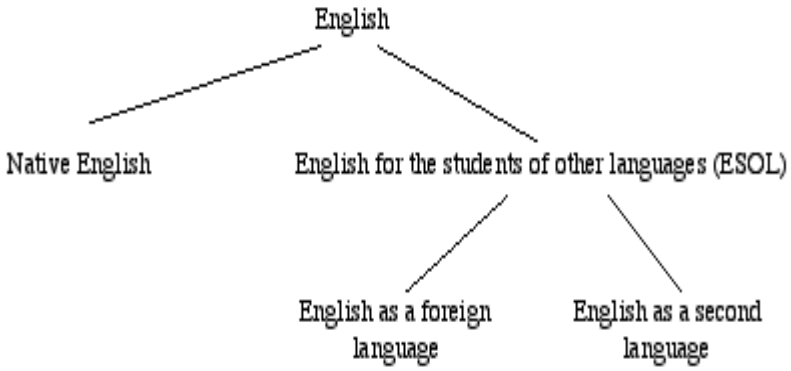

Figure 6: The Old Distinction in English Instruction (Adapted from Smith 1983)

In Brutt-Griffler's account (2002), multilingualism is an intrinsic design feature of World English. EIL users as *agents* in its spread and in its linguistic development and contribute to the language and the functions it fulfils. At this stage it seems interesting to address the possible implications that English as an international language may have pedagogically. The following questions seem worth considering:

- What would/could teaching EIL actually mean, and
- How would it differ from teaching English as a foreign language or English for specific purposes (e.g. Business English)?

According to Talebinezhad (2001) EIL is practically nonexistent in language teaching curricula and materials though the existing notions of 'intelligibility' in communicative competence; however, it is more directly related to what natives perceive as being as such. The idea of multilingualism is essential in widening the scope of this notion and includes non native speakers of English and their perception on intelligibility. Mutual accommodation (in the sense of Giles & Coupland 1991) or

communication strategies (Eg Kasper & Kellerman 1997) are relevant concerns to consider at this stage. Similarly, Junkin (2000) suggests that pedagogical benefits would be grasped through the knowledge of the features which tend to be crucial for international intelligibility. For Graddol (2012), the rate of change is so fast that it is difficult for educational policy and practice to respond to the rapid expansion of English. It also requires a close match with economic planning priorities and communicative expectations. (Talebinezhad, 2001)

2.3. ICT in Algeria

In this section we will review ICT evolution in Algeria. For the purposes of the study the term ICT will cover all technologies that we use daily, Internet, mobile devices WEB 2.0, including CMC tools and networking.

2.3.1. Internet Usage and Users Statistics for Algeria

By the end of 2013, the total number of internet users in Algeria in a population of over 38m was that of 6 million representing a penetration rate of 16, 5 %. The sector demonstrated an important expansion since it shifted from 4m in 2009 to over 6m by the end of 2014. Despite its considerable population size, internet usage in Algeria remains low since it represents only 2, 7% of the whole African internet users, ranking it 8th out of 10 Africa top internet countries far from south Africa and Egypt with, more than 63m and 43m internet users respectively according to the latest 2013 Internet World Stats Report:

INTERNET USERS STATISTICS in ALGERIA FOR 2013						
AFRICA	Population (2014 Est.)	Internet Users 31-Dec-2000	Internet Users 31-Dec-2013	Penetration (% Population)	Internet % Africa	Facebook 31-Dec-2012
Algeria	38,813,722	50,000	**6,404,264**	16.5 %	2.7 %	4,111,320

Table 5: Internet Users' Statistics in Algeria for 2013

AFRICA 2014 POPULATION AND INTERNET USERS STATISTICS FOR 2013						
AFRICA	Population (2014 Est.)	Internet Users 31-Dec-2000	Internet Users 31-Dec-2013	Penetration (% Population)	Internet % Africa	Facebook 31-Dec-2012
Algeria	38,813,722	50,000	**6,404,264**	16.5 %	2.7 %	4,111,320
Angola	19,088,106	30,000	**3,645,828**	19.1 %	1.5 %	645,460
Benin	10,160,556	15,000	**497,867**	4.9 %	0.2 %	171,780
Botswana	2,155,784	15,000	**323,368**	15.0 %	0.1 %	294,000
Burkina Faso	18,365,123	10,000	**808,065**	4.4 %	0.3 %	141,740
Burundi	10,395,931	3,000	**405,441**	3.9 %	0.2 %	41,900
Cameroon	23,130,708	20,000	**1,480,365**	6.4 %	0.6 %	562,480
Cabo Verde	538,535	8,000	**201,950**	37.5 %	0.1 %	107,340
Central African Rep.	5,277,959	1,500	**184,729**	3.5 %	0.1 %	163,780
Chad	11,412,107	1,000	**262,478**	2.3 %	0.1 %	43,120
Comoros	766,865	1,500	**49,846**	6.5 %	0.0 %	19,940
Congo	4,662,446	500	**307,721**	6.6 %	0.1 %	107,640
Congo, Dem. Rep.	77,433,744	500	**1,703,542**	2.2 %	0.7 %	903,020
Cote d'Ivoire	22,848,945	40,000	**968,000**	4.2 %	0.4 %	N/a
Djibouti	810,179	1,400	**76,967**	9.5 %	0.0 %	50,140
Egypt	86,895,099	450,000	**43,065,211**	49.6 %	17.9 %	12,173,540
Equatorial Guinea	722,254	500	**118,450**	16.4 %	0.0 %	32,980
Eritrea	6,380,803	5,000	**377,363**	5.9 %	0.2 %	20,940
Ethiopia	96,633,458	10,000	**1,836,035**	1.9 %	0.8 %	902,440
Gabon	1,672,597	15,000	**153,879**	9.2 %	0.1 %	132,000
Gambia	1,925,527	4,000	**269,574**	14.0 %	0.1 %	97,280
Ghana	25,758,108	30,000	**4,378,878**	17.0 %	1.8 %	1,630,420
Guinea	11,474,383	8,000	**183,590**	1.6 %	0.1 %	68,780
Guinea-Bissau	1,693,398	1,500	**52,495**	3.1 %	0.0 %	N/a

Kenya	45,010,056	200,000	**21,273,738**	47.3 %	8.9 %	2,045,900
Lesotho	1,942,008	4,000	**97,100**	5.0 %	0.0 %	51,440
Liberia	4,092,310	500	**188,246**	4.6 %	0.1 %	N/a
Libya	6,244,174	10,000	**1,030,289**	16.5 %	0.4 %	781,700
Madagascar	23,201,926	30,000	**510,442**	2.2 %	0.2 %	282,880
Malawi	17,241,754	15,000	**931,054**	5.4 %	0.4 %	203,840
Mali	16,455,903	18,800	**444,309**	2.7 %	0.2 %	212,020
Mauritania	3,516,806	5,000	**218,042**	6.2 %	0.1 %	106,200
Mauritius	1,331,155	87,000	**519,150**	39.0 %	0.2 %	367,900
Mayotte (FR)	217,909	N/a	**103,136**	47.3 %	0.0 %	19,500
Morocco	32,987,206	100,000	**18,472,835**	56.0 %	7.7 %	5,091,760
Mozambique	24,692,144	30,000	**1,333,375**	5.4 %	0.6 %	362,560
Namibia	2,198,406	30,000	**305,578**	13.9 %	0.1 %	231,340
Niger	17,466,172	5,000	**296,925**	1.7 %	0.1 %	63,500
Nigeria	177,155,754	200,000	**67,319,186**	38.0 %	28.0 %	6,630,200
Reunion (FR)	867,687	130,000	**300,000**	34.6 %	0.1 %	240,040
Rwanda	12,337,138	5,000	**1,073,331**	8.7 %	0.4 %	188,800
Saint Helena (UK)	4,255	N/a	**1,600**	37.6 %	0.0 %	N/a
Sao Tome & Principe	190,428	6,500	**43,798**	23.0 %	0.0 %	6,940
Senegal	13,635,927	40,000	**2,849,909**	20.9 %	1.2 %	675,820
Seychelles	91,650	6,000	**46,192**	50.4 %	0.0 %	27,600
Sierra Leone	5,743,725	5,000	**97,643**	1.7 %	0.0 %	76,880
Somalia	10,428,043	200	**156,420**	1.5 %	0.1 %	123,480
South Africa	48,375,645	2,400,000	**23,655,690**	48.9 %	9.9 %	6,269,600
South Sudan	11,562,695	N/a	**100**	0.0 %	0.0 %	N/a
Sudan	35,482,233	30,000	**8,054,467**	22.7 %	3.4 %	N/a
Swaziland	1,419,623	10,000	**350,647**	24.7 %	0.1 %	89,500
Tanzania	49,639,138	115,000	**6,949,479**	14.0 %	2.9 %	705,460
Togo	7,351,374	100,000	**356,300**	4.8 %	0.1 %	117,420

Tunisia	10,937,521	100,000	**4,790,634**	43.8 %	2.0 %	3,328,300
Uganda	35,918,915	40,000	**5,818,864**	16.2 %	2.4 %	562,240
Western Sahara	554,795	N/a	N/a	N/a	0.0 %	N/a
Zambia	14,638,505	20,000	**2,254,329**	15.4 %	0.9 %	327,600
Zimbabwe	13,771,721	50,000	**2,547,768**	18.5 %	1.1 %	N/a
TOTAL AFRICA	**1,125,721,038**	**4,514,400**	**240,146,482**	**21.3 %**	**100.0 %**	**51,612,460**

NOTES: (1) Africa Internet Statistics were updated for December 31, 2013. (2) Africa Facebook subscribers were updated for December 31, 2012. (3) CLICK on each country name for further data on individual countries and regions. (4) Africa Population numbers are mid-year 2014 estimates, based on data mainly from the U.S. Census Bureau and local census offices. (5) For definitions, navigation help and methodologys, see the site surfing guide. (6) Africa Internet usage information comes mainly from data published by WWW, ITU , Facebook, and other trustworthy sources. (7) For Internet growth comparison purposes, baseline Internet usage data for the year 2000 is displayed. (8) Data from this table may be cited, giving the due credit and establishing an active link back to internetworldstats.com

Table 6: Internet Users and Population Statistics for Africa in 2013
(Retrieved from Internet World Stats website)

There are four main internet providers in Algeria: Algérie Télécom (AT) as the public landline operator, and three dominant private internet service providers (ISPS): Anwarnet, Icosnet, and Smart Link Communications (SLC). AT is the sole provider of internet to residences and the public, it is represented in the internet market by its subsidiary, Djaweb which was formed following a merger of three earlier subsidiary internet providers belonging to AT: Fawri, Anis and Easy ADSL. However, good connectivity and internet usage are still considered a luxury for most Algerians.

The 2005 Ousra'TIC project aimed at providing PCs to 6m families. According to Webdialn@ study of Algerian internet users (*4ème vague*), only 5,5 % of the whole respondents of the survey (internet users) benefited from it with an important 22% of them ignoring totally the premises of the project .

According to the Oxford Business Report, between 2004 and 2008, AT invested €2bn to improve satellite communications, logistics and information management systems, among other upgrades and €4.8 will between 2010 and 2014 to improve the fixed line and mobile infrastructure.

The e-Algérie 2013 strategy aimed at defining a plan for ICT development in the country seeking to boost internet subscription numbers to 6m by 2013 and the introduction of 3G technologies, an ambitious project that met its objectives by the end of December 2013.

As for the mobile market in Algeria, there were over 35 million mobile subscribers by the end of 2011, compared to only 5 million in 2004. There are reportedly 33 million mobile phones in use in Algeria which represents a 94.2% mobile penetration rate and puts Algeria in 26th place in terms of the number of mobile phone users. For years, Algerie Telecom (through its branch Mobilis), has enjoyed a monopoly over the provision of telecoms services in Algeria; but in 2002, Djezzy and Nedjma (later named Ooridoo) completed the whole picture of the mobile market in Algeria.

The introduction of 3G technology favored changes to online usage, as people shifted their internet time usage partly to mobile Internet. According to counter Global Stat 97.43% of connections in Algeria were made from the desktop, and only 2.57% were made from mobile between January 2012 and January 2013. This is partly because of the expensive cost of smart phones for teenagers and young adults, the largest population fraction which uses internet regularly.

2.3.2. Internet Usage Statistics for Algeria

New studies entitled Webdialn@ (meaning ‘our web’ in the Arab Algerian variety) by Med&Com and Ideatic were carried out for a duration of 6 weeks during 2012 and polled 13 600 internet users through an online survey, made available online on 33 popular Algerian sites. The questions turned on ADSL, mobile internet, Social networks, e-commerce, etc.

In its previous study (2012) it was estimated that 75% of Algerian internet users consider the web an “essential tool”, with more than 90% confessing to “not being able to get by without going online ‘at least once a day’. Most users reported spending two hours on average in front of their monitors.

The latest study shows a gender gap in internet use. The typical Algerian web user is described as male (68, 3%), women represent just 31.7% of Algerian web users. The majority of users are aged between 26 and 35 representing by this way more 60% of the whole surveyed population. More than 63% of them hold a university degree and 18% are high schools students.

As far as internet usage is concerned, 76% of the respondents declare that they access internet many times a day with an average of 3 hours or more a day. 88% of them still favor accessing the web from home; whereas 19% of others prefer mobile internet. Emailing, web searching, watching news, *facebooking*, downloading, watching videos, and chatting have the lion’s share among the overall activities on the net with 78,2%; 72,6%; 71,1%; 55,3 %; 50%; 47,6%; 45,5% respectively.

In 2010 the total number of Facebook users in Algeria was estimated by Facebook over 1m. According to recent stats (2013) the overall estimation is that of 4 million Facebook users which amounts 11% of the general penetration rate of the country and more than 65% of the whole Algerian users. Youtube readership on the other hand increased from just 300,000 visits a day in April 2011 to 700,000 in the beginning of 2012.

Twitter receives an average of around 15,000 unique visitors daily and all of these figures combined suggest that Algerians are very active on the social media front. This number is subject to important future expansion with the recent introduction of the 3G technology and the promotional campaigns of IT mobile providers to buy smart phones and widespread the use of mobile internet.

2.4. ICT in Algerian Educational Contexts

ICT in education has gone through many stages of development influencing teaching and learning and changing by this way the role of educators from

transmitters of knowledge to *maestros* in a vast setting of knowledge construction where information is created, shared, updated and organized. It offers unprecedented opportunities to enhance learning through the impressing possibilities it offers to educators to better meet learners' styles of learning and help them to be prepared for the workplace challenges through the enhancement of their competences and the development of their skills.

ICT has been introduced into Algerian educational system from in the late 1990s. A wave of governmental decisions helped its dissemination across a large range of educational institutions under the provision of hardware, personal computers and ICT labs. The aim was to achieve the potential benefits of teaching and learning through ICT, and making by this way ICT as an integral part of the curriculum. To facilitate the entry of Algeria into the information society the following national ICT initiatives have been introduced (the list is not exhaustive):

- The project of the ministry of education to equip all schools with computers by 2005;
- The connection of educational institutions under the ministry of culture to the internet project in 2012
- The Ousra'TIC project (Computer for Every Home Initiative) in 2006
- The Tempus ID@A project of e-learning (2005-2008)
- The virtual university project
- The Academic Research Network ARN in 2012

(Adapted from Info Dev report on Algeria, 2007 and International Telecommunication Union Report on Algeria, 2014)

However the enthusiasm underlying its widespread into schools did not last due to the obstacles encountered when attempting to integrate it into daily teaching and learning practices. Learners were asked to attend ICT overloaded theoretical courses, teachers were asked to teach using ICT without any former training or ineffective training that did not respond to their concerns or anxieties. It proved then to be a burden instead of being a supporting means to teaching or learning. Parallel to this learners experienced frustrated imposed ICT courses where theoretical

notions largely surpassed practical experiences, a necessary condition to allow effective learning to occur.

Integration in schools misses beforehand strategic planning where clearly defined objectives have to be set, processes of integration to be discussed and organized and relative stakeholders to consult to better evaluate the enablers and obstacles intrinsic to any process of change underlying any innovation diffusion.

As a consequence, millions of dollars have been invested and no up to date studies have been carried out and discussed to evaluate objectively the results of such nationwide experiences. Almost certainly, one of the mistakes is the absence of limited scale pilot studies that would have proved to be fruitful in the evaluation of defined situations and which would have allowed objective analyses and avoided unnecessary expenditures.

The table below summarizes the influencing factors which enabled or constrained ICT adoption in Algeria:

Factors	**Enabling Features**	**Constraining Features**
Policy framework	A national ICT policy for Educational development was set forth in 2002. The government has adopted ICT in all domains, particularly the education sector, as an integral part of the development process.	The policy for ICT exists, but to be successfully implemented it needs Strong infrastructure and resources. Vast areas of Algeria are still lagging Behind in basic needs.
Infrastructure and access		Algeria faces problems of poor infrastructure and

		connectivity issues.
Availability of appropriate learning materials	The development and provision of tools and learning material are at The heart of the policy of ICT for educational development.	There are not enough appropriate learning materials.
Rural/urban Divisions	A major concern of the national ICT policy is provision of access And connectivity to all areas of the Country.	Few schools and even fewer universities and higher institutions are available in rural communities.
Gender equity	A number of development projects, especially non-formal education programs, are directed towards females being part of the underserved population.	In general, the level of illiteracy is higher among females and this is reflected in their access to ICT as well as training and skills.
Human resource Development		The multilingual base in Algeria poses a major hurdle to unifying or Implementing programs at a large Scale. Professional development

		programs and teacher training is still limited to basic ICT training with no connection or relevance to Integration into the educational process. Professional development and ICT programs lack connection with content and curriculum development in a manner that allows for proper implementation of reform. The disconnection among the different development programs impedes proper impact and progress.
Sustainability	The political arena has stabilized somewhat in Algeria, thus setting the grounds for proper Implementation of the development programs and allowing for a more sustained reform effort.	Several projects and initiatives have been underway, but due to the obstacles posed by the political unrest, many of them have been discontinued.

	The political stability leading into economic reform allows for Attracting investment and support locally and internationally	

Table 7: Factors Influencing ICT Adoption (INFODEV, 2007)

2.4.1. ICT in ELT in Algeria

For the purpose of this report, the term ICT i.e. (Information and Communications Technologies) including computers, internet (and internet applications), handheld technologies, etc will be used. When one of these technologies is included in a language learning process we define it as CALL i.e. (Computer Assisted Language Learning), or TELL i.e. (Technology Enhanced Language Learning) to entail all technological devices and applications that enhance learning to occur and all allow effective teaching to take place. Among these types of learning: e-learning, online learning, networked learning, blended learning and recently, flipped classroom learning.

Many solutions exist to deliver ICT- based language teaching, teachers may chose among these solutions or propose alternative ones depending on his constraints and enablers in terms of ICT usage, time, technological and pedagogical knowledge and necessarily his pedagogical objectives. In addition to that he may even opt for ICT tools which were not necessarily for pedagogical uses and adapt them into his teaching to serve a learning situation.

Among ICT tools what proved to have pedagogical perspectives, Computer Mediated Communication tools, developed primarily for entertaining and communicating purposes, out of the educational use. Their integration in the teaching

/learning process is neither cost effective, time consuming for teachers nor necessarily threatening for learners.

If grounded into a sound pedagogical framework, and targeted towards specific language teaching aspects, this kind of ICT integration may prove to be beneficial for 21st century learners who prefer this kind of learning experiences. They can self-pace their learning progress without necessarily being constrained by the formality of the traditional face to face teaching layout. The Internet builds on multimedia technology enables both asynchronous and synchronous communication between learners and teachers, and between natives and non-natives, allowing authentic language learning experiences to occur. The activities learners engage in may be structured or unstructured, but they embody two important features: interactive learning and individualized learning, two specificities of 21st century learners.

2.4.2. ICT in ELT: from CALL and TELL

2.4.2.1. Definition

Computer Assisted Language Learning (CALL) is succinctly defined by Levy (1997: 1) as *"the search for and study of applications of the computer in language teaching and learning".* CALL embraces a wide range of information and communications technology applications and approaches to teaching and learning foreign languages, from the "traditional" drill-and-practice programs that characterized CALL in the 1960s and 1970s to more recent manifestations of CALL, An alternative term, technology-enhanced language learning (TELL), also emerged around the early 1990s. Since the early 2000s there has been a boom in the development of so-called Web 2.0 applications. Shifting emphasis from Web browsing, this is essentially a one-way process, to more interaction and sharing.

2.4.2.2. Phases and Approaches to CALL and TELL

Warschauer (1996) and Warschauer & Healey (1998) identified three historical phases of CALL, classified according to their underlying pedagogical and

methodological approaches. In a later publication Warschauer changed the name of the first phase of CALL from Behaviorist CALL to Structural CALL and also revised the dates of the three phases (Warschauer 2000), namely :Structural CALL: 1970s to 1980s. It consisted of drill-and-practice materials in which the computer presented a stimulus and the learner provided a response; Communicative CALL: 1980s to 1990s. It consisted on using the language rather than analysis of the language, and grammar is taught implicitly rather than explicitly. The computer is used for skill practice, but in a non-drill format and with a greater degree of student choice, control and interaction. This led to a new perspective on technology and language learning, which has been termed integrative CALL from 2000 to now.

This phase is marked by the introduction of two important innovations: (a) Multimedia; (b) The Internet It saw a definitive shift from the use of the computer from basic purposes to more integrative ones. Students learn to use a variety of technological tools to integrate four skills e.g., listening, speaking, reading, and writing as an ongoing process of language learning and use, rather than visiting the computer lab for exercises. A definitive line has been drawn to define ICT is a supportive pedagogical tool across curriculum. It can be used to reinforce what has already been learned in the classroom or as a remedial tool to help learners who require additional support.

There are two main aspects where ICT is used in English teaching and learning: ICT is used as a tool for teaching English; English is taught via ICT. In the former aspect, English teachers and learners are aware that they use ICT, particularly computers and network communication, to support teaching and learning. A wide range of ICT applications are used as tools. For example, teachers and learners use a word processor to enable correcting and redrafting of an essay; they use PPT, Flash and other software to prepare lectures or presentation. In this context, Jones C. (1986) rejected the idea of the computer being "*some kind of inferior teacher-substitute"* and proposed a methodology that focused more on what teachers could do with computer programs rather than what computer programs could do on their own: *"in other words, treating the computer as they would any other classroom aid"*.

Many teachers were moving away from a cognitive view of communicative teaching to a more social or socio-cognitive view, which placed greater emphasis on language use in authentic social contexts. Task-based, project-based, and content-based approaches all sought to integrate learners in authentic environments, and also to integrate the various skills of language learning and use. In integrative approaches, students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a once a week basis for isolated exercises (whether the exercises are behaviorist or communicative).

This period saw whole language theory embraces constructivism and postulates that language learning moves from the whole to the part, rather than building sub-skills to lead towards the higher abilities of comprehension, speaking, and writing. It also emphasizes that comprehending, speaking, reading, and writing skills are interrelated, reinforcing each other in complex ways.

The current philosophy of CALL puts a strong emphasis on student-centered materials that allow learners to work on their own. The learner exercises a high degree of control over the path that he/she follows through the learning materials.

Butler-Pascoe (2011) looks at the history of CALL from a different point of view, namely the evolution of CALL in the dual fields of educational technology and second/foreign language acquisition and the paradigm shifts experienced along the way. Shift from passive consumption of ready-made programs to independent building of content.

The integrative phase appears to be describing the technology more than the pedagogy and methodology. As for the enhancement of the four skills, Felix (2008) claims that there is *"enough data in CALL to suggest positive effects on spelling, reading and writing"*, but more research is needed in order to determine its effectiveness in other areas, especially speaking online. Levy (1997:118ff.) analyzed the results of a comprehensive CALL Survey which he carried out among authors of CALL materials in order to determine what kinds of conceptual frameworks lay behind their work. Most respondents declared their approach to be eclectic. As for

the role of the computer in CALL, most respondents favored a non-directive role, with very few supporting the idea of the computer replacing the teacher. There was a significant lack of references to innovative pedagogical approaches. The figure below illustrates the evolution of the CALL through its different phases:

Figure 7: Phases of CALL

(Retrieved from: https://selalualways.wordpress.com/2010/10/06/using-technology-in-language-teaching-and-learning/)

Bax (2003) prefers to talk about *approaches* rather than *phases*. He offers a critical examination and reassessment of the history of CALL, and argues for three new categories: Restricted CALL; Open CALL; and Integrated CALL. According to the author (2003) Integrated CALL does not yet exist but represents instead an aim towards which we concentrate our efforts. (Bax 2003:22)

Advances in technology and increased user-friendliness of equipment will certainly lessen resistance to ICT use in and outside the classroom. Teachers' attitudes towards technology greatly influence their adoption and integration of computers into their teaching. According to (Russell & Bradley, 1997) anxiety, lack of confidence and competence often lead ICT to take a back seat to traditional ways of teaching and learning. According to (Woodrow, 1992) for successful transformation in educational practice, individuals need to develop positive attitudes toward the innovation.

However, though experts wholly agree on the potentials of ICT in education they emphasize that, not enough attention is being devoted to questions of how the new media actually can systematically aid language learning; they address the issues of culture of learning and the culture of teaching. For them, new media do not automatically lead to a new learning but simply offer the opportunity for change.

ICT into educational institutions calls for a change in learning and teaching patterns imposing on teachers and learners to embody new roles. The teacher is urged to no more stick to his basic role of the transmitter of content; but mainly to shift his to that of a guide who orchestrate and design a motivating learning environment for learning to take place. Learners on the other hand could no more expect teachers to pour in their heads any kind of knowledge. They have responsibility over their learning and should master the necessary strategies to self-pace their learning and progress with or without their teachers' guidance.

Considered as one of the most important benefits of ICT use in education, learners' autonomy or at least the *"autonomisation*" of the learning process of EFL learners stays an ultimate goal in itself. To reach this goal is somehow to fulfil the objectives of contemporary education that advocates active involvement of all the actors of the educational system; including the educator, the learner and the context in which these later evolve. The challenge of educators and foreign language teachers then is to make the best use of these Information and Communication Technologies to both meet academic objectives and help learners to become autonomous and take charge of their learning processes.

2.5. Pre-Requisites of ESP Course Design (Fundamentals)

As job requirements become more specific and complex, learners need to develop strategic skills to succeed in their future workplace careers. The term "career-ready" is generally defined in business literature as being the kind of knowledge and skills deemed to be essential for success in the modern workforce. As a consequence, Schools need to adapt and develop new ways of teaching and learning that reflect a changing world. The purpose of school should be to prepare students for success after graduation, and therefore schools need to prioritize the

knowledge and skills that will be in the greatest demand, such as those skills deemed to be most important by employers.

As noted earlier, an ESP course is constituted from: a need analysis (learners' present needs & target needs) and a syllabus design (type of tasks, timing, organization, and assessment). The content that the ESP designer teacher aims at proposing to learners should be challenging and motivating at the same time. For that he course should:

- Fits their learning preferences ;
- Challenges them to transcend their actual level of proficiency; yet meets the ESP course requirements.
- Be relevant to their present and prospective professional context.

Relevancy in the language classroom is important and has a direct impact on learners' self-confidence on their future use of language, ongoing motivation throughout the language course and direct influence on their language-related target objectives. A teacher who delivers a language course which meets the learner's present language concerns, and paves the way through raising awareness to future work-related communicative activities is almost sure to maintain the interest and motivation of his learners. The difficult way to go through the different language-related courses, examinations, evaluations are generally well accepted by the learners as being a normal way to go through to attain their target objectives and may be perceived as challenges to overcome rather than impediments to their progress.

According to Dhieb-Henia (2008) the course designer is expected to investigate the group as well as individual learning styles, and provide the learners with a variety of learning sources for the same item. Similarly, Sysoyev (2000) on the other hand asserts the importance of students' analysis in the provision of two kinds of information. The first reflects learners' current level in their L2, motivation, methods of learning they have experienced, etc; the second represents what learners want to achieve. In this vein, the teacher then as Tudor (1993: 24) remarks will need to:

"Get to know the students well enough to be able to understand both their intentions (what they need and would like to do) and their resources (what they are able to do)".

Tudor (1993: 24)

Carter (1983) asserts that there are three features common to ESP courses: a) authentic material, b) purpose-related orientation, and c) self-direction. Robinson (1991) reminds us that ESP is normally goal directed. The course should imperatively offer many modification opportunities to enable different learners to go through the ESP course in a challenging and motivating manner.

Responding to the learners needs may be of two types according to Hutchinson and Waters (1987) target need and learning needs, on the other hand, one should ask some questions:

- What could constitute the target needs? And what is the target situation?
- What are the target needs at EPSECG?
- What are the target needs in the economic workplace?

Identifying and analyzing learners' needs are only one part of the puzzle to design a successful ESP course. Equally important is to integrate ESP course design to what constitute a successful learning experience in a 21st century era. In fact different factors influence the process of course design.

Living in a globalized world entails to be competitive in all aspects of life; educators including ESP teachers and ESP material developers are asked to line up the different segments of a successful learning experience and do their best to take up the challenges of 21st century literacy that take favors not only the enhancement of the linguistic aspects of a foreign language learning, but also the development of communicative and interpersonal skills, collaborative abilities, construction and sharing of knowledge, all in all what prospective job seekers are expected to be required in today's workplace and economic sectors.

Figure 8 : Grid for 21st century learning

(Source: engauge 21st Century Skills)

(Retrieved from: http://pict.sdsu.edu/engauge21st.pdf)

Teaching English in the Algerian university, however, meets some difficulties in guarantying the attainment of communicative competence in English for its students. This deficiency is the natural outcome of traditional non-native classroom environment that suffers the acute lack of interpersonal interactions in the target language and no exposure to authentic environments, two basic elements in the acquisition of a foreign language.

While there is broad agreement that today's students need different skills than were perhaps taught to previous generations, and that cross-disciplinary skills such as writing, critical thinking, self-initiative, group collaboration, and technological literacy are essential to success in higher education, modern workplaces, and adult life, there is still a great deal of debate about 21st century skills-from what skills are most important to how such skills should be taught to their appropriate role in public education.

For an ESP teacher who is time limited and most of the time syllabus – bounded, being asked to prepare and train learners to such complex set of competences is probably out of reach, due to the lack of available pedagogical, psychological and organizational resources that would facilitate meeting these objectives.

2.5.1. ICT in ESP: Things to Consider

Researchers concur that teaching English through ICT tools should be framed not only around the tool; but mainly around the 21st century learners. It is therefore imperative to reconsider ingeniously our teaching practices so as to meet the specificities of the new cultures of learning.

Much learning occurs outside the realm of the classroom. It is then necessary not to focus our attention to the restricted realm of the classroom and the possible changes/ or not that occur there. With the advent of technology in our daily life activities, language and social activities are prolonged and enriched outside the physical classroom context, before PC's monitors and through other channels of communications, including computer mediated communication channels and social networks handheld technology devices or smart phones, to cite a few.

In his research paper entitled "the future of Digital English", Michael Carrier (2012) technology-supported learning must put forward new teaching models, new activities, new contents, more effective and modern instruments and channels for communication to increase students' exposure to English, and improve the levels of competence in this language. In his research, (Abdul Mahmoud, 2010) goes further stating that *"we should exploit the modern technologies effectively to radically change from teacher-centered approach to student-centered approach in teaching ESP"*

Technology Enhanced Language Learning TELL studies seem to jointly support the idea that the new communicative tools that are available on the web Platform such as Computer Mediated Communication CMC tend to present favorable communicative environments for learning to occur and communicative competence to develop.

The challenge is to explore possibilities of how best to achieve the integration of communicative classroom learning objectives with online experiences in a learner-centred context where knowledge building is constructed and negotiated. As reminded by educational researchers ESP remains an approach to teaching there is no such a thing called ESP materials, teachers will unavoidably piece together some GE teaching materials with that specifically designed for ESP contexts in conjunction with the teacher's "self-crafted" ones.

Teachers at the preparatory schools EPSECG are called to meet the communicative needs of students so as to enable them to grasp the English language content for economics that is presented to empower them in terms of communicative skills and specific language needed to resolve practical communicative problems during future workplace communicative activities like presentation and writing of business reports, negotiation, interviews, etc. The challenge for teachers is to continually fine-tune to learners' needs through adjusting their teaching approach to empower them through knowledge construction or skill-building in situations beyond the ones in which they are acquired.

Long (1985, 1996) supports the idea that some communicative skills, may be enhanced as learners interact with each others. CMC offers the possibility to learners to communicate without constraints of time and place with natives as well as non-natives, increasing by this way a possibility for access outside the classroom environment.

2.5.2. The Communicative Competence in ESP

It is important to draw a clear distinction between communication competence and proficiency. What is worth noting is that there is a mismatch between the skills students are graduating with and the skills required by the industries. Besides the necessary skills and knowledge allowing communication to take place, communication competence building needs sustained motivation to develop.

Brian Spitzberg (2006) used these assumptions to develop a model of communication competence that is constituted of motivation (affect), knowledge

(cognition), and skills (psychomotor abilities). Specific teaching process should be directed towards meeting Basturkmen's (2006) five objectives:

- To reveal subject-specific language use;
- To develop target performance competencies;
- To teach underlying knowledge;
- To develop strategic competence -To foster critical awareness.

2.5.3. Bridging the Communicative Competence Gap in an ESP Course using ICT Tools.

As far as the learners' skills should develop, (Blue, 2001) asserts that students' needs in any field may be very similar to the skills needed by professionals. Robinson (1991) reminds us that ESP is normally goal directed. The ESP course should imperatively offer many modification opportunities to enable different learners to go through the ESP course in a challenging and motivating manner.

Responding to the learners needs may be of two types according to Hutchinson and Waters (1987) target needs and learning needs; on the other hand, one should ask some questions:

- What could constitute the target needs? And what is the target situation?
- What are the target needs at EPSECG?
- What are the target needs in the economic workplace?

Cummins (1979) theorized a dichotomy between basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP). The former refers to the language skills used in the everyday informal language used with friends, family and co-workers. The Latter refers to a language proficiency required to make sense of and use academic language.

The figure below illustrates Cummins' (1979) Iceberg Theory of BICS &CALP

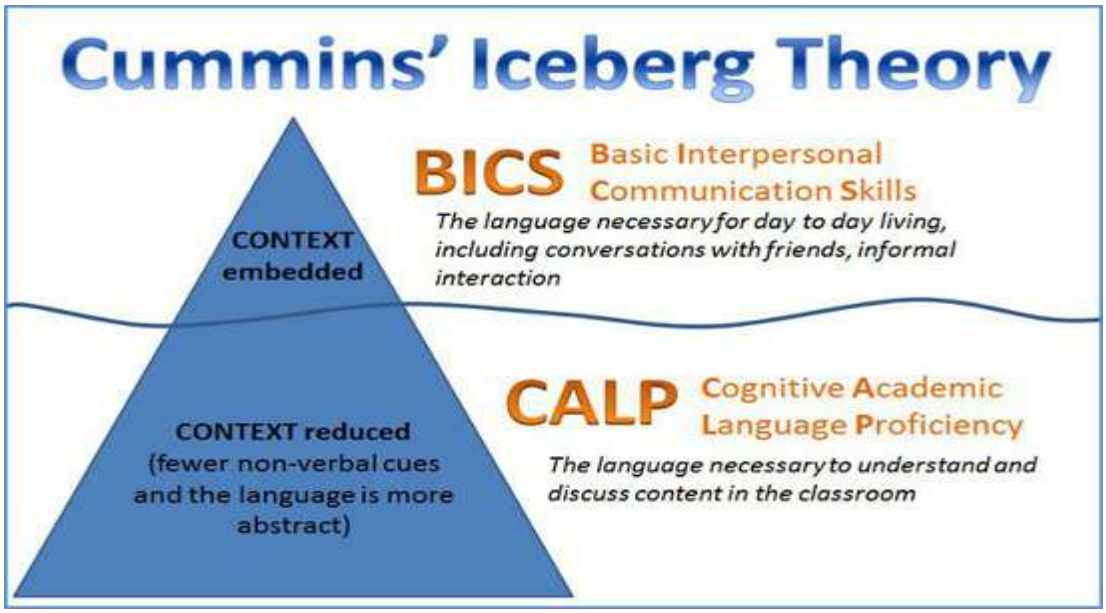

Figure 9: Cummins' (1979) Iceberg Theory of BICS &CALP

The table below is an attempt to show some of the similarities that may exist. Study activities and the corresponding professional activities both draw on essentially the same language skills:

Study Activities	Skills Required	Professional Activities
Lectures	-Listening to understand content -Listening for key words and phrases -Making notes -Asking questions	Presentations
Seminars	-Asking and answering questions -Understanding and expressing different points of view -Reporting on work done -Making notes	Meetings
Reading textbooks, articles, etc.	-Understanding the overall content -Distinguishing main points from supporting detail -Skimming, scanning, evaluating -Making notes.	Reading Reports
Writing essays, dissertation	-Construction of reasonably accurate sentences and paragraphs -Good organization of ideas.	Writing reports, letters, etc.

Table 1.1: Study and Professional Activities
(Adapted from Blue, 2001)

Table 8: Study and Professional Activities (Adapted from Blue, 2001)

In a partnership with the University of Phoenix, the Institute for the Future has produced a new report titled “Future Work Skills 2020”; it identifies the key driving factors changing the workplace. The report suggests the following as key skills in the future workforce:

- Sense-making - The ability to determine the deeper meaning or significance of what is being expressed.
- Social intelligence - Ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired intentions
- Novel and adaptive thinking - Proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based.
- Cross-cultural competency - Ability to operate in different cultural settings.
- Computational thinking - Ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning.

- New-media literacy - Ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communications.
- Transdisciplinarity - Literacy in and ability to understand concepts across multiple disciplines.
- Design mindset - Ability to represent and develop tasks and work processes for desired outcomes.
- Cognitive load management - Ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques.
- Virtual collaboration - Ability to work productively, drive engagement and demonstrate presence as a member of a virtual team.

2.7. Conclusion

Effective ICT integration is tightly linked to 21st century effective learning that sees it as being communicative, collaborative, favoring critical thinking to name a few. A new approach to learning and teaching with ICT is necessary if one is to expect effective learning experiences to occur. English in the workplace should be analyzed in view of proposing a fitting English language variety (English as an international language EIL vs ESP) in terms of relevance to global understanding and business challenges (functionality) and translate it pedagogically in terms of and appropriate tasks and content curriculum. Relevance and efficiency are two factors to consider when considering designing a framework that aims at bridging the gap of a communicative competence of English in the workplace.

Our idea is that an ICT-ESP based approach to learning/teaching a foreign language is necessary if one is to expect successful learning and teaching experiences to occur and communicative competences to be enhanced and improved effectiveness is measured actually in our context through the ability to bridge the gap between academic achievement and workplace achievement through communicative competence building.

Chapter Three

Data Collection Procedures and Instruments

Chapter Three: Data Collection Procedures

3.1. Introduction

The data collection procedures and instruments' section is important because it accounts the overall phases through which the research work progresses and presents the stages leading to the resolution of the problematics at hand. The aims of this chapter are threefold:

1. To explain the epistemological approach the researcher opted for to clarify the complex interplay of environmental, situational and individual-related variables influencing the effectiveness of ICT integration in our educational context,

2. To describe the present situation psychologically, pedagogically and technologically using different data collection procedures and instruments.

3. To decipher the specificities of the situation at hand, namely: EPSECG, the ESP context and the research work's informant participant.

For so doing, the researcher will go through the following steps:

Firstly, to describe the educational context using the SWOT analysis grid and underline the areas where strength and opportunities exist as well as weaknesses and threats. It is important to have a global view about all possible environmental variables that influence both teaching and learning.

Secondly, to explore the perceptions and attitudes of learners and teachers using different ICT tools in order to suggest and plan in later stages effective ways to better integrate technology in our ESP teaching and learning contexts. Questionnaires to both teachers and learners were used, as well as a learners' focus-group interview was realized to alleviate some blurred aspects obtained through the introspective methods of data collection. The research study was supplemented by an economic actors' questionnaire. The aim was to have a broader vision about their present workplace communicative situation and the actual communicative needs. However, the response rate was insignificant, and the obtained findings could not be discussed. However, a detailed description of the questionnaire per se was provided.

As far as the teachers' questionnaire is concerned, the ICT Usage Survey was adopted. The learner's questionnaire consists of different sections relating to

actual uses of ICT. It is aimed to discover which type of internet users they are and reflect on possible pedagogical activities that may be designed to meet their learners' needs using technological tools.

Thirdly, to examine both teachers and learners' possible underlying barriers (psychological, pedagogical, and technological) that may prevent effective uses of ICT, hampering by this way successful learning/ teaching experiences to take place.

The above-mentioned research procedures aim at collecting the necessary data to allow us design a practical framework that would account psychological, pedagogical as well as technological aspects necessary for a successful integration of ICT in our educational context at hand.

3.2. The Problematics

The ultimate goal that we would like to attain is to facilitate the teaching and learning of ESP through ICT. The hypothesis that we move ahead is that learners may become communicatively competent and bridge the communicative gap in the workplace with ICT effectively integrated in ESP teaching. This could be possible if two conditions are met:

1. Psychological as well as pedagogical obstacles regarding ICT use in ESP are clearly defined and alleviated and;
2. Economic sector‘s communicative needs are clearly defined and analyzed in view of developing a matching ESP curriculum.

To assist teachers grasp the whole potential of the technological tools which could be used in the language classroom, it is necessary to gauge their perceptions about both their ICT usages (uses and competences) as well as potential added value in its integration.

Evaluating individual perceptions could prove to be a tough task and is subject to individual skepticism due to the intrusiveness of the questions and the underneath psychological and social weights which frame actual attitudes and behaviors towards the acceptance or resistance of any innovative practice or any innovation

dissemination in general. The problematics that we put forward is therefore as follows:

The national plan to implement Five Preparatory Schools of Economics, Commerce and Management throughout the country, with the necessary infrastructure and human resources, aims at providing a quality instruction to the future business and economic leaders of the country by providing a staff of excellence composed of professionals, experts and specialists in the domain of management techniques, foreign languages, accounting, and exact sciences.

Teaching English at EPSECG constitutes an interesting research experiment where technology, pedagogy and psychology melt together to take up the 21st century challenges together with that of the new economy, to which we intend to prepare Algeria's future leaders .

Parallel to this, if the last decade was that of blind optimism regarding the use of ICT in education, more specifically in the teaching and learning of a foreign language, the present one is that of plain realism due to the deceitful local experiences in terms of general perceptions regarding prevalent ease of use and pedagogical established added values.

Recent literature stresses the importance that effective teaching and authentic learning is not related to the use of the latest technology *en vogue* only; but mainly to our ability to understand the potential that ICT may bring to our educational context with a due consideration to the pedagogical, culturally-rooted practices as well as the psychological specificities of our teachers and learners alike.

3.3 The Research Questions

The researcher will attempt to answer the following research questions:

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT?
2. How can we define a successful ICT integration in ELT?
3. What are the prevailing attributes of success related to ELT in general and ESP in particular?

4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?
5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG.

3.4. The Hypotheses

The ultimate goal that we attempt to attain is to enhance the teaching and learning of ELT (more precisely ESP) through ICT. For that, we posit the following hypotheses:

1. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of *a reasoned and principled* integration of ICT in English teaching/learning contexts.

2. Both EPSECG's learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.

3. Understanding the possible resistance to change related to ICT uses in e ELT in general, and ESP context of EPSECG helps identifying the necessary strategy to overcome underlying barriers to successful ICT integration.

4. Uncovering the type of language learners' ICT uses is important to meet their learning styles and propose adequate ESP activities.

5. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data and propose a practical framework that accounts for the specificities of the educational context at hand.

3.5. The Theoretical Guidelines

Learning technology research in general is concerned with understanding how technology can be used to support learning and teaching. It seeks to improve the

students' learning experience as well as the teaching practice through ICT. Some of the questions being addressed by researchers concern issues regarding pedagogical, technical and organizational features of ICT integration. As remarked by Conole (2003):

"Learning technology research suffers in a number of respects, (1) …the area is not clearly scoped and lacking theoretical underpinning; and (2) …"it is a practical and applied discipline which is contextualized in nature."

Conole (2003)

Any human activity is directed at something and subject to environmental influences and is accomplished through the interaction of many variables. When doing e-learning research, it seems fundamental to study the human activity as an association of all what identifies it as such, namely: the individuals, purpose of actions, the way actions are accomplished through tools, etc. s a consequence, any human activity (including teaching and learning), be it technologically-mediated or not, cannot be interpreted in isolation, it changes as conditions change, each element influences and transforms s the other in a dynamic manner (Leont'ev, 1978). As a consequence, when dealing with teaching and learning issues using ICT tools, the researcher's theoretical position is fundamental to the interpretation of data (Oliver & Harvey, 2002).

3.5.1. Exploratory Research

The research theory upon which we have built our methodology is referred to as Exploratory Practice. It is mainly based on "*existing pedagogical practice as a research tool"*. In this sense, Allwright and Lenzuen (1997) described it as follows:

"Exploratory Practice is a sustainable way of carrying out classroom investigations that provides language teachers (and potentially the learners also) with a systematic framework within which to define the areas of language teaching and learning that they wish to explore, to refine their thinking about them, and to investigate them further using familiar classroom activities, rather than 'academic' research techniques, as the investigative tools."

(Allwright and Lenzuen, 1997: 73)

In the same vein, Allwright (1999) summarized the principle guiding this approach to in class language /teaching research- studies saying that it becomes by this way a practical means of teacher development, while simultaneously working for learner development.

In Exploratory Research the researcher seeks to understand a new problem in its preliminary stage or an existing problem from a new angle. As a consequence it stands as an attempt to lay the groundwork that will lead to future studies.

The research methods used in educational psychology tend to be drawn from psychology and other social sciences. The classroom is an environment where complex communication takes place. It is also a place where cultural, psychological and educational loads are brought to the scene to describe the whole picture. There is a lot to gain if the research is tackled by the teacher itself. In this sense, when the teacher practitioner is immersed in the process of researching any aspects of what takes place in his classroom. "*Research (…) becomes a learning tool and an educational process rather than an abstract, distance set of procedures"* as Wright (2006:83) remarked. Consequently, Exploratory Practice becomes a unique theoretical position through the integration of many fields of research and pedagogy.

3.5.2. Action Research

Action Research (AR) aims at improving teaching and learning bringing about change. It involves a cyclical process involving four stages: Plan, Act, Observe and Revise, known under the acronym of [PAOR].

The figure below demonstrates the four stages of Burns's (1999) cyclical Action research (AR).

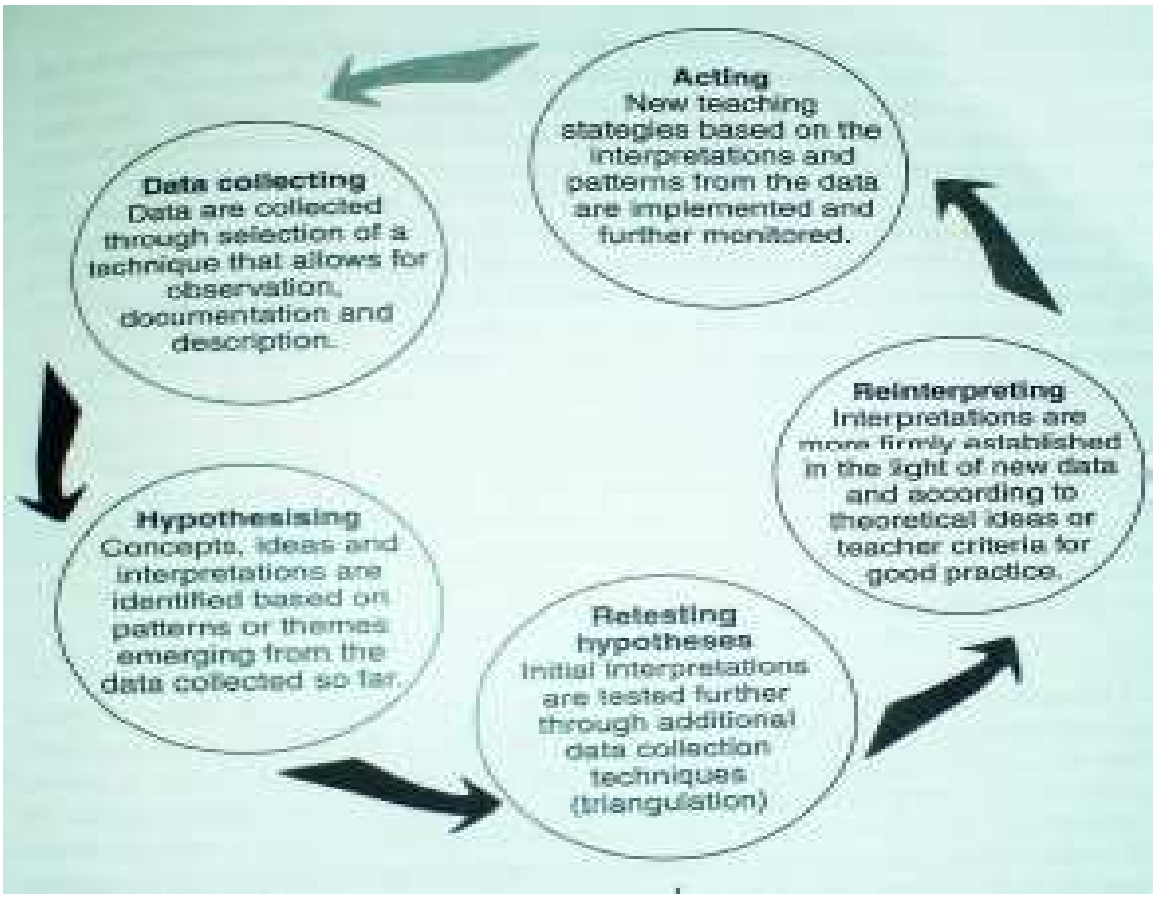

Figure 10: Data Collection and Analysis Cycle (Burns, 1999:155)

In Kemmis & McTaggart's (1988) model of The Action Research Cycle the four elements are not separate stages, but progressive ones.

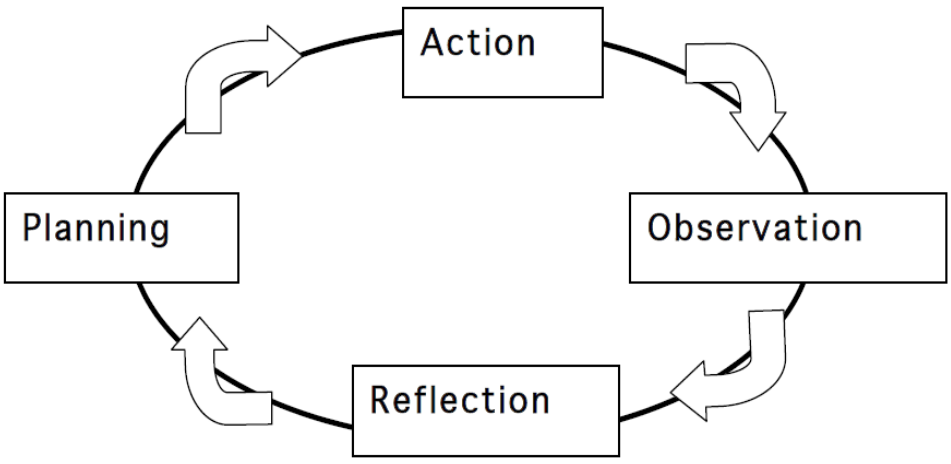

Figure 11: The Action Research Cycle (Kemmis & McTaggart 1988)

The context of action defines the work environment in which we behave, react and respond to external stimuli. Individuals reflect on some issues through drawing on personal experience, reading, conversations with colleagues and also their own ability to analyze the situation. Finally, there is the planning stage, informed by all the stakeholders or only some of them. A plan is decided on and transformed into action, where observation, checking and reflection are encouraged to assess the present situation in terms of improvement and propose future suggestion. As a consequence, (AR) aims at responding to actual (EP) on the other hand, aims at understanding what happens and why it happens the way it does. EP is intended to be integrated to the everyday practices of teachers.

Our theoretical research position is somehow in the middle, standing between the preliminary stages of ICT integration in ESP exploratory research and action research through the design of practical psycho-pedagogical framework as a later stage of or research work. The researcher is immersed in the progress of the different phases of the research and attempts to act through following the guidelines and making in practice the data obtained through the Exploratory Research stage.

3.6. Research Design and Data Collection Methodology

In this section, the researcher is asked to clarify what was done to answer the research questions, describe how it was done, justify her approach, and explain how the results were analyzed. In other words, as remarked by (Punch: 2005, 63): it constitutes the decisions a researcher makes, connects research questions to data, and provides answers to four questions, namely:

- Following which strategy?
- Within which framework?
- From whom?
- How?”

In terms of research design, two methods, namely qualitative and quantitative could be employed. The researcher used a single site case study partly because data is difficult to collect due to the interplay of situational and individual related variables. The aim is to lay the groundwork for future studies and provide a wealth of details; as

opposed to larger samples which can only be studied superficially. In fact, depending on the nature of the study, the researcher may use either, or a blending of both. For the purposes of this study, a combination of both methods was applied. This is what is referred to as mixed-methods research design.

Problems most suitable for mixed methods are those in which the quantitative approach or the qualitative approach, by itself, is inadequate to develop multiple perspectives and a complete understanding about a research problem or question. The complexity of today's research problems requires more comprehensive and nuanced efforts as remarked by (Wheeldon, 2010b). Researchers may seek to view problems from multiple perspectives to enhance and enrich the meaning of a singular perspective. Miles and Huberman (2002) urge all researchers to entertain mixed models by avoiding polarization, polemics, and life at the extremes, they suggested that both quantitative and qualitative inquiry can support and inform each other in important ways.

O'Cathain, Murphy, and Nicholl (2008) offer guidance for what they refer to as Good Reporting of a Mixed Methods Study (GRAMMS), the researcher is then asked to:

- Describe the justification for using a mixed methods approach to the research question;
- Describe the design in terms of the purpose, priority, and sequence of methods;
- Describe each method in terms of sampling, data collection and analysis;
- Describe where integration has occurred, how it has occurred, and who has participated in it;
- Describe any limitation of one method associated with the presence of the other method; and
- Describe any insights gained from mixing or integrating methods.

(O'Cathain, Murphy, and Nicholl, 2008)

3.6.1 Quantitative Data Collection Methods

Tools used to collect information vary depending upon the type of data we need to gather. They rely on and structured data collection instruments and random sampling that fit into precise response categories. The results are easy to summarize, compare, and generalize. The questionnaires fit into this category and may be selected because they are objective in nature guarantying standardized data collection and they were more likely to guarantee anonymity. However, in addition to low response rates, another problem associated with questionnaires is the frequency that respondents select socially desirable rather than truthful responses.

3.6.2. Qualitative Data Collection Methods

Qualitative data help researchers understand processes and complex issues. They provide detailed analyses about setting providing useful information to understand the processes behind observed results. It stands then as a an important analytical approach to clarify complex issues. One of the strengths of qualitative research is the recognition that data must always be understood in relation to the context of their production. Hitchcock and Hughes (1995: 295) explain qualitative methods as: "*the ways in which the researcher moves from a description of what is the case to an explanation of why what is the case is the case."*

As far as the sampling is concerned, qualitative research necessitates having a small sample because of the detailed and intensive work required for the study. In this respect, Marshall and Rossman (1990, 111) explains that these methods are "time consuming, creative, and fascinating processes".

3.7. Data Collection Procedures and Instruments

The procedures that we attempt to follow are intended to uncover what seem to us the underlying factors for an effective in-practice strategy to bridge the English communicative competence gap in the workplace and then better meet the

increasing communicative demands of the workplace in terms of language use, fluency and competence. This may be achieved through designing a workable psycho-pedagogical framework for an ICT-ESP based approach to teaching and learning English at EPSECG.

The term Data means relevant information. It is easy to collect information about what goes on in a classroom or a school, but what information is relevant will depend on what you are trying to change. In fact, ICT successful integration in a teaching/learning context requires the implementation of strategic organization that is not possible unless supported by a suitable change process at psychological and a pedagogical levels. According to Gulbahar & Guven (2008):

"Providing schools with hardware, software and in-service training is not enough. Any in service training needs follow-up support, peer coaching and peer dialogue to ensure successful utilization of new technologies. There must be active involvement of the teachers concerned in the whole change process so that there is the element of "ownership" of the innovation"

(Gulbahar& Guven, 2008)

The data should be analyzed within a more global examination of the educational context at hand. The obtained results, put together, inform us the plan strategically and guide us in our attempt to design a psycho-pedagogical framework for ICT integration in an ELT context, i.e.; in an ESP course at EPSECG of Oran.

As remarked by Jack Richards (2001:59) **"***Since any one source of information is likely to be incomplete or partial, a triangular approach is advisable"* our research procedures are based on, questionnaires to learners, teachers and economic actors, supplemented by a SWOT Audit of EPSECG and a learners' focus-group interview.

To achieve this objective, it seems to us interesting to proceed in three phases:

1. To audit the EPSECG educational context
2. To survey the needs of learners at EPSECG in terms of ICT potentials for education by exploring their internet-based practices

3. To unfold the attitudes and perceptions of English language teachers at EPSECG of using innovative practices for language teaching

The three-phase research work seems to us a prerequisite to:

1. Cross-reference the data obtained from the learners and the teachers and analyze their respective needs and expectations;
2. The design a psycho-pedagogical framework for ICT-ESP based approach to teaching at EPSECG;
3. The plan of an effective strategy to alleviate the barriers that constrain its sustainable integration, and consequently impede the communicative objective which we endeavor to reach.

3.7.1 The SWOT (Audit) of the Context

In an ever-changing work environment, you need to adapt and learn new skills – raising your effectiveness and employability. Communication has become an essential skill in any professional environment. On the other hand, learning could not stand aside from any innovation. Pedagogically speaking, it imposes on us, teachers, a reconfiguration of our approaches and methodologies and a reconsideration of the psychological variables which may influence its successful implementation.

In our research we audit EPSECG throughout 4 levels using the SWOT analysis. The acronym stands for: Strengths and Weaknesses (internal to the studied environment and are predictable); Opportunities and Threats (external to the studied environment and are less predictable). The four levels of analysis are as follow. The table below summarizes it.

1. Pedagogical evaluation;
2. Psychological evaluation;
3. Organizational evaluation and;
4. Technological evaluation

Pedagogical evaluation		Psychological evaluation	
S	**W**	**S**	**W**
O	**T**	**O**	**T**
Organizational evaluation		**Technological evaluation**	
S	**W**	**S**	**W**
O	**T**	**O**	**T**

Table 9: SWOT Analysis/Audit of Pedagogical, Psychological, Technological and Organizational Levels at EPSECG

A SWOT analysis is a scan of the internal and external environment of an environment or an aspect of it that is aimed to be changed or improved. It is a useful tool for reducing a large amount of data into a more manageable profile of the institution or any of its internal projects, and provides a framework for identifying the issues that impact the integration of an innovative practice. It should review the internal data you, describe the current state of the art of many aspects in terms of solutions, weaknesses, opportunities and threats. By this way it stands as a snapshot of what any practice looks like in terms of previously described aspects of analysis. The figure below illustrates the SWOT Matrix:

Figure 12: SWOT Analysis Matrix: Strength, Weaknesses, Opportunities, Threats

The Internal Assessment Table below shows a list of strengths and weaknesses. Strengths are elements internal to your school that facilitate reaching your goals. Weaknesses are elements internal to your school that are barriers to reaching your goals. On the other hand, *The External Assessment Table* below shows a list of opportunities and threats. Opportunities are aspects of the external environment that facilitate reaching your goals, they are not just positive aspects of the environment but can also be the chance to address the gaps and initiate new activities. Threats are aspects of the external environment that are barriers or potential barriers to reaching the goals.

SWOT Analysis: Internal Assessment Table

Component	Strengths	Weaknesses
Pedagogical Evaluation		
Psychological Evalutaion		
Technological Evaluation		
Organizational Evalutaion		

Component	Opportunities	Threats
Pedagogical evaluation		

Psychological evaluation		
Technological evaluation		
Organizational evaluation		

SWOT Analysis: External Assessment Table

3.7.2. The Teachers' Questionnaire

To assist teachers grasp the whole potential of the technological tools which could be used in the language classroom, it is necessary to gauge their perceptions about both their ICT usages (uses and competences) as well as potential added value in its integration.

The "Information and Communication Technology Usage Survey" developed by the researchers, mainly based on discussions in the related literature (Iding, Crosby & Speitel (2002); Bielefeldt (2001); Haydn, Arthur &Hunt (2001); Mccormick & Scrimshaw, 2001) was used to collect data for this research study. The survey was composed of five parts. The first part of the survey consisted of 24 items regarding teachers' software use, as well as other instructional tools and materials. The purpose of this part was to find out the self-expertise level of the social studies teachers.

The second part consisted of 9 items about preferences for professional development on information gathering and support. The subsequent part consisted of 8 items about factors that encourage teachers' usage of technology. In the fourth part of the survey there were 18 items related to teachers' perceptions of self-efficacy. Finally, the last part was composed of 19 items regarding the barriers that teachers faced during technology utilization in the teaching-learning process.

3.7.3. The Learners' Questionnaire

Teachers are not always aware about their learners' learning styles (visual, haptic, auditory) and probably less aware about their use of the internet to learn a new learning object, entertain or practise a foreign language. We consider that understanding our learners learning styles is a prerequisite for any attempt to use ICT in educational settings.

This questionnaire aims to provide a broad view of actual practices related to learners own English language learning experiences in formal/casual context. It is hoped that the questionnaire helps identify the type of activities associated with different contexts of ICT as well as serve as a starting point to reflect on possible ICT-based pedagogical applications. In a whole, we attempt to answer this question: to what extent does learners' own technological practices influence their English language learning experiences using technology?

The questionnaire to the learners consists of 10 questions. 7of them were multiple choice questions and the remaining ones were open-ended. The aim from this questionnaire was to have an idea about the learners' preferences using information and communication technologies (ICT) tools when learning English. The questions did not intend to go into details since it was the first time that learners receive questionnaires.

We relied on the hypothesis that learners were in majority actual users of the internet and its communicative and social applications (chatting, emailing, social networking) but it was interesting to test whether they know or not the possible educational or pedagogical potentials that these applications offer when learning English. Besides we wanted to know their own perceptions about their level of English mainly the sub-skills that necessitated more practice, the level of the educational activities proposed during the lecture sessions and the allocated time devoted to the teaching of the foreign language, what to do to make the English sessions more useful and more attractive.

The five first questions enabled us to have a bird's eye view of the general communicative concerns of the learners and their visions about the planning of the sessions and the presented activities as well as their own perceptions of the possible remedies to best meet their expectations in terms of English language learning (methodology, use of ICT, allocated time per session, focus on orality, etc)

The two last questions concerned ICT in general and their potential uses in language learning, the first questions dealt with their point of view about the latest technology that is seen as the most interesting to them and the following question deepened the query by asking them to say whether they owned one of the. The last question asked whether they possessed/ made use of any of the afore-mentioned technologies in their language learning.

3.7.4. The Economic Actors' Questionnaire

As far as the economic actors' communicative needs questionnaire, it was composed of three distinct sections encompassing 12 questions: the first one consisted of five items and concerned demographic information about the company, the second section concerned the linguistic and communicative needs of the company, and consisted of 4 questions, 2 multiple choice questions and two open–ended questions. The third section concerned the point of views and consisted of 3 questions, one of them is multiple-choice questions, one is a guided question and the last one is an open-ended one.

The questionnaire were sent electronically via the CCI and the ACET mailing data bases which count 120 and 30 member companies respectively. The first sending was done in early September, and a second sending was done in the mid of November. As a last attempt to obtain answers, hard copies of the questionnaires were distributed as handouts during the ACET weekly meetings by the ACET as a supportive initiative to the research work. From the whole attempts only one questionnaire was completed and submitted during a period of three months.

To understand this situation two interviews were organized with the ACET's and the CCI respectively. We asked them to explain the non-contribution of the ACET and the CCI's members to fill the questionnaire despite the researcher's

numerous attempts. Unpredictably, they did not find the state of affairs uncommon and confirmed the difficulty to access data through questionnaires from the economic actors in general. Moreover, they stress on the fact that it is independent of the questionnaire-related subject and cited examples where important economic studies were carried-out with the same difficulties; the cause which obliges researchers to rely on either qualitative interpretations of data , to supplement their research with interviews or to rely on existing ,rarely up-dated data.

We asked them to answer the following questions

- What are the most important economic sectors in the region of Tlemcen which constitute both the CCI and the ACET members respectively?
- Are the afore-mentioned companies importing or exporting ones?
- Is there a need of the English language presently for them?
- Is there a perspective of the evolving communicative needs of these companies in the near future?
- Can these companies be competitive without English in the future?
- What kind of English knowledge do these companies use at present in their respective businesses?
- What do you think about the future demands of the English language in the region underlying the perspective associated with the economic growth of the region?

3.7.5. The Learners' Focus Group Interview

By conducting interviews, researchers obtain a clearer understanding of an individual's background experience. It helps the researcher better understand the context for an individual's behavior (Seidman, 1998).

The learners' focused group interview is small group discussion that concentrates on specific topics. It was realized as the latest stage of our preliminary phase of investigation in order to shed some light on some aspects that were noticed during the observation sessions and the questionnaires. The questions that we have asked to students are as follow:

- What do you think about your level in English till now?

- Do you practice English between friends? If no, why is the case?
- What are the constraints that you are facing that prevent you from communicating orally?
- Do you use English when doing group projects?
- Do you make academic presentations in English, aside from during English courses?
- According to you, why is English important nowadays?
- Do you think that you will need English for your future life?
- Do you use English when you use internet? How?
- Do you encounter any difficulties when working on the internet without your mastery of English?
- Do you intend to develop your English language in order to take benefits of your internet use?
- Do you think that internet helps you develop your English learning, how?
- What are the internet applications that you use in which you use English?
- What could teachers do to assist you meet your English communicative needs?

3.7.6. The Setting

3.7.6.1. EPSECG Defined

The study is carried out at EPSECG with teachers and learners of English. The national plan to implement five preparatory schools of economics, commerce and management throughout the country with the necessary infrastructure, and human resources aims at improving a qualitative training and tutoring to the future business and economic leaders of the country by providing a staff of excellence composed of professionals, experts and specialists in the domain of management techniques, foreign languages, accounting, and exact sciences.

3.8.6.2. ESP at EPSECG

English through its international standing has become the most obvious mark of globalization. Foreign language learning and teaching faculties within the university–based national framework strive in vain to provide an adequate training matching the constraints of both academic curriculum and actual business world requirements to the future English language communicating professionals.

English is compulsory during the two years of the former training. ESP instruction in the context of EPSECG stands as a bridge between English for Occupational Purposes EOP, and English for International Communication.

Evaluation is done on a trimester basis with two tests that count 20% of the average mark and an exam mark that counts for 60% of the average mark. English teaching sessions last two hours and take place twice a week. Teaching content is delivered in accordance to the ministry's commission of curriculums who chooses the themes to be covered during the first and the second academic year. The curriculum is oriented along economic general themes and introductory registers together with grammar and language structure basics. Nonetheless; little is done towards communicative competencies building. During the first year, the area of English language teaching which holds the lion's share is reading comprehension with a focus on themes-related vocabulary through texts studies. Written practice comes on second position and is aimed at consolidating the acquired grammatical rules or/and summarizing the studied texts.

During the second year of instruction, reading comprehension still maintains the teacher's attention but more oral practice is initiated with students along with more business-oriented writing techniques. The teachers' argument is that EPSECG learners are better linguistically equipped to initiate discussions, respond autonomously to questions or comment on point of views. As far as reading comprehension is concerned, teachers perceive it as a "must" to expose learners to a maximum of economic themes and vocabulary so as to enable them to have a large array of equivalent information, previously studied in economics in the English language.

It is hypothesized that ESP curriculums as they have been designed until now could not respond to the evolving communicative needs of the workplace because they are designed independently from the actual economic concerns of the country

relying on no more than purely individual visions about what would be considered as the workplace's linguistic demands.

Some important questions which should be considered at this stage are as follows:

- What are the target needs in the economic workplace?
- What is the proficiency communicative level required by the institution of by the business world? And finally,
- What should be the pedagogical priorities of teaching English at EPSECG?

One way to answer these queries is to consider enabling change in ESP teaching/learning through ICT integration. This requires the implementation of strategic organization that is not possible unless supported by a suitable change process on both a psychological and a pedagogical level.

Technology can bring a lot to education: learning English in general or in specific purposes contexts cannot be set aside. Specific literature stresses the added value that ICT offers to the teaching and learning of English compared to traditional ways of teaching, and encourages its integration and implementation in educational institutions to line up with 21st century challenges in terms of skills and communicative enhancement. Responding to the learners needs is therefore helping them to get a step forward to the main aim that preparatory schools expect to reach which is to prepare learners to be competitive in a fast-growing globalized world, and train them to be the future national economic leaders in their respective economic sub-sectors

3.8. The Sample Population

3.8.1. The Teachers' Profile:

English language teachers' profile's is somehow characterizing of the ESP situation in Algeria. Many of them are not necessarily teachers of English through their former instruction, i.e. Translators and interpreters. Some of them never received any theoretical former training of what might be an ESP approach to teaching, not even any teaching principles. Furthermore, they are teaching English

to learners whose main subject matter is not English; but counts as an important subject study to succeed in order to pass to the second year of instruction.

English language researchers for professional and specific purposes acting within foreign language university-based departments lack the actual side of English in the workplace and are short of providing the adequate resources and tools that would help their students to be confident in their future enterprise. At present, instructors introduce the ESP program for the English language courses simply by selecting materials from available commercial texts for teaching English economic purposes along with material designed for teaching English for general use or collecting different materials in a handout through web resources.

This characteristic imposes a reconsideration of in practice training and tutoring to help them succeed in their educational mission through the provision of tailored solutions that would fit the novice ones and help the more experienced to enrich their practice through interaction and comments on similar experienced situations.

The sample population of teachers of English at EPSECG is limited (6 teachers), so the use of questionnaires to sound their perceptions regarding ICT use in their teaching practice would not have been solely an adequate research method. On the other hand the use of interviews could not have been sufficient if stood-alone as the main research instrument. Rarely research participants echo their views about a particular situation, freely, without being somehow inhibited to *lose face* due to the intrusive nature of the research instrument. Last but not least, observation alone would not have been a reliable research instrument due to the possible instances of the researcher's subjective interpretations.

For an ESP teacher who is time limited and most of the time syllabus – bounded, being asked to prepare and train learners to such a complex set of communicative competences is probably out of reach, due to the lack of available pedagogical, psychological and organizational resources that would facilitate meeting these objectives.

Responding to the learners needs is therefore helping them to get a step forward to the main aim that preparatory schools expect to reach which is to prepare

learners to be competitive in a fast-growing globalized world, and train them to be the future national economic leaders in their respective economic sub-sectors.

According to Hutchinson and Waters (1987), they may be of two types: target need and learning needs. The design of a tailored ESP course that meets both the curriculum requirements and the workplace communicative priorities requires the provision of subject specialists, domain experts as well as language authoritative figures who work hand in hand to cross-check the data and finally to side them with the perception of what is seen as a 21st communicative skill.

3.8.2. The Learners' Profile

It is a homogeneous group in terms of age with a higher percentage of females, general characteristics of Algerian university students.

Preparatory schools welcome students from the whole country, the leading towns of origin differ from one graduation promotion to another with a higher percentage of students coming from north Algerian regions, in our case, the Great Kabylie Region.

This aspect may to some extent influence the type of answers the researcher can have through the questionnaires due to the context specificities in terms of technological access.

However, this aspect does not influence totally their actual perceptions regarding ICT and falls most of the time within more homogeneous tends in terms of preferences, and actual uses. Recently, technological access disparities throughout the national territory are being progressively erased with the introduction of the 3G.

As far as learning is concerned, classes are homogenious in terms of level of entry with no attention paid to Bac exam mark of English. No entry exam is proposed. Students follow the same courses. Extra sessions area offered when necessary.

3.9. Validity & Reliability Issues Regarding the Research Procedures

Due to the exploratory nature of the research work and the research methodology, data obtained is in general of a qualitative value. The reason behind is that the scope of the study is mainly socio-cultural, spanning both technological and psycho-psychological dimensions. As a consequence, close attention is given to the description of the context's variables (the setting, the teachers' profile, the learners' profile, the staff, etc.) The aim of studies of such nature is to deepen understanding of the stated situation and the complex interplay of the underlying factors underlying it.

One of the main drawbacks of favoring qualitative data over the quantitative data analysis is the researcher's own vision when interpreting data, resulting in a kind of subjectivity. This could not be avoided, nor that of the participants when being d or surveyed through questionnaires. However, it could be naïve to believe that a purely quantitative analysis of data through figures, tables of statistics engenders a more objective analysis , and least that it gives a more accurate picture of the of the situation under scope.

The validity of research findings refers to the extent to which the findings are an accurate representation of the phenomena they are intended to represent. The reliability of a study refers to the reproducibility of the findings. It refers to the degree to which the results can be applied to the general population of interest. We distinguish two types of validity:

- Internal validity is determined by the degree to which conclusions drawn from an experiment correctly describe what actually transpired during the study.
- External validity refers to whether (and to what degree) the results of a study can be generalized to a larger population.

3.10. Limitations & Further Suggestions

Self-report measures, such as these, have several advantages, among the most important being their ability to assess psychological constructs such as attitudes in a relatively economical way (Manstead and Semin, 2001). They also have

disadvantages. It is not always possible to collect self-report data completely unobtrusively: participants are always aware that they are under investigation and may modify their responses as a result. In particular, there is ample opportunity for the respondent's answers to be influenced by motivational factors such as social desirability.

3.12. Conclusion

ICT integration in teaching practices is most of the time oversimplified and little attention is paid to the underlying factors of its success and failure. The concern addressed in this research work is to remedy this important aspect.

Given that no prior research study was undertaken in this sense, the researcher, through the choice of the research instruments proposes a deep analysis that could prove beneficial for the design of the psycho-pedagogical framework.

The questionnaires shed some light on perceptions and attitudes regarding the use of ICT in the educational context. Learners' actual uses of ICT offer a clearer vision of the possibilities of what could represent a successful integration in learning. On the other hand, teachers' actual uses of ICT decipher the barriers which could be encountered and at the same time offer perspectives of a principled integration of ICT in the teaching practice. The focus group interview complements to some extent our understanding by offering a more comprehensive picture of the complex interplay of variables. As far as the economic actors' questionnaire, it was not possible to answer some prevailing questions; nonetheless it gave a more objective analysis of the real problems and stresses the difficulties that exist to bridge the gap between the academic sphere and the economic one.

Chapter Four

Analysis, Interpretation and Discussion of Data

4.1. Introduction

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4.2.3.6. Learners' Perception about time Allocated to the English Language Sessions

4.2.3.7. Learners' Perceptions about the way to make more interesting the English Sessions

4.2.3.8. Learners' Future Intentions about Economic Job sectors

4.1. Introduction

We will concentrate on the analysis and interpretation of the qualitative and quantitative data obtained from the previous phase of the research and includes a detailed analysis o of the environment using SWOT Analysis, as well as a deep analysis of the different questionnaires of learners and teachers perceptions and attitudes when using ICT for language learning/teaching purposes and for entertainment. The aim is to see whether there are some correlations, to find out the enablers and the motivations underlying it, as well as to attempt understanding the causes behind the resistance ICT adoption in the language learning/ teaching environment.

The ultimate goal that we attempt to attain is to enhance the teaching and learning of ELT (more precisely ESP) through ICT. The obtained results are made up of qualitative and quantitative data obtained from questionnaires to teachers and learners along with a SWOT analysis interpretation of the environment of ICT integration at EPSECG.

As mentioned in the general introduction the objective of this research study is the threefold:

1. To show that a successful integration of ICT in the teaching of English as a foreign language more specifically in an ESP context is not evident in isolation.
2. To explain that the technological level of integration in our English language learning context is neither sufficient to guarantee neither effective communication use nor does it assures efficient foreign language teaching to take place.
3. To assert the importance of reconsidering the psychological and pedagogical factors as being determinant in the teaching and learning of English for Specific Purposes through ICT.

The general hypothesis that we put forward was that developing a psycho-pedagogical framework for ICT integration was necessary to maximise the chances of *a reasoned and principled* integration of ICT in English teaching/ learning contexts.

The preliminary phases of the study help us to shed some light on the research questions previously asked and check the hypotheses already posited. The questions we will attempt to answer in this part are:

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT in general and ESP in particular?
2. How can we define a successful ICT integration in ELT?
3. What are the prevailing attributes of success related to ELT in general and ESP in particular?
4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?
5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG.

The specific hypotheses that we would like to check through this pre-study phase discussion of result section are as follows

1. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of a reasoned and principled integration of ICT in English teaching/learning contexts.

2. Both EPSECG's learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.
3. Understanding the possible resistance to change related to ICT uses in ELT in general, and ESP context of EPSECG in particular, helps identifying the necessary strategy to follow in order to overcome the pedagogical and psychological obstacles.

4. Uncovering the type of language learners' ICT uses is important to meet their learning needs and preferences and propose adequate ESP activities.

5. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data (the environment, the learners and the teachers) and propose a practical framework that accounts for the evolving nature of teachers' and learners' pedagogical and psychological specificities.

4.2. Analysis and Interpretation of Data

4.2.1. Analysis and Interpretation of SWOT Analysis

Component	Strengths	Weaknesses
Pedagogical Evaluation		Young teachers Unclear course design using ICT Unclear pedagogy how to teach English with ICT Unclear understanding about which technologies (aspects of) and related language aspects No idea about blended learning, e-learning, Lack of awareness from students' about pedagogical values of internet applications, social media, chats etc so lack of sustainable interest

Psychological Evalutaion	Young teachers Small number of teachers	Teachers' reluctance towards ICT integration Lack of confidence when integrating ICT Negative perceptions about its usefulness in the short and long term
Technological Evaluation	Availability of ICT equipments (Lg lab, data projectors, computers for each student)Availability of ICT training and assistance	Unavailable prompt technical support.
Organizational Evaluation	Small number of teachers	Lack of time

Component	Opportunities	Threats
Pedagogical evaluation	Motivation of students with good school access level FL courses which are enriched digitally	Lack of collaboration Students who get accustomed to hyper structured courses: spoon feeding in education and forgets to learn by himself designed until now not able to respond to the evolving communicative needs of the workplace individual visions about the workplace's communicative competencies
Psychological evaluation	Supportive pedagogical environment Positive perceptions about teachers as transmitters of knowledge	Fear of losing time during lectures because of lack of available technicians Students who do not find the ICT augmented courses appealing (the same course design as compulsory courses)
Technological evaluation	*Internet broadland* *Multiplication of internet access* *Digitalization of the school library* FL courses which are enriched digitally *Access to open access online*	students who do not perceive the limits of ict.

	libraries from the school	
Organizational evaluation		administration staff eager to have tangible results of progress and success in FL, Absence of global educational project integrating ICT, anecdotal experiences Replication of success stories in other educational contexts that do not meet the local context

Table 10: Internal and External Assessment of SWOT

Hereafter a summary table of the SWOT Analysis:

STRENGTHS	WEAKNESSES
• Young teachers • Small number of teachers • Availability of ICT equipments (language lab, data projectors, computers for each student)Availability of ICT training and assistance • Small number of teachers	• Unclear course design using ICT • Unclear pedagogy how to teach English with ICT • Unclear understanding about which technologies to use for which purposes • No prior knowledge about blended learning, e-learning, • Lack of awareness from students about pedagogical values of internet applications, social media, chats, etc • Teachers' reluctance towards ICT integration • Lack of confidence when integrating ICT • Negative perceptions about its usefulness in the short and long

	term • Unavailable prompt technical support. • Lack of time
OPPORTUNITIES	**THREATS**
• Motivation of students with good school entrylevel • FL courses which are enriched digitally • Supportive pedagogical environment • Positive perceptions about teachers as transmitters of knowledge • Internet broadland • Multiplication of internet access • Digitalization of the school library • FL courses which being enriched digitally • Access to online libraries from the school	• Lack of collaboration • Students who get accustomed to hyper structured courses now not able to respond to the evolving communicative needs of the workplace • individual visions about the workplace's communicative competencies • Teachers' fear of losing time during lectures because of lack of available technicians • Students who do not find the ICT – based courses appealing (the same course design as in class courses) • students who do not perceive the limits and potentials of ICT • administration staff eager to have instant results of progress and success in FL, • Absence of global educational project integrating ICT • success stories in other educational contexts that do not meet the local context

Table 11: Summary Table of the SWOT Analysis

4.2.1.1. SWOT Analysis and Strategic Plan Implementation

A major part of SWOT analysis is how you implement your strategy based on the data you have received. Listing down all the strengths and weakness, identifying all the opportunities and threats are of no use if you cannot implement a strategy. In other words, you need to react to the set of information given. You have to utilize the strengths of the educational institution and take full advantage of the opportunities

that open up. With a special attention to come up with ways to either improve on your weaknesses or eliminate them altogether. The true value of SWOT Analysis is to bring all these information together. The analysis helps to assess the most promising situations and the most vital issues.

Strengths describe the positive factors of the educational institution, they are completely under control, and may be utilized for the benefit of the institution. As an example, if your workers are highly skilled and have been given adequate training then they are also considered as your strength. Weaknesses are internal factors that are within your control that hinder the educational progress .Weaknesses may include the lack of technologies, lack of resources, unskilled teachers to cite a few.

External factors are such that are beyond your control. However, opportunities are the positive external factors. Opportunities reflect the potential of the institution. These open up possibilities for the institution to develop. you can take this opportunity and classify it as strength as well. Threats are basically the factors which may put your institutional development strategy in jeopardy.

The activity performed according to a plan in order to achieve an overall goal is what is referred to as a plan's strategic implementation. The plans are made over a period of time: the projects are assessed against strategic targets defining priorities. They are regularly evaluated and refined. The gap analysis is the difference between two different sets of results. The aim of the strategic planning is to close the gap between the actual situation and the intended one. A simple version of is depicted in this figure. Among the requirements for effective gap analysis we may cite:

- An agreed time span for the strategic planning exercise is important Where do we intend to be in 3 years, where 3 years time span is the planning horizon)
- A clear definition of the target setting is important.
- A clear review of the necessary resources that are required to achieve a set of goals.

The figure below illustrates the Gap Analysis:

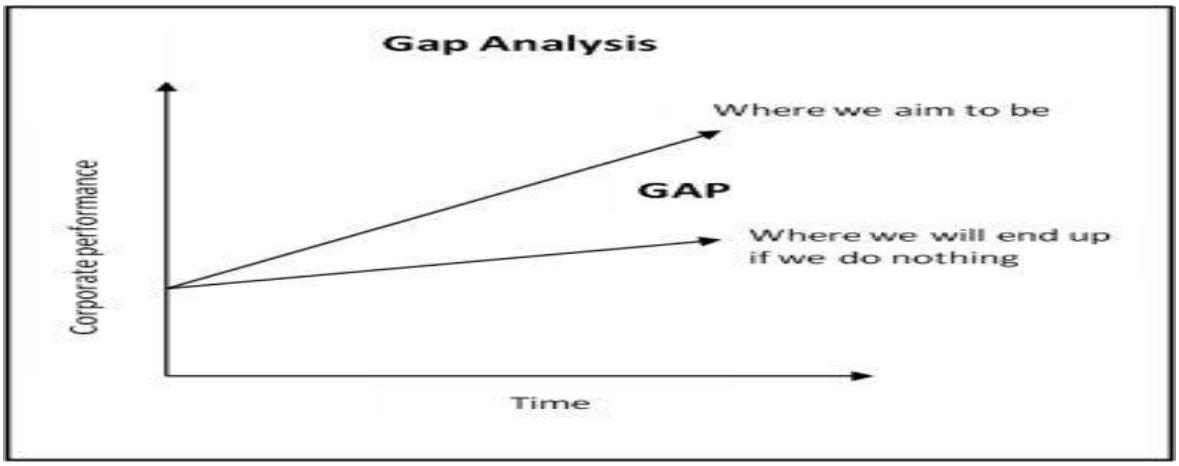


Figure 13: the Gap Analysis

4.2.1.2. The Plan of Actions Using the SWOT Analysis

ICT integration should be organized through principled stages through which we identify the Strategic Gap from the data collected in the audit and the analysis that has been carried out. It is an ongoing process; it is not a rigid process with a clearly defined set of steps which are continually refined to meet the evolving nature of the environment. Once done, the Strategic Gap has to be coupled with the Strategic Target; a successful plan includes: a defined set of outcomes and a proposed pathway to try to get there; plans are developed by consensus and collaboration and successful planners make informed decisions based on examining best practice elsewhere.

The figure below represents an overview of the strategic planning.

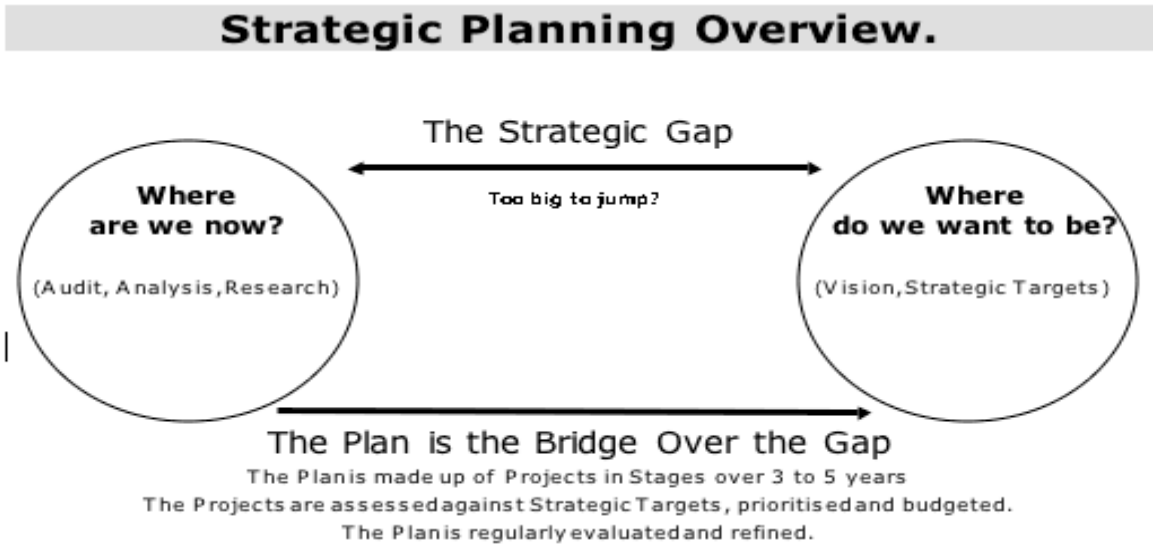


Figure 14: Strategic Planning Overview (SIIA, 2009)

The plans are made over a period of time: the projects are assessed against strategic targets defining priorities. They are regularly evaluated and refined.

4.2.1.3. EPSECG Strategic Plan

EPSECG of Oran is a young higher educational institution in Algeria - only 5 years old. Its relatively brief history is marked by two defining moments – its institutional founding, which was grounded in a commitment to innovation in education and engagement with public affairs, and its transition in the prospects of 2016 .to being one of five outstanding *Grandes Ecoles* in economy in the nation and strives constantly to sustain and enhance its quality in teaching, for the purpose of economic development.

The mission and vision of EPSECG should be in accord with its founding values, which are to provide an intellectually rich, collaborative learning environment for students, faculty, and staff, while serving local, regional, state, national, and dedicated to academic excellence, with the goal of preparing all students to be critical thinkers, lifelong learners, and engaged citizens. Higher educational institutions,

including EPSECG are operating in an increasingly competitive environment. Thus, in order to make continuing strategic progress overall specific period of time, energy must be reserved for efforts and initiatives that best serve priorities. EPSECG must be: (1) relevant to our regional community and (2) inclusive and engaged with students, teachers, and community.

4.2.1.4. Action Steps and Target Outcomes

4.2.1.4.1. Pedagogy

Action Steps:

- To propose communicative tasks so as to bridge the communicative competence in the workplace.
- To propose a layered curriculum of ICT using ICT to enable learners and teachers alike to go smoothly through the SAMR ladder of ICT integration.
- To match the evolving professional communicative needs

Target Outcomes:

- A fitting pedagogy which meets today's work environment challenges.
- A layered ESP curriculum along the SAMR spectrum of ICT integration
- Building communicative skills and strategies in accordance with future work environment.

4.2.1.4.2. Psychology

Action Steps:

- Building confidence between colleagues and the staff for an effective cooperation and collaboration
- Encouraging teachers' initiatives to try out new teaching methodologies using ICT to meet the learners' needs of their learners.
- Raising teachers awareness about learners styles using ICT

Target Outcomes:

- A non-threatening work environment where professional development is facilitated
- A supportive work environment, where teachers' efforts to innovation are acknowledged and rewarded.
- A teaching methodology through which learners' styles using ICT is considered and adequately integrated in ICT-ESP course design.

4.2.1.4.3. Technology

Action Steps:

- Informed choice of ICT tools
- Awareness of ICT pedagogical potentials and limits
- Awareness of pedagogical and educational approaches underlying effective ICT use in education.

Target Outcomes:

- Meeting the learners' specific learning objectives through ICT integration in ESP courses
- Enhancing learning through an adequate choice of ICT tools
- Enhancing learning through an awareness of pedagogical approaches underlying ICT use in ESP.

4.2.1.4.4. Organisation

ActionSteps:

- Reduction of teaching time
- Providing ongoing technological training and sustained support

Target Outcomes*:*

- Sufficient time to prepare and design ICT- ESP based courses
- Building teaching skills in terms of ICT integration.

Core components of the Strategic Plan should be advanced prior to outlining priorities and action steps to be taken. For that strategic goals should be set, clear priorities should be decided upon.

The researcher conducted a careful analysis of the institutional strengths and weaknesses, as well as an assessment of significant environmental threats and opportunities. The process generates clear mission and vision statements and outlines action steps that would enable EPSECG to make significant progress in four strategic areas: pedagogical, psychological, technological and organizational ones respectively.

4.2.2. Analysis and Interpretation of Data: Teachers' Questionnaire

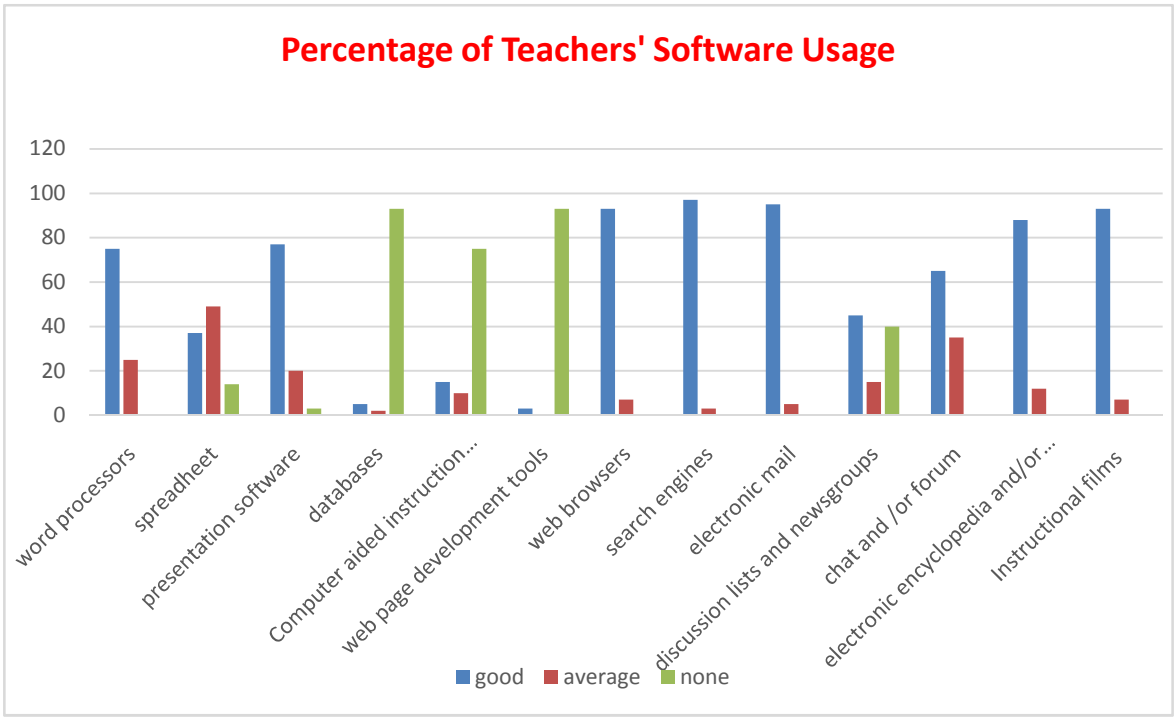
4.2.2.1. Teachers' Software Usage

Software Usage	**Good**	**Average**	**None**
Word Processors (Word etc)	75	25	00
Spreadheet (Excel)	37	49	14
Presentation software (Power Point)	77	20	03
Databases (Access)	05	02	93
Computer Aided Instruction Software	15	10	75
Web page Development Tools (Front Page, Dreamweaver)	03	00	93
Web Browsers (Nescape, Mozzila, Explorer, Google Chrome)	93	07	00

Search Engines (Google, Yahoo, Bing)	97	03	00
Electronic Mail (Email)	95	05	00
Discussion Lists and Newsgroups	45	15	40
Chat and/ or Forum	65	35	00
Electronic Encyclopedia and /or Atlas	88	12	00
Instructional Films (video, CD, VCD, etc)	93	07	00

Table 12: Percentage of Teachers' Software Usage

The graph below shows the percentage of teachers' software usage



Graph 1: Percentage of Teachers' Software Usage

The research analysis revealed that teachers' use of software is targeted towards three main ICT domains: electronic mail, instructional films and web browsers with percentages of 95%, 93%, and 93% respectively. These are considered basic software uses; teachers assert having a good use of these later. On the other hand, they confirm not having any competence using databases, web page development tools, and computer aided instruction software with 93%, 93%, 75% respectively.

Through this question, the analysis shed light about common uses of software uses without necessarily predicting precise correlations with future instructional applications. Nonetheless it deciphers clear cut distinctions in terms of teachers' comfort uses of these ICT tools since the percentage is high. This may foretell a possible transfer in the educational realm.

Since teachers that we have questioned are all teachers of English, percentages regarding databases, web page development tools use may seem justified because not used for teaching purposes in their subject matter. The last percentage regarding computer-aided instruction software seems however subject to debate. The school offers technology training sessions; however, this may be explained by the fact that the instruction they receive in technology integration is still too focused on learning how to use the software rather than integrating it into the teaching and learning process. Besides, the time between the learning time and the learning application is determinant in future software use, this is what is referred to as "the lag time". For that, teachers should receive instruction in technology when they need it and follow-up support to plan their technology-related activity just in the right time.

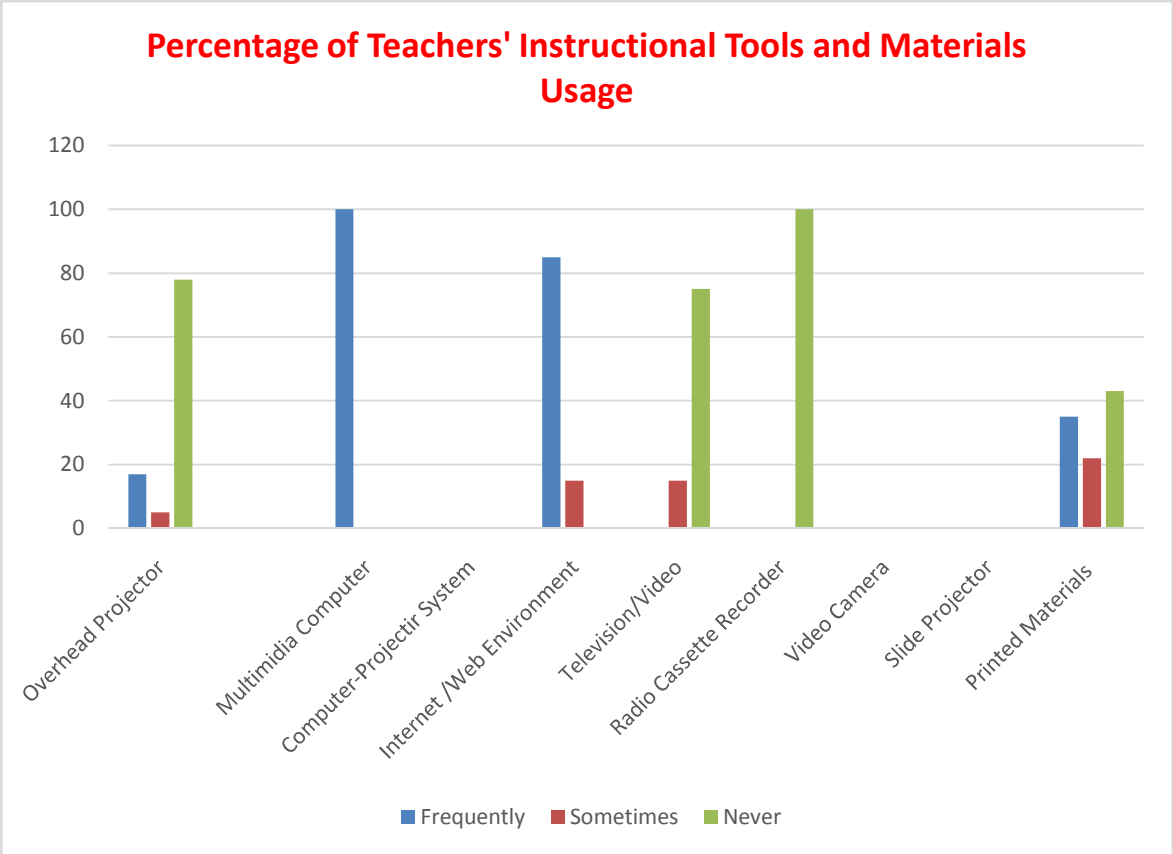
4.2.2.2. Instructional Tools and Materials

Usage of Instructional Tools and Materials	**Frequently**	**Sometimes**	**Never**
Overhead Projector	17	05	78

Opaque projector and/or Document Camera	00	00	00
Multimedia Computer	100	00	00
Computer- Projector System	00	00	00
Internet/Web Environment	85	15	00
Television/Video	00	15	75
Radio Cassette Recorder	00	00	100
Video Camera	00	00	00
Slide Projector	00	00	00
Printed Materials (journals, books, worksheets, etc)	35	22	43

Table 13: Percentage of Teachers' Instructional Tools and Materials Usage

The graph below shows the percentage of teachers' instructional tools and materials usage:



Graph 2: Percentage of Teachers' Instructional Tools and Materials Usage

As far as Instructional tools and materials are concerned all teachers assert never using a radio cassette recorder, and a great majority of them never using an overhead projector and/or a television video (78% & 75% respectively). Regarding the most frequently used tools and materials, all of them assert using multimedia computers and 85% of them using Internet/Web Environment.

According to (Capper, 2003) many teachers who have access to the technology will not use it, either because they don't know how, are satisfied with their current approach to teaching, or that they don't have sufficient time to devote to the types of lessons best supported by technology. Very few teachers have a comprehensive knowledge of the wide range of ICT resources now available in education. This means that their pupils are not given all the learning opportunities which ICT could provide.

Davis, Bagozzi and Warshaw (1989) developed a theory of 'action relating to reasons' (Technology Acceptance Model) based on the work of Fishbein and Ajzen (in Davis et al, 1989) to investigate the reasons why some people use computers and their attitudes towards them. Their model links the perceived usefulness and ease of use with attitude towards using ICT and actual use (system use).

From previous studies there are a number of factors which have been identified which relate to the perceived ease of use of ICT, which in our case is for experienced practicing ICT/IT users. Some of these are given in the table below.

Positive Factors	**Negative Factors**
Regular use and experience of ICT outside the classroom	Difficulties in using software/hardware
Ownership of a computer	Need more technical support
Confidence in using ICT	Not enough time to use ICT
Easy to control the class	Is too expensive to use regularly
Easy to think of new lesson ideas	Insufficient access to the resources
Can get help and advice from colleagues	Restricts the content of the lessons

Table 14: Positive and Negative Factors influencing Perceived Ease of Use

In the same vein, it is considered that teachers' former experience during their pre service and in service training influences a great deal the way they themselves use new teaching techniques and methodology.

Sandholtz & Reilly (2004) claim that teachers' technology skills are strong determinant of ICT integration, but they are not conditions for effective use of technology in the classroom.

Desforges (1995), in a literature review of the shift from novice to expert teachers, found that *"many teachers are perfectly well satisfied with their practices and are unlikely to question prevailing educational processes"* (Feiman-Nemser & Buchanan (1985) in Desforges (1995).

According to Williams and Burden (1997), teachers' beliefs about learning will affect everything they do in the classroom. So what teachers believe about how a language is learnt is stronger than a particular methodology to be adopted. In fact, Teachers with teacher-centered conceptions of education are less likely to use the tool or they will use it in ways that allow them to perpetuate their traditional practices. Niederhauser and Stoddart's (2001, 22) suggest "*that teachers use technology in ways that are consistent with their personal beliefs about curriculum and instructional practice"* . On the other hand, Becker (2000) claims that teachers with a strong constructivist thinking are eager to adopt ICT in educational settings. Teachers adopting constructivist educational beliefs seem to be more willing to adopt student-centered approaches and other innovative instructional approaches (Higgins & Moseley, 2001; Pajares, 1992).

In our analysis we may come to the conclusion that teachers are more inclined to use recent ICT tools without necessarily questioning the pedagogical approach behind. More importantly, they seem to abandon old materials. This may suggest that they align academic effectiveness with recent ICT tools only. As far as the most frequently used tools, multimedia PCs with internet connection seems to gain prevalence. This may be because they are more are at ease with this kind of tools since they use it at home far from professional concerns.

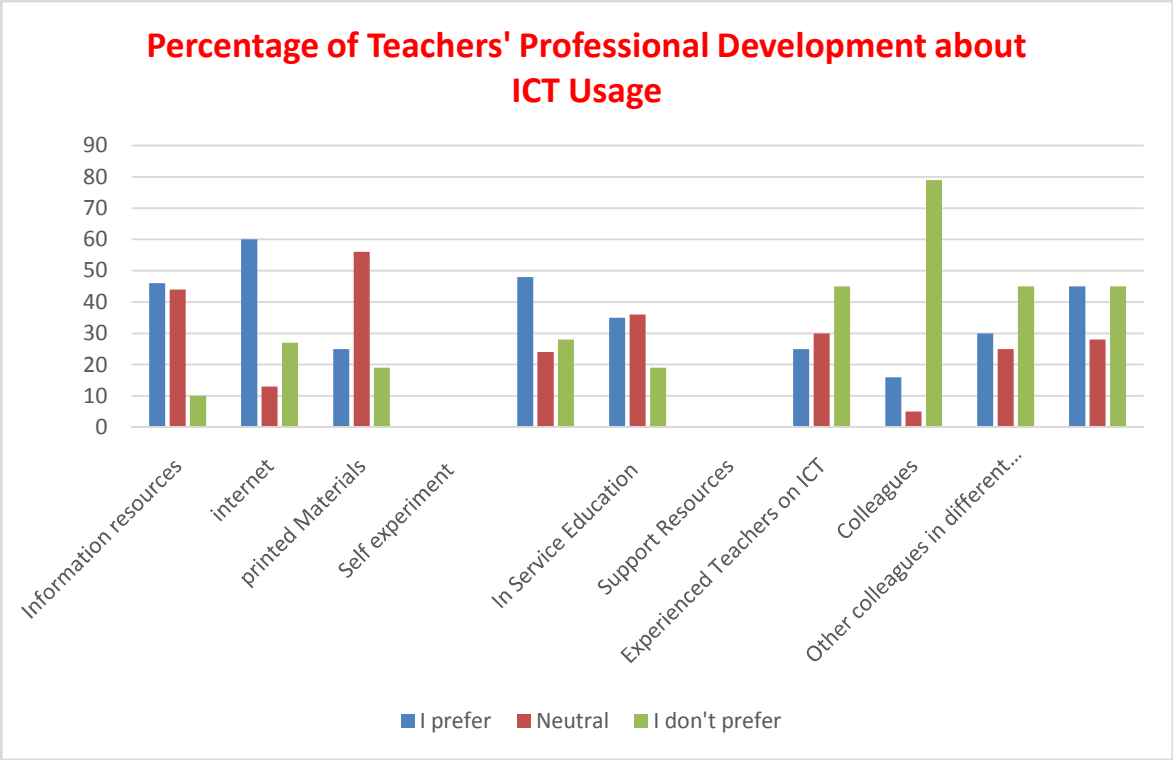
4.2.2.3. Professional Development about ICT

Professional Development About ICT	**I prefer**	**Neutral**	**I don't prefer**
Information Resources	46	44	10

Internet	60	13	27
Printed Materials (Manual or Journal, Etc)	25	56	19
Self Experiment	00	00	00
Participating Seminars or Taking Courses	48	24	28
In- Service Education	35	46	19
Support Resources	**I prefer**	**Neutral**	**I don't prefer**
Experienced Teachers on ICT	25	30	45
Colleagues	16	05	79
Other colleagues in different schools	30	25	45
Technical support units in the schools	45	28	27

Table 15: Percentage of Teachers' Professional Development about ICT Usage

The graph below shows the percentage of teachers' professional development about ICT usage:



Graph 3: Percentage of Teachers' Professional Development about ICT Usage

Our research analysis shows that teachers do not welcome other colleagues' expertise and knowledge to develop professionally. This may be explained by their fear to lose face or to be judged professionally according to their lack of competence in this knowledge area. On the other hand, they seem more enthusiastic towards growing professionally through the support o the internet (60%) and participating in seminars and workshops (48%).

Zander (1970) and Baskin (2001) who note that one of the factors due to which resistance to change is generated is when it arouses inner conflict that is connected to the process of consolidating the teachers' professional identity as professionals, and when there are both negative, as well as positive, elements and professional dissonance is generated in their attitudes (Beijaard et al. 2004).

There are many studies which have shown that teachers are "*not given to questioning their professional practice*" (Underwood, 1997). In the same vein, one common obstacle to integrating ICT in the teaching practice, is finding adequate time during the school day for teachers to participate in professional development. Other

common challenges include insufficient support for professional development from the administrative leadership, a lack of faculty interest or motivation, or overburdened teacher workloads.

However, Teachers need to open their mind to technological changes and accept that they must redefine their roles, so they can support their students to develop their full potential. Given that the 21st century promises to bring about new practices in technology- supported teaching and learning, one is then urged to reflect on his career evolution and the meaning he wants to give to his professional development. Kerr (1996) (cited in Capper, 2003) argues that integrating technology into classroom practice requires *"a radical shift in both teaching style and the teacher's vision of what classroom life is all abou*t."

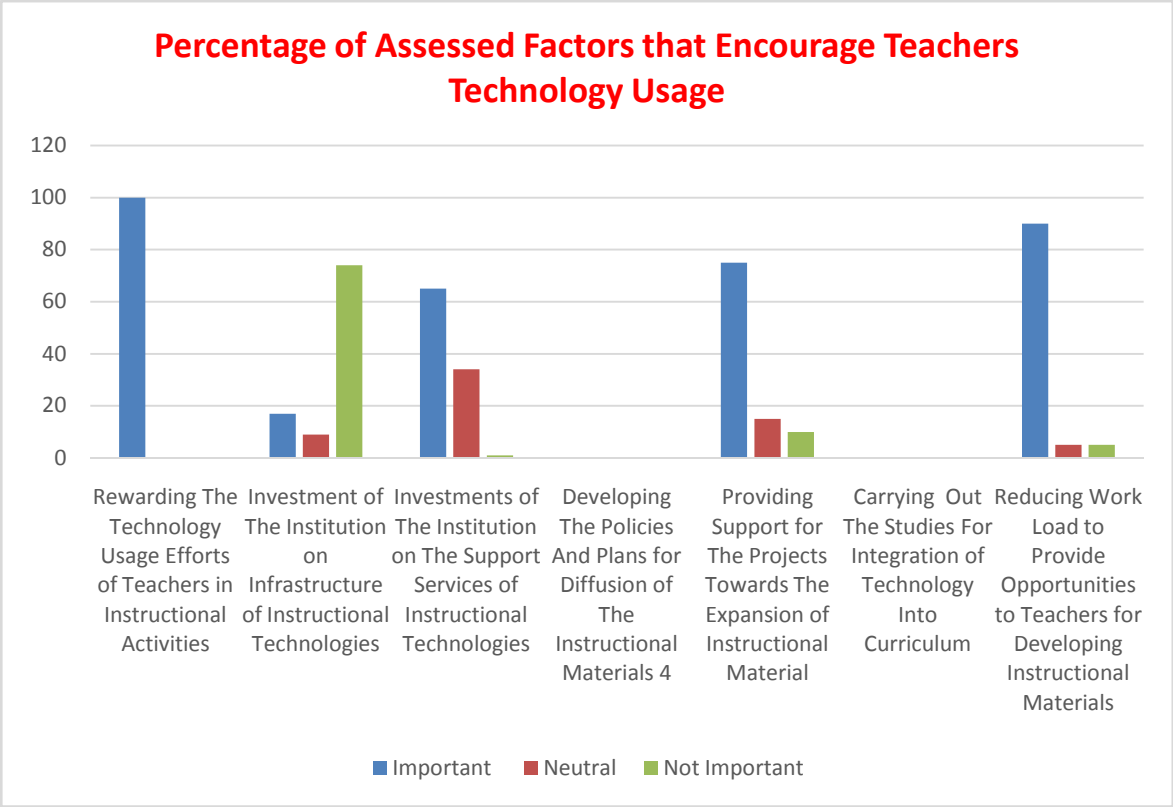
4.2.2.4. Factors that Encourage Technology Usage

Factors Encourage Technology Usage	**Important**	**Neutral**	**Not Important**
Rewarding The Technology Usage Efforts of Teachers in Instructional Activities	100	00	00
Investment of The Institution on Infrastructure of Instructional Technologies	17	09	74
Investments of The Institution on The Support Services of Instructional Technologies	65	34	01
Developing The Policies And Plans for Diffusion of The Instructional Materials	00	00	00

Providing Support for The Projects Towards The Expansion of Instructional Materials	75	15	10
Carrying Out The Studies For Integration of Technology Into Curriculum	00	00	00
Reducing Work Load to Provide Opportunities to Teachers for Developing Instructional Materials	90	05	05

Table 16: Percentage of Assessed Factors that Encourage Teachers' Technology Usage

The graph below shows the percentage of assessed factors that encourage teachers' technology usage:



Graph 4: Percentage of Assessed Factors that Encourage Teachers' Technology Usage

Our analysis revealed that teachers do not perceive any need to invest more on other instructional technologies. They shed light on the importance to consider other factors as driving forces for ICT use and integration. All of them (100%) identify "rewarding The Technology Usage efforts of teachers in Instructional activities as the most encouraging factor, followed by (75%) for "providing support for the projects towards the expansion of Instructional materials". It seems worth mentioning that three propositions were not considered by any teacher as contributing factors for ICT usage, which are:

- Developing the policies and plans for diffusion of the instructional materials,
- Carrying out the studies for integration of technology into curriculum,
- Reducing work load to provide opportunities to teachers for developing instructional materials.

According to Joanne Capper (2003) in her article “Complexities and Challenges of Integrating Technology into the Curriculum”

“There are a number of particularly worthwhile educational, economic and societal goals that are more likely to be accomplished with the use of multimedia technology in the teaching and learning process. Such goals are unlikely to be achieved without ensuring a broad range of conditions that enhance the likelihood of technology use, including the integration of technology into the formal, articulated curriculum, and perhaps even into high-stakes examinations (…) many teachers are unlikely to devote the time and energy required to use technology if its use is not formalized in system statements of expected learning outcomes.”

(Capper, 2003)

4.2.2.5. Perceptions about the Use of ICT

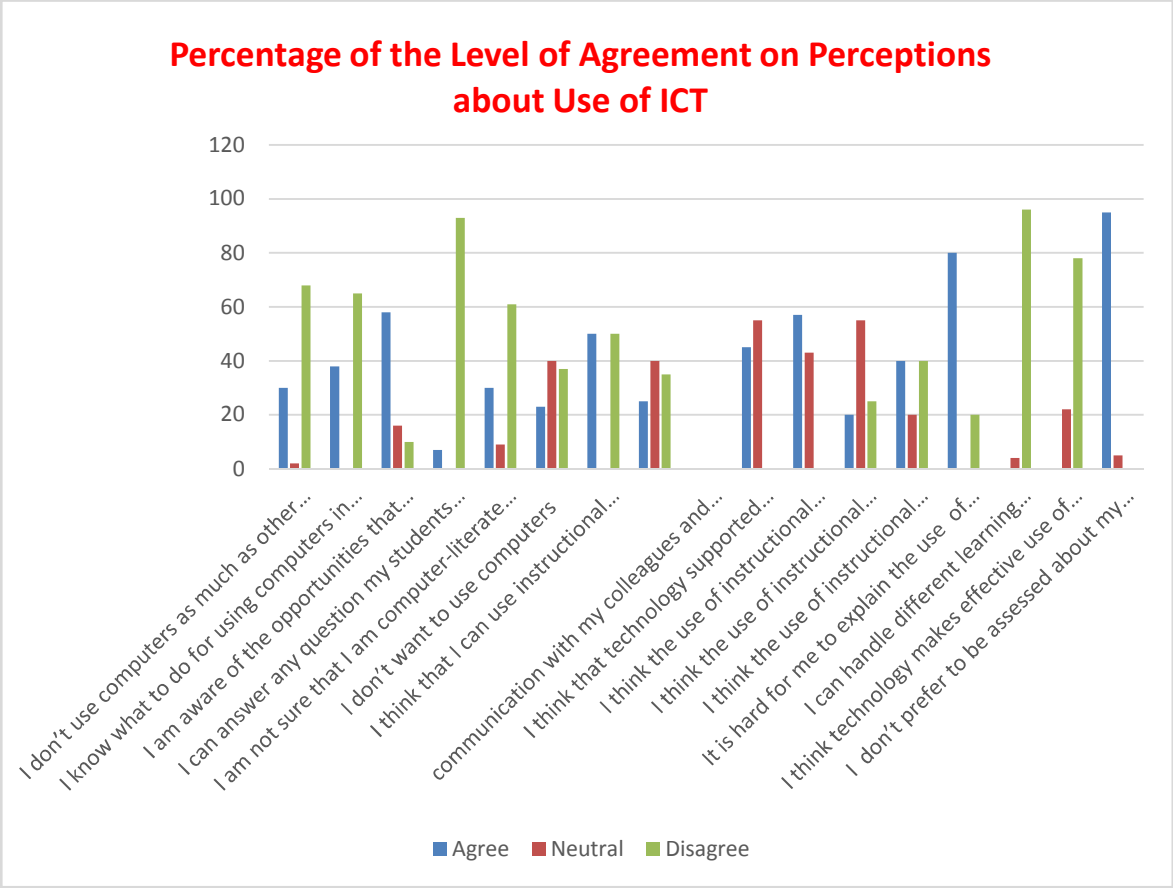
Perceptions about use of ICT	**Agree**	**Neutral**	**Disagree**
I don’t use computers as much as other resources (books, overhead projectors, etc.) For instructional purposes	30	02	68
I know what to do for using computers in instructional environments	38		65
I am aware of the opportunities that computers offer.	58	16	10

I can answer any question my students ask about computers	07	00	93
I am not sure that I am computer-literate for use computers in my classes	30	09	61
I don't want to use computers	23	40	37
I think that I can use instructional technologies in class activities more effectively day by day	50	00	50
I believe that tools like email, forum and chat will make communication with my colleagues and students easier	25	40	35
I think that technology supported teaching makes learning more effective	45	55	00
I think the use of instructional technologies increases the interest of students toward courses	57	43	00
I think the use of instructional technologies increases the quality of courses	20	55	25

I think the use of instructional technologies makes it easier to prepare course materials (assignments, handouts, etc)	40	20	40
It is hard for me to explain the use of computer applications to my students	80	00	20
I can handle different learning preferences of my students having different learning styles by using instructional technologies	00	04	96
I think technology makes effective use of class time	00	22	78
I don't prefer to be assessed about my instructional technology based applications by any other professionals.	95	05	00

Table 17: Percentage of the Level of Agreement on Perceptions about Use of ICT

The graph below shows the percentage of the level of agreement on perceptions about use of ICT:



Graph 5: Percentage of the Level of Agreement on Perceptions about Use of ICT

In our analysis, the majority of teachers agree not willing to be evaluated about their technology-instructional practices by other professionals (95%) and almost the same percentage assert that it is hard for them to explain the use of computer applications to their students (80%). Parallel to this, the majority of them seem to share their disagreement about two statements, namely: their ability to handle different learning styles through technology a (96%) and relationship between technology use and effective instructional time (78%).

Jones (2004) asserts that teachers feel reluctant to use computer if they lack confidence. "fear of failure" and "lack of ICT knowledge" (Balanskat et al., 2007) have been cited as some of the reasons for teachers' lack of confidence for adopting and integrating ICT into their teaching. On the other hand, research suggests that majority

of teachers who reports negative or neutral attitude towards the integration of ICT into teaching and learning processes lacked knowledge (Harrison and Rainer,1992) and skills that would allow them to make “informed decision” (Al- Oteawi, 2002, p.253, as cited in Bordbar, 2010).

In the same token, Eby (1997) warns that “*technology could not support learning without teachers who know how to use it and integrate it into subject-specific area.”* In the context of the Higher Institute of Language at the University of Gabes (Tunisia), the researcher Seyf Mohamed (2014) made a research to explore how technologies were really used in their classrooms through the implementation of technology-based activities in English as a foreign language (EFL) class. In his research he compared what they say about the use of technology in class and what they actually do and comes to the conclusion that:

> “Most activities observed and discussed with teachers are reduced to drilling and extra practice of studied topics. Activities are not contextualized, and basically students work individually with the computer, wasting opportunities for implementing strategies and more communicative and interactive tasks”
>
> (Seyf Mohamed, 2014)

In this sense, the implementation of technology is carried out more in terms Of reinforcement and consolidation of structures worked in class rather than in enhancing the Process of learning and teaching a language in a more meaningful way.

According to Pelgrum (2001), the success of educational innovations depends largely on the skills and knowledge of teachers. In this respect, Peralta & Costa (2007) considers that teachers with more experience with computers have greater confidence in their ability to use them effectively. In the same vein, if the teachers hold positive attitudes to integrating computation and they have the knowledge and skills to apply them in practice, they will integrate computations in their work successfully (Bitner and Bitner 2002; Anderson and Maninger 2007).

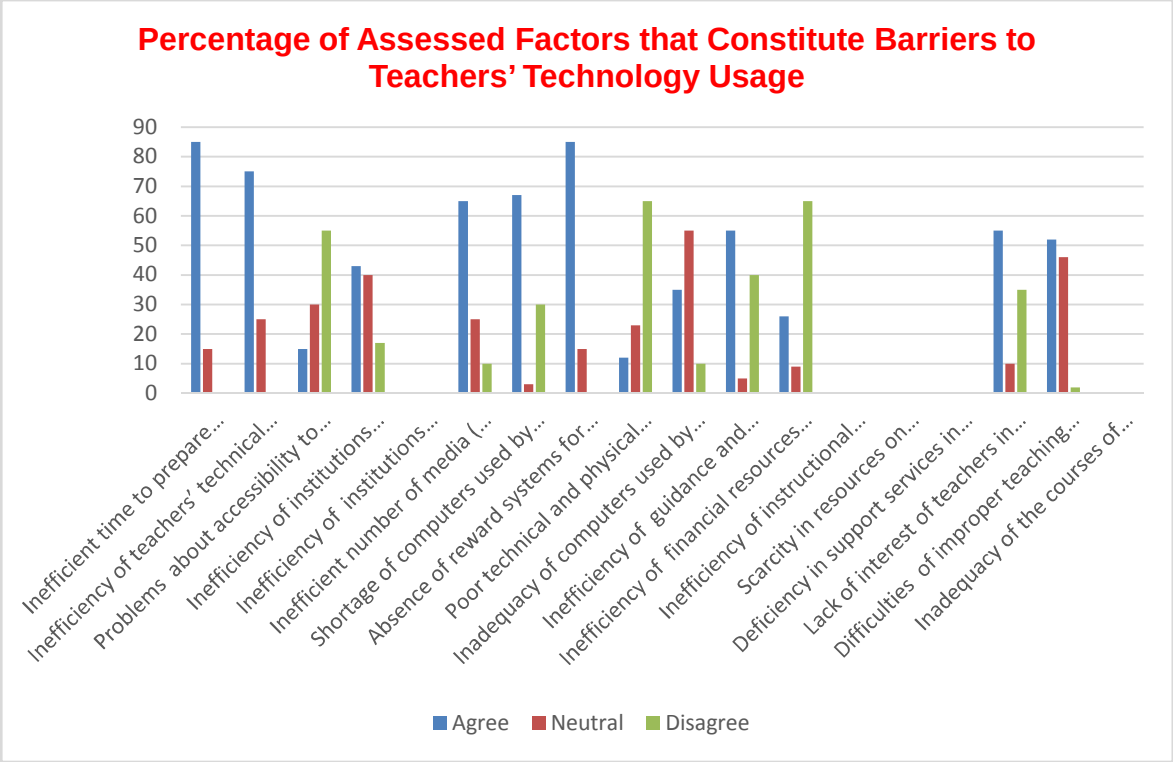
4.2.2.6. Barriers to Technology Usage

Barriers to technology usage	Agree	Neutral	Disagree
Inefficient time to prepare materials based on technology	85	15	00
Inefficiency of teachers' technical knowledge to prepare materials based on technology	75	25	00
Problems about accessibility to existing hardware (computer, overhead projector, etc)	15	30	55
Inefficiency of institutions computer laboratory	43	40	17
Inefficiency of institutions technical infrastructure about instructional technology	00	00	00
Inefficient number of media (printer, scanner, etc) for effective use of computers	65	25	10
Shortage of computers used by teachers	67	03	30
Absence of reward systems for encouraging technology usage	85	15	00
Poor technical and physical infrastructure of learning	12	23	65

environments			
Inadequacy of computers used by learners	35	55	10
Inefficiency of guidance and support by administration	55	05	40
Inefficiency of financial resources for technology integration	26	09	65
Inefficiency of instructional software/ electronic resources	00	00	00
Scarcity in resources on technology for attaining information	00	00	00
Deficiency in support services in material development/technology usage	00	00	00
Lack of interest of teachers in technology usage	55	10	35
Difficulties of improper teaching methods for technology usage	52	46	02
Inadequacy of the courses of technology offered to students	00	00	00

Table 18: Percentage of Assessed Factors that Constitute Barriers to Teachers' Technology Usage

The graph below shows the percentage of assessed factors that constitute barriers to teachers' technology usage:



Graph 6: Percentage of Assessed Factors that Constitute Barriers to Teachers' Technology Usage

Our research analysis revealed that the majority of teachers agree on three salient features which constitute for them actual barriers to technology usage:

- Inefficient time to prepare materials based on technology (85%)
- Absence of reward systems for encouraging technology usage (85%)
- Inefficiency of teachers' technical knowledge to prepare materials based on technology (75 %).

Hannafin and Savenye (1993) reported several possible explanations for teacher resistance to using computers. These reasons included a) doubt that computers improve learning outcomes, b) resentment of the computer as a

competitor for student's attention, c) unsupportive administrators, d) Increased time and effort required of the teacher and e) fear of losing control of center Stage, and fear of looking stupid in front of the class.(Adapted)

Lack of time is seen as one of the biggest constraints to the integration of ICT into the teaching learning situation. Teachers need time to learn how to use the hardware and software, time to plan, and time to collaborate with other teachers. Teachers also need time to develop and incorporate technology into their curriculum; or even participate in professional development. Other common challenges include insufficient support for professional development from the administrative leadership, a lack of faculty interest or motivation, or overburdened teacher workloads.

This kind of response displays a natural psychological reaction to possible situations where a feeling of discomfort might be felt. Teachers may sometimes resist using technologies based on their feelings of discomfort, dislike and even fear of technology (Stone, 1998). Individuals give prominence to a kind of experiences where low levels of stress or anxiety is required. This constitutes their safe zone, a comfort zone as described in psychology.

Bardwick (1995) defines the term as "*a behavioral state where a person operates in an anxiety-neutral position*". As defined by Henry (2013) in his article "The Science of Breaking Out of Your Comfort Zone *"comfort zone is a behavioral space where your activities and behaviors fit a routine and pattern that minimizes stress and risk". It provides a state of mental security."* In fact dealing with technologically- based teaching experiences may engender different psychological responses due to individual differences. The newness of the technology *per se*, the pedagogical methodologies underneath are sources of professional stress because they imply stepping out from routine tasks where everything was under the teachers' control.

On the other hand, Research has shown that teachers' attitudes towards technology influence their acceptance of the usefulness of technology and its integration into teaching, Huang & Liaw (2005). Acceptance typically contains the concept of approval. Lack of user acceptance is a significant impediment to the

success of new information systems (Gould et al; Nickerson). Therefore, user acceptance has been viewed as the pivotal factor in determining the success or failure of any technology integration

Mcleod (2007), a leading expert on school-technology leadership issues reports in his article “resistance to change” Dr Moss Kanter ‘s ten reasons that drive resistance to educational change initiatives:

1. Decisions or requests that are sprung on administrators and teachers without notice.
2. Not knowing enough about the change
3. Feeling that changes are being done to, rather than done by, those affected.
4. Concerns that change will require administrators and teachers to question familiar (and comfortable) routines and habits.
5. Expectation that the initiative is temporary and does not contribute to success.
6. Change implies that the former way of doing things was wrong. Some administrators and teachers may feel embarrassed in front of their peers or staff.
7. Educators can question their ability to be effective after a change: Can I do it? How will I do it? Will I make it in the new situation?
8. Change in one area can disrupt other projects or activities, even ones outside of work.
9. Organizational change often increases workloads.
10. Change often creates real winners and losers, and people worry about where they will end up when the project is completed.

4.2.3. Analysis and Interpretation of Learners’ Questionnaire

The aim of this questionnaire threefold:

1. Determining perceptions regarding their language learning
2. Determining perceptions regarding their ICT usage
3. Determining perceptions regarding the pedagogical perspectives of ICT in their language learning experiences.

Analyses of the questionnaire results are made in terms of percentage.

4.2.3.1. Demographic Information

Male	Female	Age	Hometown
33	67	19	

Table 19: Learners' Demographic Information

The demographic information indicates that 33% of respondents were males, and 67% were Females of about 19 years old. It is a homogeneous group in terms of age with a higher percentage of females, general characteristics of Algerian university students. Preparatory schools welcome students from the whole country, the leading towns of origin differ from one graduation promotion to another with a higher percentage of students coming from north Algerian regions, in our case, the Great Kabylie Region.

4.2.3.2. Learners' English Exam Mark Average

What was your mark of English in the Bac Exam?	12

Table 20: Learners' English Exam Mark Average

The majority of respondents obtained a general mark above 13/20 in the Bac exam. As far as the English mark, the majority obtained 12/20. It was interesting to shed some light on their mark of English to have information about their entry level in the English course to allow teachers act accordingly and plan adequate ESP courses to bridge eventual linguistic and communicative gaps.

The percentage in this case does not provide relevant information to take into account. Marks of English were mainly dependent on individual learners and tightly linked to the study stream followed during the high school period; two elements which were not taken into consideration prior to the design of the questionnaire.

4.2.3.3. Learners' Level Evaluation of English

	Elementary	**Intermediate**	**Advanced**
How do you evaluate you level of English?	43	52	05

Table 21: Learners' Level Evaluation of English

43% of the respondents perceive their level of English as elementary 52% as intermediate, and 05% as advanced.

The most interesting aspect to stress through this question was to have the respondents opinions' of themselves in terms of English language learning out of any context of formal evaluation done by the authoritative figure of the teacher. However, one may be skeptical about the trustworthiness of the responses as learners may not provide accurate information because of some underneath psychological load in terms of shyness, discomfort or feeling of failure.

This idea should be compared with what is referred to in psychology as the concept of self-efficacy. Successful experience is the most important source of fostering self-efficacy. it is a defined as self-judgment of one's ability to perform a task in a specific domain. (Mills et al., 2007, p. 417; see also Bandura, 1997; Graham, 2006). Background knowledge about learners' former experiences in English may bring fruitful information about this aspect.

4.2.3.4. Learners' Difficulties when Learning English

	Reading Comprehension	Listening Comprehension	Oral Expression	Written Expression	Grammar
What are the difficulties you encounter when learning English?	12	27	41	15	05

Table 22: Learners' Difficulties when Learning English

The majority of respondents (41%) report difficulties on oral expression and 27% others regarding listening comprehension in English. Through this question, the respondents voiced out about their perceived difficulties in the studied English course content. These responses reflect the encountered difficulties in the general aspects of the English course through their exposure to English (past experiences as well as current situation.

It is worth mentioning that questionnaires were distributed at the end of the academic year, during which some perceptions might have change or evolved as learners overcome some difficulties or upgraded their level of English. In the previous question it was mentioned that teachers have at their disposal their entry English mark and were supposed to act in accordance in terms of support, remedial work, etc.

4.2.3.5. Learners' Evaluation of Activities in the English Language Classroom

	Easy	Intermediate	Difficult
How do you evaluate the level of the activities proposed in the English language classroom? (Reading comprehension texts & grammar lessons)	15	65	20

Table 23: Learners' Evaluation of Activities in the English Language Classroom

65% of learners evaluate their level in Reading comprehension texts & grammar lessons as intermediates. According to Kumaravadivelu (1991) both teachers and learners bring with them their own perceptions of what constitutes language teaching and learning. In other words, learners and teachers interpret classroom activities from their own perspectives, which may not always match.

According to (Eslami-Rasekh & Valizadeh, 2004) teachers should become aware of their students' preferences. Once they come to know them, they can, "if necessary," take into consideration those preferences and plan and implement alternative behaviors and activities in their classes (Barkhuizen, 1998). Even if learners' desires and those of teachers' are in contrast with each other (e.g., teachers emphasize communicative activities and learners tend toward traditional activities), they can shift to a negotiated syllabus procedure and come to reasonable agreements (Jordan, 1997).

Teachers' awareness of those preferences plays a considerable role in influencing their decision-making processes and classroom behaviors (Spratt, 1999). Learner level is an important factor in selecting authentic listening materials. As remarked by ESP researchers, spontaneously spoken language is too complex to be introduced in the classroom in the first stage of foreign language learning, but in the second or intermediate stage, all the aspects of the spoken language come into action. So for the lower level learners, we should provide easier materials.

Task-based teaching defines two types of tasks, namely: the target task and the pedagogical task. The first one takes place outside the confines of the classroom in the real life situation; whereas the second one forms the nucleus of the classroom activity and presents the set of the necessary devices/techniques that are needed to accomplish the target task (adapted from Brown, 2001: 242). This way, the emphasis is around a particular language function; for example a communicative task that focuses on negotiation of meaning. The priority is then no more on the bits of language in isolation; but rather on the functional uses for which they are designed to fulfil a real-life communicative purpose.

It is however important to keep in mind that is students do not necessarily move through the learning stages sequentially: as Knefelkamp points out, learning is an ego-threatening task. Too much challenge to the ego and students retreat and they don't progress. One of our tasks as instructors is to recognize the stage where our students are and to help bridge the transition to the next stage.

4.2.3.6. Learners' Perception about the Time Allocated to the English Language Sessions

	Sufficient	**Not Sufficient**
What do you think about the time allocated to the English language sessions?	45	55

Table 24: Learners' Perception about the Time Allocated to the English Language Sessions

The analysis showed that there is no significant distinction about learners' perception concerning time allocated to English language sessions with a small advantage to learners perceiving it as sufficient for their learning progress (55%).

As a reminder, the teaching time average for foreign languages is that of 3 hours per week, across all instructional levels except foreign languages departments where the delivery of the whole curriculum is done through the target language.

Horwitz's (1999) meta-analysis in which she investigated the cultural and situational influences on language learners' beliefs discovered that students' involvement in learning is linked also peers community, attitudes to learning situations, the classroom situation, to cite a few. In fact, learners of different cultures and environments estimated more or less longer time needed to learn the language, had a specific evaluation of their own abilities as language learners, appreciated differently aspects of language learning, and had stronger beliefs that their knowledge of the language would help them find employment (Horwitz, 1999).

On the other hand, academic year time should be contrasted with the student active engaged time on tasks (once again contrasting in campus vs. off campus learning time). Besides, academic learning tightly linked to student involvement and engagement. It is referred to as the amount of time spent working successfully on task- related academic content. On the other hand, the number of research available that demonstrates the relationship between the length of the academic year and student achievement is scarce and varies considerably (Fredrick and Walberg 1980)

4.2.3.7. Learners' Perceptions about English in Terms of Importance

Among the following propositions, what is the one that best describes your vision of English in terms of importance?	
English is not important for me in my studies	05
English is important for me during my studies and in the future	05
English is not really important for what I intend to do in the	25

future	
English is not really important in the present situation but it will be very important in my future career.	51
English is not really important for my future job but it is still important to learn as international language nowadays.	14

Table 25: Learners' Perceptions about English in Terms of Importance.

Through this question, the aim of the researcher was to relate learners' perceptions about the importance of English and the prospective economic sectors they intend to work in. The underlying idea was that a correlation is to be perceived thanks to the global status of the foreign language.

Through the analysis, it was revealed that only 51% perceived the importance of English in their future career, without necessarily agreeing on the instant added-value of studying it. On the other hand, 25% do not perceive the importance of English in their future work.

Apart from the idea of globalization of the economic job market, which was not analyzed in this questionnaire, other attributes may be behind such responses and be psychological and cultural in nature.

Learners' attitudes have often been addressed in the literature in relation to two different targets: attitudes toward the learning situation (often encompassing the instructor as well as the instructional techniques used (Gardner, 2005), and attitudes toward the target community.

The role of attitudes on the language process should be taken into consideration, besides attitudes of students towards language are closely associated with the success or failure in language learning. Gardner and Lambert (1976) emphasize the importance of attitude in foreign language learning.

Ellis (1994) claims that learners' attitudes have been identified as one set of variables of major importance. There are both negative and positive attitudes towards the L2 being learnt.

As far as attitudes toward the target community, positive attitudes are typically connected to the speakers of the language in question and the culture represented by its speakers. Such positive attitudes can be expected to enhance learning, since learners can be expected to want to be able to communicate with native speakers of the language they are learning. Positive attitudes reinforce the degree of involvement and motivation to do effort. Negative attitudes, on the other hand, may impede language learning. According to (Woodrow, 1992) for successful transformation in educational practice, users need to develop positive attitudes.

4.2.3.8. The Economic Sector where the Learners' intend to be employed in

Through this question, the researcher was not able to extract definite economic sectors with significant percentages. However the cited job areas include: Management, Finance, Marketing and Communication. For the sake of interpretation we may relate this result to the previous question and attempt to draw some preliminary axes of interpretation.

According to Brown (2001, 118):

> English is not frequently learned as a tool for understanding and teaching US or British cultural values. Instead English has become a tool for international communication in transportation, commerce, banking, tourism, technology, diplomacy, and scientific research.
>
> Brown (2001, 118)

Students on the other hand, suffer an acute:

- Lack of information, absence of information concerning jobs' possibilities,
- Lack of vision about their future,
- Lack of plans, objectives, and
- An absence of actual uses of English in the workplace.

4.2.3.9. Learners' Perceptions about the way to make more interesting the English Sessions

Changing the teaching methodology	70
Developing the oral/listening/written expression skills	55
Integrating information and technological tools in the teaching /learning process	60
Adding the number of hours devoted to the teaching of English per week.	00
Others.	00

Table 26: Learners' Perceptions about the English Sessions

The analysis of this question appeared to decipher some of highly perceived positive ideas as able to turn the English sessions more interesting and then engaging for students. Changing the teaching methodology (70%), integrating information and technological tools in the teaching/ learning process (60%), developing the oral/ listening/ written expression skills (55%) are the three axes that students decided to stress on.

The classroom environment constitutes a special social context where only some types of relationships between individuals are possible. These relationships define the roles that both the teacher and the students may embody within this realm and define by the same way the types of interactions that are allowed. However, when it comes to an ELT context, this may constrain genuine instances of language use to take place, and effective learning to occur.

The interactive classroom is the environment where both interactive teaching and learning are possible; this entails that all the elements that make up the dynamics of a traditional classroom are in a reciprocal dialogue that favours an

effective interaction that is conducive to learning. The elements in question are the context, the teacher (his role and methodology), the students and the materials.

There is a tendency to use the word activity and task interchangeably, literature review however seems to underlie a difference. Task is characterised by its authentic language use for a meaningful communicative purpose and that outside the classroom context. In Second Language Acquisition Research, a task is defined as goal-oriented and involving activity where:

- Meaning is primary;
- There is some communication problem to solve;
- There is some sort of relationship comparable to real-world activities.
- Task completion has some priority; and the assessment of the task is in terms of outcome.

(Skehan, 1998: 95 cited in Brown, 2001: 50)

On the other hand, it is quite motivating for language learners who find in this environment an opportunity to test their language abilities among other aspects. However, the motivation is likely to be short lived unless they feel some benefits from their tasks. In fact, learners may lose their enthusiasm if they don't understand or agree with the purpose of technology-based activities and if they feel that such activities are interfering with their language-learning progress (Warschauer, 1998).

Learners are easily motivated when the teacher creates a vision, makes sense of the teaching content, creates a pedagogical and psychological contract and complies with them, in other words, when he explains and acts accordingly.

Learning English with the support of new technologies requires teachers who rethink their class objectives, adapt their methodologies to the digital age, prepare a variety of activities that allow students to be the centre of the process and interaction in English, include content based on the interests of students, and use new communication tools, media and channels. Only then, they achieve more communicative, relevant learning.

As a consequence, if one is to expect technology to have an added- value in the learning experience, many aspects have to be considered concerning the ICT tool (s):

- Ease of use,
- Familiarity or degree of experience with the tool
- Flexibility of the application

If the devices are made easy to use, students are likely to adopt and use them and integrate them in their learning.

Facilitating conditions of ICT use and alleviating surrounding problems is a step forward to support adoption and usage of ICT- based learning at a given institutions (Venkatesh et al., 2003).

Trifanova et al. (2003) defined mobile devices as "…any device that is small, autonomous and unobtrusive enough to accompany us in every moment (cited in Kukulska-Hulme & Shield, 2008)." Mobile Assisted Language Learning or MALL can be called m-learning or Mobilearn (Chinnery, 2005). MALL can be any type of language learning using portable devices, such as mobile phones, MP3/MP4 players, pdas, palmtop computers, portable radios and DVD players, and electronic dictionaries (Kukulska-Hulme & Shield, 2008). In the context of MALL, the resources include availability of mobile devices, reliable broadband connection, and other related resources. Therefore, as remarked in specific literature, students' decisions to adopt and use mobile learning will be influenced by his or her perception on availability of support services and resources to deliver mobile learning.

4.2.3.10. Learners' Present Technological Uses and Future Possible Educational Applications

In this part the researcher will try to answer and analyse the following questions:

- According to you which technology among the following ones is the most interesting nowadays? (Underline the proposition you chose):
  - ✓ Internet and associated applications(social media, chats, emails, surf, download, etc) 35
  - ✓ mp3 readers
  - ✓ mp4 readers
  - ✓ smartphones and their associated applications
  - ✓ tablettes 25
  - ✓ notebooks
- Please explain your choice (s) 12 Do you use one/ some of them? Which one/ones?
- Do you use one/some of them in your English learning? Which one/ ones ?
- Please explain how do you use it (them) for educational purposes.

The four above questions are analyzed jointly to present the broad view about the learners' uses and possible future decisions concerning ICT tools as part of their learning experiences.

With the development of cheap and handy technological devices becoming routines in their daily lives, students develop clear requirements in terms of pedagogical prospects of using these devices should cater for this new reality.

Learners who use the internet recreational purposes do not perceive necessarily an overlap between entertaining contents and scholarly ones.

4.3.2.11. Learners' Perceptions about the Necessity to Integrate Technology when Teaching English

	Yes	No
Do you think that teaching English should be more technologically-based?	66	46

Table 27: Learners' Perceptions about the Necessity to Integrate Technology when Teaching English

The degree to which students believe that using mobile learning will help to enhance their learning performance and gain better grades is referred to as Performance expectancy (Wang et al., 2009). Strengthening this belief will increase students' behavioral intention to adopt and use mobile learning.

Equally important is what is referred as multimodality or the teacher's presentation of information through more than one medium. Indeed, the teachers should cater for the varieties of learning styles for the purpose of learners' inclusion. In this respect, Mayer and Sims (1994) state that:

"Multimedia learning occurs when students use information presented in two or more formats -such as a visually presented animation and verbally presented narration- to construct knowledge. In a strict sense, our definition applies to the term "multimodal".

(Mayer and Sims, 1994: 389, 390)

The same task may be presented with different ways using different tools. It is worth noting that the final end of language learning task is to enhance one or many aspects of language and not the display of ICT expertise, the teacher should pay attention not to be distracted by the technological aspects at the expense of the learning outcome.

4.3.2.12. Learners' Perceptions about ICT Benefits in Education

Studies by Butler-Pascoe and Wiburg (as cited in Lin, 2009), there are twelve attributes of how technology enriches the language learning environment. In the following list the most important seven are highlighted.

- It provides interaction, communicative activities, and real audiences.
- It supplies comprehensible input,
- It uses task-based and problem-solving activities,
- It facilitates focused development of English language skills,
- It uses multiple modalities to support various learning styles and strategies,
- It meets affective needs of students,
- It fosters understanding and appreciation of the target and native cultures.

There are many ways in which technology increases foreign language learning. In studies conducted by Dunkel (as cited in Liu, Moore, Graham, & Lee, 2002), these tools increased students' self-esteem, vocational preparedness, language proficiency, learning autonomy and, specially, provided immediate feedback.

4.3.2.13. The Learners' Perceptions about ICT-related Barriers in Learning

A psychological needs analysis is a prerequisite to predict the kind of learning behaviors a teacher may face and the possible resistance obstacles he may be asked to overcome to reach his objectives.

On the other hand, Learner autonomy is also an important component of L2 learning (Benson, 2001). Autonomy means *"the ability to take charge of one's own learning"* (Holec, 1979). Inherent in this is the need of the learner to determine the learning objectives, define the content and progression of learning, and select methods and techniques to be used. In 2001, Benson suggested six ways of fostering autonomy, and one of these emphasizing on a technology-based approach.

The starting point for enabling language learning autonomy is for the student to develop effective strategies for pursuing individual learning, while being able to

change and improve those strategies over time, as the language learning progresses. One of the primary roles teachers can play in enabling and encouraging learner autonomy in a face-to-face or online context is to provide students with guidance on recommended online tools and services.

Students are not always competent and proficient enough in doing their Internet search and working with information sources from the Internet, especially if those sources are in English. When their Internet search is teacher-supervised, such problems disappear because students can always turn to their teacher for help. Providing students with Internet sites for their work is not enough, the teacher is also supposed to teach them how to find relevant sites in English on their own, i.e. how to best use search engines to become independent in their Internet research learning activities.

On the other hand, the presence and accessibility of mobile technologies do not guarantee their potential will be realized in educational contexts (Liu et al., 2010). It should be noted that, the success of mobile learning depends on human factors in the use of mobile devices (Kukulska-hulme, 2007). The need to understand factors that contribute towards learners' intention to adopt and use mobile learning is critical for successful implementation in a given context.

If learners are taught how to use basic functions of mobile devices, finding essential learning materials, selecting which tools are necessary to study their desired topics with guidance, their autonomy can be enhanced. They can then study independently anytime and anywhere.

4.2.4. Analysis and Interpretation of the Learners' Focus Group Interview

The focus-group interview to students revealed that there is much to do during the ESP course to help students get familiar with the oral aspect of the language and engage in meaningful communicative practices. The problem that was signalled by the students concerns their communicative skills that they qualify as poor. The constraints that they put forward concern their unfamiliarity with strategies to manage communications in the target language and the lack of vocabulary that

may help them bridge the communicative gap and experience genuine instances of interactions.

In one of the questions, they cite Internet applications as tools they use to enhance their language studies. At this stage of the investigation students are not able to explain how it interferes actually in their learning process; however they acknowledge the large possibilities that internet offers.

As far as the ESP activities that are proposed by the teacher aim at developing the linguistic overall skills however, they are perceived as lacking relevancy when it comes to respond to students' urgent communicative need. The ESP course is mainly perceived as being content-based instead of being interactively based.

4.2.5 Analysis of Economic Actors' Questionnaire

As far as the economic actors' communicative needs questionnaire, it was composed of three distinct sections encompassing 12 questions: the first one consisted of five items and concerned demographic information about the company, the second section concerned the linguistic and communicative needs of the company, and consisted of 4 questions, 2 multiple choice questions and two open–ended questions. The third section concerned the point of views and consisted of 3 questions, one of them is multiple-choice questions, one is a guided question and the last one is an open-ended one.

The questionnaire were sent electronically via the CCI and the ACET mailing data bases which count 120 and 30 member companies respectively. The first sending was done in early September, and a second sending was done in the mid of November. As a last attempt to obtain answers, hard copies of the questionnaires were distributed as handouts during the ACET weekly meetings by the ACET's CEO as a supportive initiative to the research work. From the whole attempts only one questionnaire was completed and submitted during a period of three months.

To understand this situation two interviews were organized with the ACET's and the CCI's. We asked them to explain the non-contribution of the ACET and the CCI's members to fill the questionnaire despite the researcher's numerous attempts. Unpredictably, they did not find the state of affairs uncommon and confirmed the difficulty to access data through questionnaires from the economic actors in general. Moreover, they stress on the fact that it is independent of the questionnaire-related subject and cited examples where important economic studies were carried-out with the same difficulties; the cause which obliges researchers to rely on either qualitative interpretations of data , to supplement their research with interviews, or to rely on existing ,rarely up-dated data.

We asked them to answer the following questions

- What are the most important economic sectors in the region of Tlemcen which constitute both the CCI and the ACET members respectively?
- Are the afore-mentioned companies importing or exporting ones?

- Is there a need of the English language presently for them?
- Is there a perspective of the evolving communicative needs of these companies in the near future?
- Can these companies be competitive without English in the future?
- What kind of English knowledge do these companies use at present in their respective businesses?
- What do you think about the future demands of the English language in the region underlying the perspective associated with the economic growth of the region?

The answers were as follows: there is a little need for the English language at present because the majority of companies are importing goods not exporting commodities, except the food industry and the services including international consulting. The remaining companies do not rely on specific individuals in charge of communication. Most of the time, the company's director resolves the communicative problem and not necessary through English. Most of the information needed doesn't even require a mastery of any basic linguistic knowledge in English and concerns only information related to quantities, the price, date of delivery, etc.

Exportation is important for business English language needs of companies to seize the added value of the international status of English efforts will be done towards bridging this gap and survive in a competitive world.

As long as the economic actors are not exporting commodities there is no perceived need to sell the positive attribute of one's commodity and no efforts will be made towards this aspect of business.

It is interesting to ask which kind of business economy we hope for our country and which kind of language we need to fulfill our economic objectives; only then could educationalists ,economists and expert strategists collaborate together, by bringing their expertise, unveiling their expectations according to the specificities of the local context.

For that to happen it is necessary to develop a strategy of action for the mid-term and to motivate all the headquarters to take part in the process of change we would like to initiate through building a vision of how we would like our country to be

in the future and for the next generation. Willingness is surely a pre-requisite but definitely not sufficient for an effective revolution to occur. Leadership is important, conviction is necessary, and commitment is crucial.

Collaboration between the educational institutions and the economic sector is vital if one is to expect a coherent and sustainable development of the national resources of the country.

4.3. Discussion of the Findings

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT?

A psycho-educational framework needs to be understood in accordance to concrete educational activities. The researcher's attempt is to make it stand first: as an explanatory tool connecting psychology theoretical principles and educational practical considerations, and second a supporting tool for the design of adequate roadmap for future enterprise, perspective development of ICT integration.

2. How can we define a successful ICT integration in ELT?

The notion of effectiveness is tightly linked to our visions of priorities, objectives, challenges and success in a globalised world.

Successful integration is dependent on successful framework. Consequently, a framework is successful only if both pedagogical and psychological principles inherent to the integration of ICT in education melt together and are applied.

We consider that the success of a psycho-pedagogical framework should be grounded in educational, psychological, organisational and innovation theories. For so doing, for effective ICT integration to occur, a number of conditions should be met.

1. An understanding of both barriers and enablers to change, and what influence people's behaviors in general.

2. Learner-centred psychological principles provide important aspects for the design of a psycho-pedagogical framework.
3. Teachers' underlying perceptions and attitudes towards ICT integration in their practice, in terms of enablers and resistance.
4. Understanding of the culture of teaching versus the culture of learning as indicators of the prevalent perceptions towards ICT integration;
5. A change of perceptions and attitudes towards the pedagogical beliefs is necessary;
6. Group work and collaboration involving all the actors in the educational context: including teachers, learners, the administration, etc.
7. Investigation of individual behavior change models per se as well as to behavior change within groups.

3. What are the prevailing attributes of success related to ELT in general and ESP in particular?

Technology Enhanced Language Learning (TELL) studies support the idea that the new communicative tools that are available on the web platform tend to present favourable communicative environments for learning to occur and communicative competence to develop.

The role of internet-based applications as meeting the objectives of contemporary education, namely active involvement of learners, and self-paced learning tend to be in accordance with the perspective of autonomous learning.

The challenge is to explore possibilities of how best to achieve the integration of communicative classroom learning objectives with online experiences in a learner-centred context. On the other hand, Computer Mediated Communication tools, as actual examples of communicative ICT tools, offer learners the possibility to communicate without constraints of time or place with natives as well as non natives increasing by these ways opportunities for access outside the classroom environment.

ESP requires a careful attention to the choice of pedagogical materials and activities. They are mainly designed for a specific group of learners within a specific learning context. The proposed activities consist of real- like performances situations. ESP course effectiveness is concerned with assessing the extent to which the course satisfies two kinds of learners' needs: their needs as language learners and their needs as language users. The particular needs of the learners are usually those imposed by the workplace or areas of study.

ICT integration in ESP teaching contexts, including CMC tools or instructional we platforms like Edmodo, should assist learners to get closer to that educational aim by bridging the communicative gap.

4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?

Teaching a foreign language through ICT may constitute a huge challenge for teachers if we lack the grounding concepts that underpin an effective use and integration of these tools. And because teaching is not only a mere replication of fail-safe routines, a deep understanding of the paradigm shift variables should first to be set. The assumptions made about how teachers should teach and learners learn through ICT integration involves an overall analysis about the outer dimensions that affect an effective framing of a psycho-pedagogical climate that is leading to better learning.

Successful integration may be viewed differently from one individual to another. Effective ICT integration for the administrative staff, for instance, may not meet the foreign language teacher's perception. This latter may concentrate his attention to the educational added-value of this integration; whereas the former may only focus his attention in the provision of hardware in language classrooms. In this respect, Gulbahar & Guven (2008) says:

"Providing schools with hardware, software and in-service training is not enough [...] There must be active involvement of the teachers concerned in the whole change process so that there is the element of "ownership" of the innovation"

(Gulbahar & Guven, 2008)

On the other hand, Bryderup & Kowalski (2002) stresses the importance of developing ICT school plan which defines the pathway to realize these goals is determinant towards ICT integration; and teachers engaged in this enterprise are likely to apply ICT in an innovative way Kozma (2003). Integration in schools misses beforehand strategic planning where clearly defined objectives have to be set, processes of integration to be discussed to better evaluate the enablers and obstacles intrinsic to any process of change.

The planning process should be managed by all the stakeholders. The primary focus is on developing a plan of actions using ICT as a tool to improve teaching and learning. One should remember that the focus is how to achieve quality education in general, not to superficially brag with the latest technologies. Teachers are asked to be empowered pedagogically and technologically to take benefits of ICT in education, go beyond the potentials to actually measure learners' academic improvement. The aim of the school staff is then assisting teachers towards the attainment of that goal by providing adequate support. Technology remains a mere tool unless used appropriately within a coherent framework and through a set of principled actions. For that to occur, the following considerations should be taken into account:

- The creation of a common vision about how ICT integration should occur,
- A clear understanding about the roles and responsibilities of all,
- A change of perceptions and attitudes towards the pedagogical uses of ICT.

Indeed, a successful ICT integration depends upon the development of a shared vision (Hughes & Zachariah, 2001) that is not possible unless supported by a suitable change process at psychological and a pedagogical levels.

When willing to integrate effectively ICT in the teaching /learning ESP context, specific psychological, organizational, technological and pedagogical issues should be raised. As teachers, we need to reflect on the pedagogical that ICT integration

may engender in terms of changing roles, learning processes, educational approaches and course design.

We will discuss these points through answering the following research questions.

5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG.

In fact, ICT integration may have many implications to the whole school organization; this may engender repercussions on teachers' changing roles within the framework of 21st century educational framework and on learners' way of experiencing learning. ICT effectiveness is then a matter of ongoing process that needs commitment to time and a willingness to evolve professionally. Equally important is the psychological barriers that accompany this course of actions.

The International Association for the Evaluation of Educational Achievement (IEA) (2003) cited essential conditions for any innovation to be sustained and transferred in educational contexts

- Providing support (technical, pedagogical, psychological),
- Shifting from providing technology first to training teachers first,
- Changing teaching beliefs with technology and initiating educational paradigm shifts,
- Building up of leadership capacity at the school,
- Promoting positive attitudes towards technology and language.

These dimensions generate changes in behavior. In fact, the theorists argued that individuals will not show intentions to perform new behaviors unless they perceive positive outcomes of performing them. In other terms, advantages should outweigh the disadvantages. This should occur in a non-threatening environment (no external pressure) with the necessary background knowledge and confidence to

occur. It is actually a long process through which individuals evolve modifying partly aspects of what they used to do. The following suggestions may stand as a corner stone to decipher what framework for changing a behavior needs to include:

- Strategies to be planned for change in behavior should match with the stage of "readiness" of the individual.
- Environmental constraints and enablers that act in favor or against performing this behavior should be considered and integrated.
- Positive personal advantages should be stressed (e.g.; professional promotions, reduction of work time load, etc.)

4.4. Conclusion

This research study chapter aims at understanding the contributing factors that influence an effective integration of Information and Communication Technologies in English language classrooms and reflecting on pedagogical implications in view of designing a practical framework that accounts technological, pedagogical, psychological and organizational factors influencing its effective integration.

The research analysis allowed us to shed light on important issues and helped us to understand that for successful integration to occur of ICT into teaching, factors that positively or negatively influence teachers' use of ICT, learners' perceptions about ICT melt together and highlight the complex interplay and influence of each of them on the other.

Answering the latest research questions allows us to confirm our former hypothesis and affirm that:

6. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of a reasoned and principled integration of ICT in English teaching/learning contexts.

7. Both EPSECG's learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.

8. Understanding the possible resistance to change related to ICT uses in ELT in general, and ESP context of EPSECG in particular, helps identifying the necessary strategy to follow in order to overcome the pedagogical and psychological obstacles.

9. Uncovering the type of language learners' ICT uses is important to meet their learning needs and preferences and propose adequate ESP activities.

10. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data (the environment, the learners and the teachers) and propose a practical framework that accounts for the evolving nature of teachers' and learners' pedagogical and psychological specificities.

ICT successful integration in a teaching/learning context requires the implementation of strategic organization that is not possible unless supported by a suitable change process not only at a technological level but also on a psychological and a pedagogical one.

Chapter Five:

Recommendations & Further Perspectives

5.1. Introduction

In this part of our research work the researcher will attempt to design a framework for ICT integration in the ESP context under study, taking into account pedagogical, psychological, technological as well as organizational factors inherent to its effectiveness. At last, an ESP course is designed within this framework using the practical and theoretical guidelines affecting its success.

5.2. Guidelines to Psycho-Pedagogical Framework Design

In this part of our research work we will concentrate on suggesting guidelines which enable the design of a psycho-pedagogical framework though which a principled set of actions using the SAMR model of ICT integration are presented. The aim is to bridge the communicative competence gap in an ESP course.

Hereafter a detailed outline of the actions being followed:

1. A reminder of the theoretical layout guiding our framework design
2. A summary of the research work's main objectives
3. An informative choice of ICT tools
4. An ESP course design using SAMR Model of ICT integration

The hypothesis that we moved ahead was that learners may become communicatively competent and bridge the communicative gap in the workplace with ICT effectively integrated in an ESP course. As a consequence, it is important for

1. Psychological issues to be clarified and overcome
2. Pedagogical obstacles to be specified and maturely reflected
3. Technological constraints to be considered (types of tools
4. Organizational issues to be discussed

<u>From a psychological view, the introspective methods revealed that :</u>

- Teachers lack enough confidence in ICT use,
- Teachers are afraid to lose face regarding their professional identity
- Teachers have mitigated perceptions regarding the added-value of ICT in education

From a technological and pedagogical point of views, teachers'

- Use of ICT was anecdotic,
- Knowledge of ICT in education was superficial,
- Knowledge about specific ICT tools' potentials and limitations in education was insufficient,
- Use of ICT tools lack a straightforward theoretical underpinning,
- Educational approaches were not consistent with educational paradigms using technology,
- ICT's Impact was not measured in accordance to specific language learning areas.

From an organizational point of view: a SWOT analysis offered a deep understanding of what constituted solutions, weaknesses, opportunities and threats to the successful integration of ICT in our EPSECG context study.

As far as learners are concerned:

A learner profile is narrative description or an academic compilation of key learning assumptions of the learner. This profile comprises the learner's characteristics, needs, preferences, attitudes and capabilities (Gardner and Miller, 2005; Rothwell and Kazanas, 2008). Currently we operate in a digital age in which ICT-enhanced education (e-learning) abounds. An e-learning profile is therefore a compendium relating to the student's characteristics, needs, styles and preferences, attitudes and capabilities as well as his/her knowledge of, access to, use of and comfort levels with e-learning technologies.

E-learning profiles which embrace students' learning styles, strategies, technology knowledge, access and usage as well as motivation should be explored and considered for effective technology-enhanced language experiences.

As far as economic concerns are concerned: no thorough analysis was possible because of the unavailability of adequate information.

5.3. Theoretical Layout for Framework Design

Considering the psycho-pedagogical framework's theoretical and practical related issues when integrating ICT in ESP, one is asked to keep in mind Munby's (1978) ESP course design- related suggestions in terms of:

- reasons for learning,
- place and time of anticipated target use,
- others with whom the user will interact,
- content areas (activities involved),
- skills (listening, speaking, reading, writing, translation, etc),
- level of proficiency required.

On the other hand, Integrative approach to CALL as remarked by (Warschauer 1996) seeks both to integrate various skills (e.g., listening, speaking, reading, and writing) and also integrate technology more fully into the language learning process. It stands as an ongoing process of language learning process.

5.3.1. Summary of the Research Work's Main Objectives

When designing the following tasks, priority was in the development of effective language teaching materials based on conclusions derived from the research work, in terms of:

- Pedagogical, psychological and technological considerations;
- Principles of ESP- course design; and
- Communicative teaching approach.

5.3.2. Choice of ICT tools

It seems interesting to stress the fact that unlike traditional methodologies that may be followed when designing a teaching material in a face to face conventional classroom, working online proves to be by far a time consuming enterprise that

requires personal investment, effort and constant availability from the part of the teacher before, during and after the experiment.

Instructors need to determine what objective they seek to reach, what aspects of language need to be considered and then choose accordingly the CMC tool (in its two forms) that is likely to meet and which is best suited to the task under hand. For instance synchronous CMC (SCMC) tools are best suited for social interactions, brainstorming sessions and short responses where interaction is in the spotlight, whereas asynchronous (ASCMC) are rather more suited for longer response, critical thinking, a problem solving activity etc.

They should also realize that just like any other type of teaching method, learning to use CMC takes some time and it also takes a commitment of time to make a method work in a course .In the same way as other teaching/ learning method, it may not meet the needs of certain students depending on their age, learning background, level, expectations, their views about learning and success.

When comparing web-based courses to the traditional classroom, it must be remembered that it is not technology that should be in the spotlight, but the people who use it and it is not the technology that is important, but rather its ability to lead to a better education. It seems interesting to stress the fact that unlike traditional methodologies that may be followed when designing a teaching material in a face to face conventional classroom, working online using CMC proves to be by far a time consuming enterprise that requires personal investment, effort and constant availability from the part of the teacher before, during and after the experiment. This explains the reasons of our limited number of participants, our focus on one aspect of language use (negotiation of meaning) and a clear definition of the objectives as well as the methodology to be used.

CMC may indeed present many opportunities for teachers and education to develop positively by motivating students and be of more relevance to their generation’s way of communicating, learning and socializing. CMC in fact offers the possibility to teachers to reach a greater number of students in a manner that was not

possible years ago, to respond to their communicative appeal, and track their progress when necessary to help them experience effective learning situations.

According to a former study about the pedagogical perspectives of SCMC tools in enhancing the communicative competence of university foreign language learners, the researcher come to the conclusion that open ended discussion, debate and brainstorming sessions produced a high amount of clarification requests, this suggests that these types of tasks are interesting in promoting interaction. It seems that learners willingly engage in effective communications when topics of discussion really matter to them (i.e., when discussing, debating, or brainstorming and deciding) generating by this way more elaborated discourse. Learners may feel engaged doing the task, value their partners' contributions, and then request clarifications to engage in more in depth discussions. They may become conscious of the importance of active involvement and collaborative for the completion and the success of the task under hand. In fact, the outcome of the process depends on all who are involved and who bring their mutual linguistic and cognitive resources to help and complement each other (Halfaoui, 2007)

Using CMC from time to time during holidays may suggest that probably low intermediates may use CMC for recreational uses with little or no direct academic concern, whereas the upper intermediate use of CMC may be interpreted differently and suggests that CMC may play for them a more valuable role than be simply a tool of distraction or recreation. Low intermediate students reported that they use English when discussing online. In fact it appears that this correlates with their language learning experience shifting gradually from previously used languages (Arabic and French) to that of present content instruction, which is English. This may explain their will to practice the language in new environment—in our case an internet-based network—where English stands as a global language.

5.4. ESP Course Design using the SAMR Model of ICT Integration

It seems important to mention that in class tasks should supplement online ones so as enhancement and transformation of learning take place. For instance, engaging learners in a kind of reflective task about an online communicative activity

may strengthen their communicative skills, trigger their learning involvement, raise their motivation and likely to help them to engage and/ or maintain their autonomous learning process.

Transform	Extending deep technological knowledge to transform and redefine pedagogy in ways not conceivable without ICT.
Modify	Applying technological knowledge to shape and modify pedagogy in significant ways compared to not using ICT.
Enhance	Building technological knowledge to enhance pedagogy and provide some functional improvement.
Replace	Adopting some technology to replace tools within existing pedagogy. Simple substitution of existing educational tools with ICT tools, with no functional improvement.
Maintain	Not yet confident to apply new technologies to pedagogy

Figure 15: SAMR vs TPACK ICT Models

(Retrieved from: https://www.linkedin.com/pulse/what-happens-when-samr-vs-tpack-november-ict-model-craig-verbruggen)

5.4.1. Reading Comprehension Task

The task requires a unique convergent goal and involves the collaboration of the two partners using their respective linguistic resources. The aim is not to use the dictionary but only the contextual clues to find the appropriate meaning of the words. This suggests a two-way information exchange between the partners and a shared construction of meaning through collaboration. Krashen (1989: 109) remarked that "the receptive skills have to be promoted firstly, with more emphasis on reading. The reason behind is that *"reading exposure is the primary stage of developing language skills"*). In the same vein it is explained that "*Through intensive reading the learners will be familiarized with the terminology used in their specialty, the grammatical structures, and the different functions and notions used in the language register."*

S

Substitution: Computer technology is used to perform the same task as was done before the use of computers. Reading an economic text on screen and answer the related comprehension questions directly using the keyboard instead of the pen on personal computers or at the school language lab.

A

Augmentation: Computer technology offers an effective tool to perform common tasks The learner may benefit from the word processor incorporated:

- Multilingual dictionary to translate some text excerpts or search directly synonyms of words to facilitate their reading comprehension
- Using highlight police, underlining, police size

M

Modification Common classroom tasks are being accomplished through the use of computer technology. Hyperlinks, images, audio, and video are usually part of the reading experience.

The learners may be provided some external links to access internet-based resources to search for additional related information from educational sources (eg universities' libraries, specialized subject-related dictionaries); (YouTube videos which relate to the reading text, related theme in the form of TV or radio news reports), etc; The teacher may decide to use links which relate to inserted documents like related assignments.

The role of the teacher is then to organise the resources and present them to learners in a sequential manner. Learners progress through the different activities during and sometimes after the class time. The teacher generally provides first the text and learners go through the different activities following a specific order pre-established by the teacher and aiming at a specific course objective.

The teacher's vision about the sequence of activities had the upper hand and teaching, though being interactive is mainly teacher- centred.

The teacher may choose this level of ICT integration as he personally gains more confidence and skills enriching his courses.

The learners may benefit of this level of ICT integration especially those which are not accustomed to integrate technological tools in their learning processes. They move smoothly through the different course' sections and learn how to transcend the course' traditional presentation in a non-threatening way. As the courses progress they may notice some learning benefits and accept more enthusiastically to integrate technological tools, modifying by this way their learning preferences enlarging by this way their learning opportunities.

R

Redefinition Computer technology allows for new tasks that were previously inconceivable. The teacher may go a step further to help learners enhance their reading comprehension skills offering them the prospects of learning at their own pace with their teacher's supervision or alone; the use of this technology may support the teachers in this enterprise. At this level, the ICT- based tasks support student-centred learning:

For further practice the teacher may propose:

Rewordify lets you read more, understand more, learn more words, and teach more effectively. It simplifies English, teaches vocabulary, creates learning materials, and lets you create documents to teach a global audience. It has many more features, and it's all free.

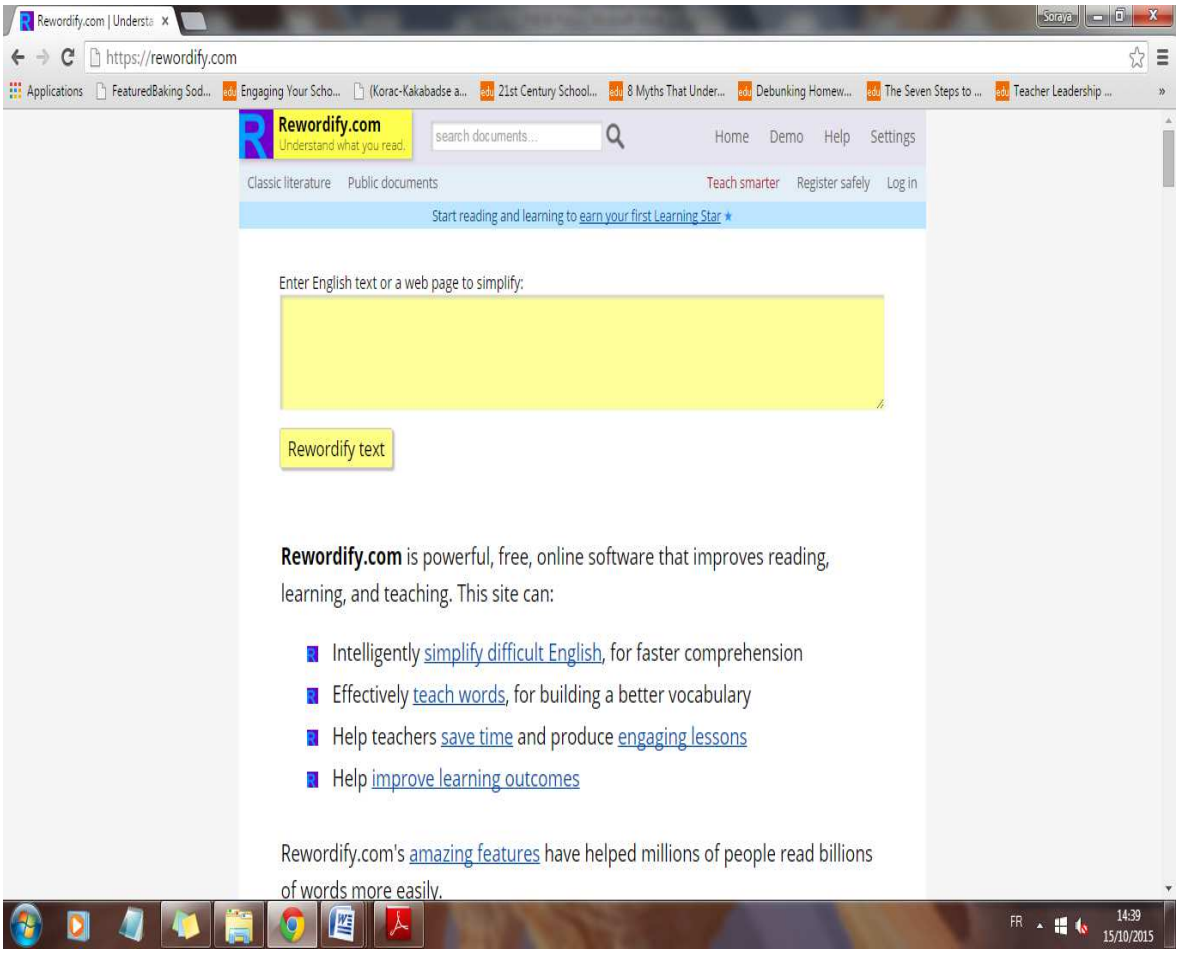


Figure 16: A Snapshot about the Page Menu of Rewordify

(Retrieved from : https://rewordify.com/)

Use of concordancers

Concordance software triggers good results, since it allows the examination of lexical, syntactic, and semantic patterns in various reading passages and contexts (Anderson, 1999: 32). This type of computer program can be a valuable instructional tool to raises students' awareness of the various types of lexical items in authentic contexts and provides non-threatening classroom experiences giving students opportunities to improve reading and vocabulary skills (Butler-Pascoe and Wiburg, 2003: 128).

Figure 17: Snapshot of Linguee

5.4.2. ICT-ESP-based Course through an Integrative Approach to CALL: GHOMARI'S Summer English

The intent of the courses is to develop the communicative competence of EPSECG learners, through internet-based communicative tasks. The platform the researcher used is Edmodo. It offers the possibility to cover many skills in an integrated manner following the teachers' choice of layering communicative activities and choice of ICT tools.

Figure 18: Edmodo Menu Page

5.4.2.1. The Objective

During the first academic year, prevalence is on developing the structural bases of the English language through grammar courses. Besides, vocabulary is studied through economic texts which cover the different themes imposed by the curriculum of EPSECG preparatory schools throughout the country.

English courses are taught 3 hours a week, the sessions are divided into two distinct sessions, one session devoted to the reading comprehension texts and the other to the grammar courses. Oral expression and writing expressions are not taught during the first year. Learners are considered not possessing the pre-requisite skills to go through oral tasks and writing tasks.

No tasks are proposed to build or/ and enhance the communicative and listening competences of the learners.

The objective of these sessions are then to bridge the communicative gap of EPSECG learners through proposing a number of internet- based tasks that aim to develop the communicative and listening skills of learners.

Integrating internet successfully in the English summer schools entails integrating it according to the learners' preferences of communicative usages and presenting the activities that go in accordance with their learning expectations.

5.4.2.2. The Choice of Edmodo

As described on the Edmodo website www.edmodo.com**:** Edmodo is a free and secure social learning network for teachers, students and schools. Edmodo provides classrooms a safe and easy way to connect and collaborate, offering a real-time platform to exchange ideas, and share content,
It is a free online service that requires only a computer, a browser and an internet with smartphones applications for mobile learning (ML).

Edmodo is an online communication and resource sharing tool that takes very little effort to get it set up, the user interface is friendly and quick to learn for the class community. It provides teachers and students with a secure and easy way to post classroom materials, many forms of digital content – blog entries, links, pictures, video, documents, and presentations. Edmodo is used for managing basic class activities; it is considered as a *process* tool where the class initiates discussions or activities or develops older ones initiated during class time. Experience shows that in most cases, once students get over the initial excitement of "Facebook like features, due to its social and interactive applications, they use Edmodo constructively and creatively. Edmodo offers the chance to students to take increased responsibility for learning

Edmodo's class groups are created and managed by the teacher; students need to know the class group code in order to view or participate in the class group; private conversation between students are not possible: students may only communicate to the whole class or the teacher. Also, teachers may choose to receive automatic notification of student postings into the class group.

As far as assignments and evaluation are concerned, the teacher may decide to give polls to check for student understanding, and award badges to individual students based on performance or behavior. They can get the pulse of their classrooms through student reactions to quizzes, making it by this way simple to track students' progress.

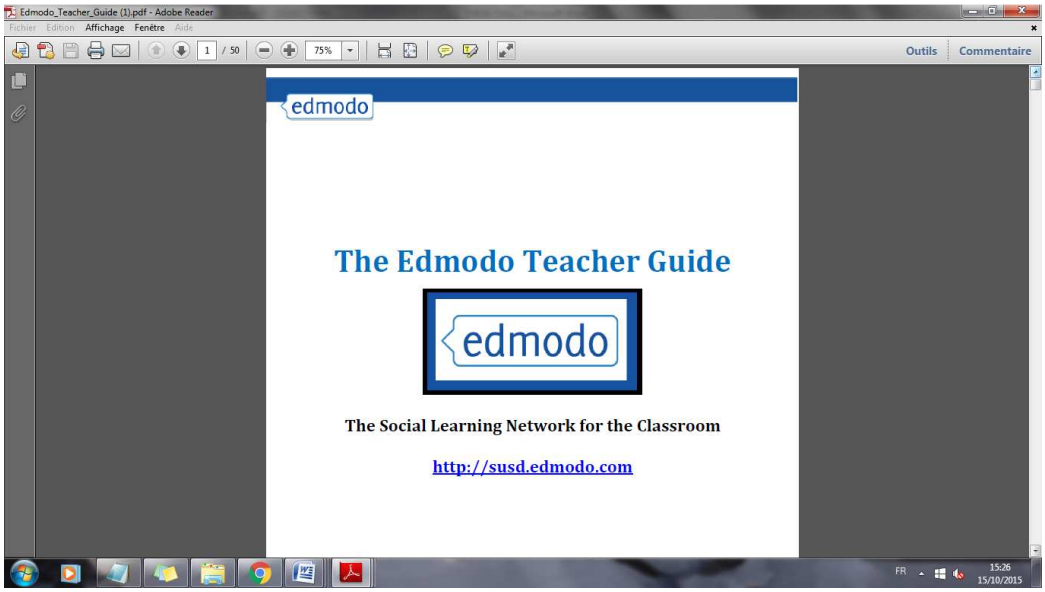


Figure 19: Snapshot of Edmodo Teachers' Guide

5.4.2.3. The Method

5.4.2.3.1. The Pre-Registration Stage

In May 2013 the online language experience were described to students and students were invited to participate willingly to the course; 30 students out of 50 registered: the pre-registration stage consisted of mentioning the full name the class, the phone number and the email address.

The learners expressed some urgent communicative needs and show enthusiasm when the teacher explained his vision and proposed his idea to work together online and develop some communicative skills that were not tackled during the academic year.

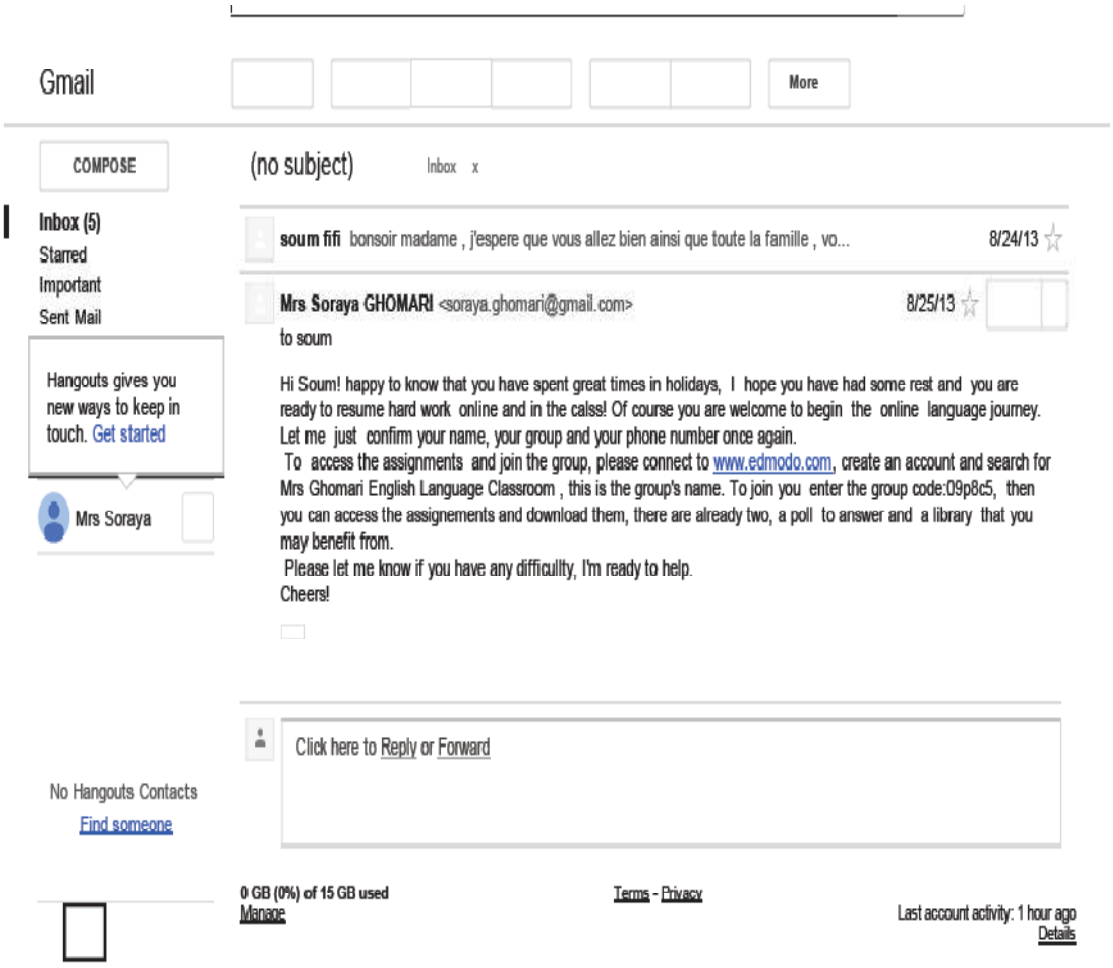


Figure 20: Snapshot of Email Exchange between the Teacher and the Students 1

5.4.2.3.2. The Registration Phase

Learners willing to take part of the four weeks online sessions of the summer English courses fill a registration sheet where their name, surname , age location, perception of their English level are mentioned.

The technologies used for that were: bulk sending SMS to all the pre-registered students that previously mentioned their name, phone numbers and

emails. An SMS of confirmation was sent to them as well as the teachers' email to stay in contact and return back the assignments.

On the other hand an account was created at Edmodo, a community based- e-learning platform.

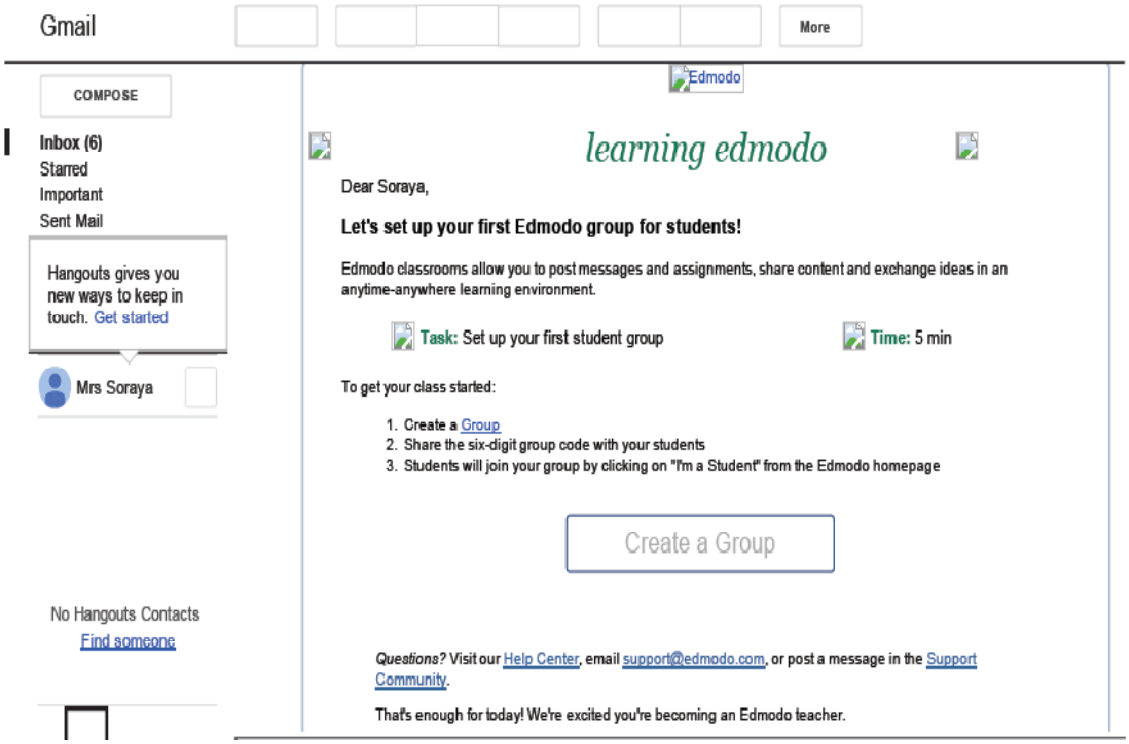


Figure 21: Snapshot of Email Exchange between the Teacher and the Students 2

The teacher creates an Edmodo page and a class group .The students are asked to create an account at Edmodo and a group code is given to them so as the registered persons are the only one to access the assignments and the worksheets.

The number of students pre-registered is 30 all first year students belonging to three different groups ranging from 18 To 21 years old. They come from different regions of the country since only 5 preparatory schools exist throughout the country.

The pre registration phase took place in May 2013 on the basis of personal choice and motivation to participate in the English language online class in summer holidays.

The researcher contacted individually the learners using short message sending. SMS the messages were written in English. The content of the messages asked learners to confirm their name and willingness to participate in the online language experience. The research objective was not explicitly mentioned and the learners accepted or declined the participation for learning purposes only and not to be part of any research experiment

9/30 learners who pre-register in May 2013 confirmed their participation during the first week through sending an email to the earlier mentioned teacher‘s email address specifying their name and corroborate their willingness to participate. The low average of learners participation during the first week may be explained partly because of the period during which the launching of the online course was planned; i.e., the second week of July , also only one week after Aid El Fitr and two weeks before resuming of the academic year; i.e. September , 1st. The majority of people were in holidays, and consequently not necessarily concerned with internet access availability , not ready psychologically to learn but to have fun, to entertain and enjoy holidays.

The choice to do the study during summer holidays was not done at random but for convenience reasons. Actually, students are generally in their respective home towns or in holidays where they benefit from plenty of spare time and relaxation, far from the day to day pressure felt during academic year.

The next stage was to inform them about how to proceed and to access the assignments.

An email was sent to them where they were thanked for showing interest and motivation to participate in the online class. The whole process of creating the account to Edmodo, accessing the group was explained.

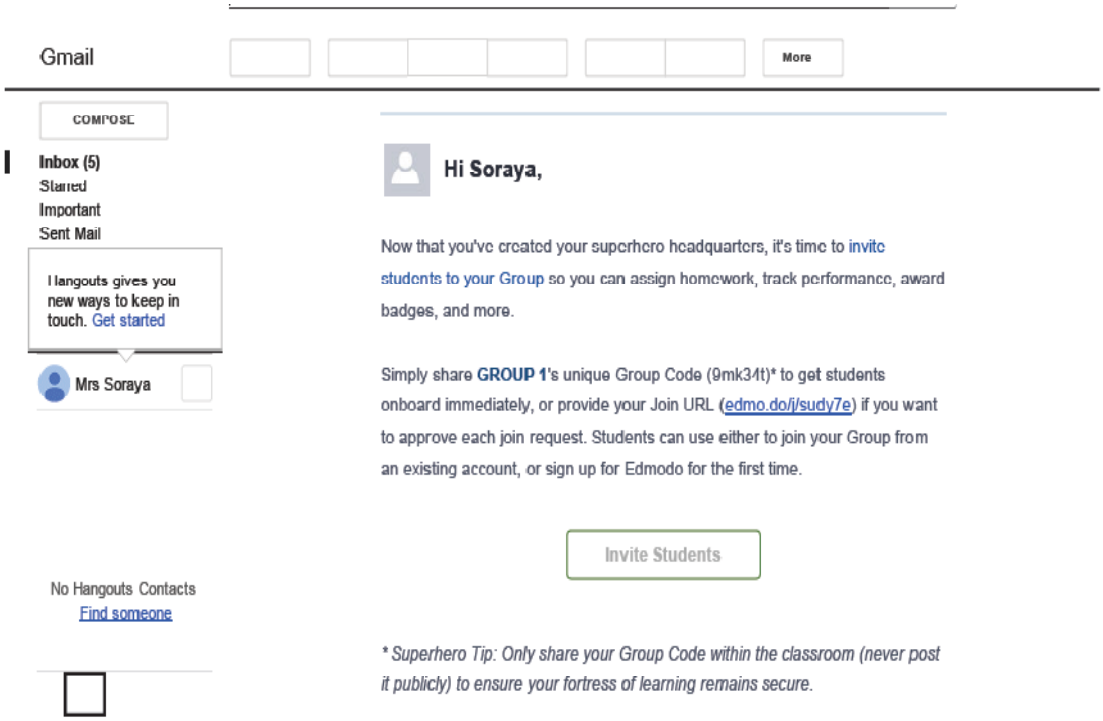


Figure 22: Snapshot of Email Exchange between the Teacher and the Students 3

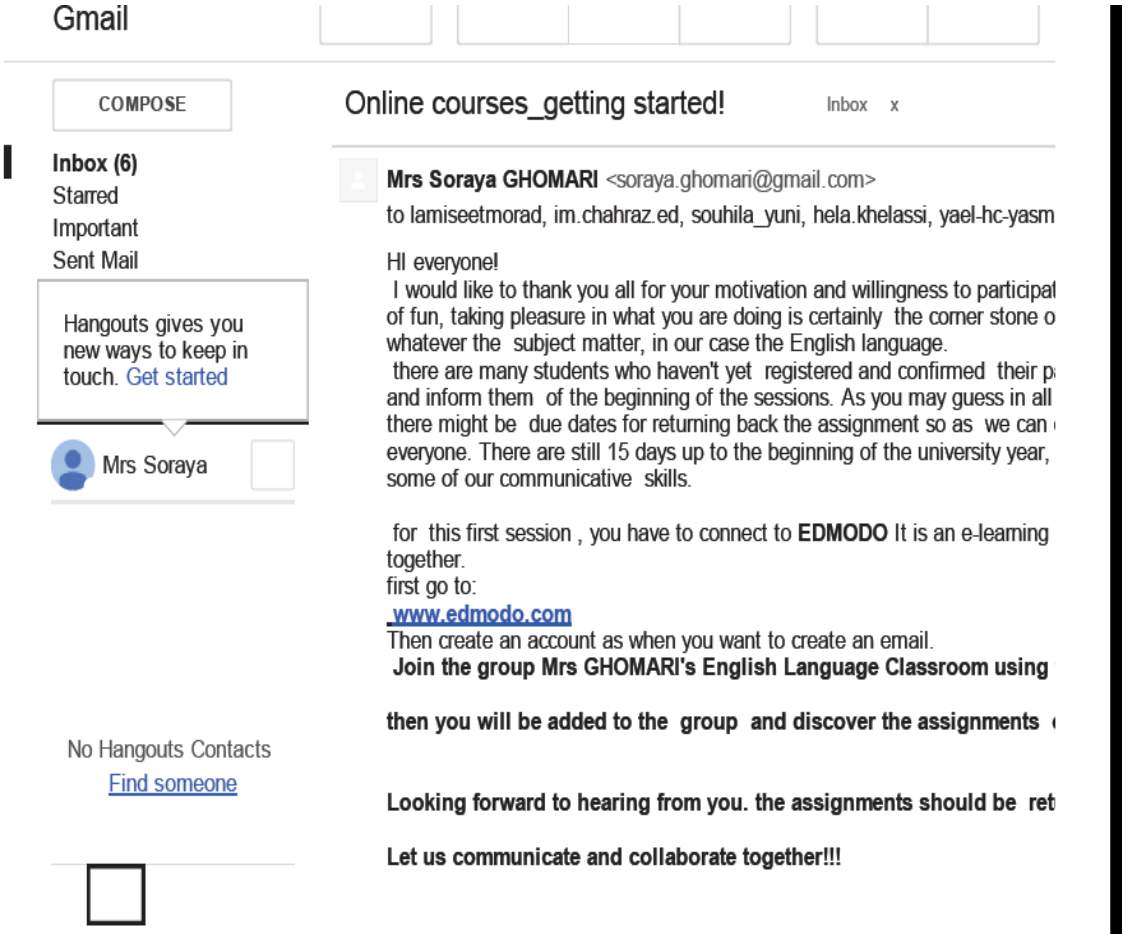


Figure 23: Snapshot of Email Exchange between the Teacher and the Students 4

An account was to be created as a first step at Edmodo by the learners. A code was given to them to access the teachers' class and join the group where all the participants were to gather, access the sent files and collaborate.

An email was sent to the teacher confirming access to the documents and mentioning any encountered difficulty.

The tasks proposed ware adequately tailored to their needs and followed the themes previously studied in class. The objective of the online class which were made explicit to the learners is to bridge the gap of the communicative aspects of the English language which were not covered by the yearly program due to time management constraints and overloaded imposed curriculum.

As far as the assignments are concerned, they are formerly described and the objective underlying them is clearly mentioned. The assignments may be accompanied by notes and alerts and flow of discussions to enable students to collaborate and comment the proposed works.

The assignment was attached and consisted of one video and an attached worksheet where the objective, the timing and the questions related to listening comprehension/ oral expression activities were mentioned. Besides the way to turn in the assignment was explained and consisted of sending the answers through a recording using an audio file via wma extension

The platform enables to supplement the assignment with external links directing or constructing a local library through the upload of files.

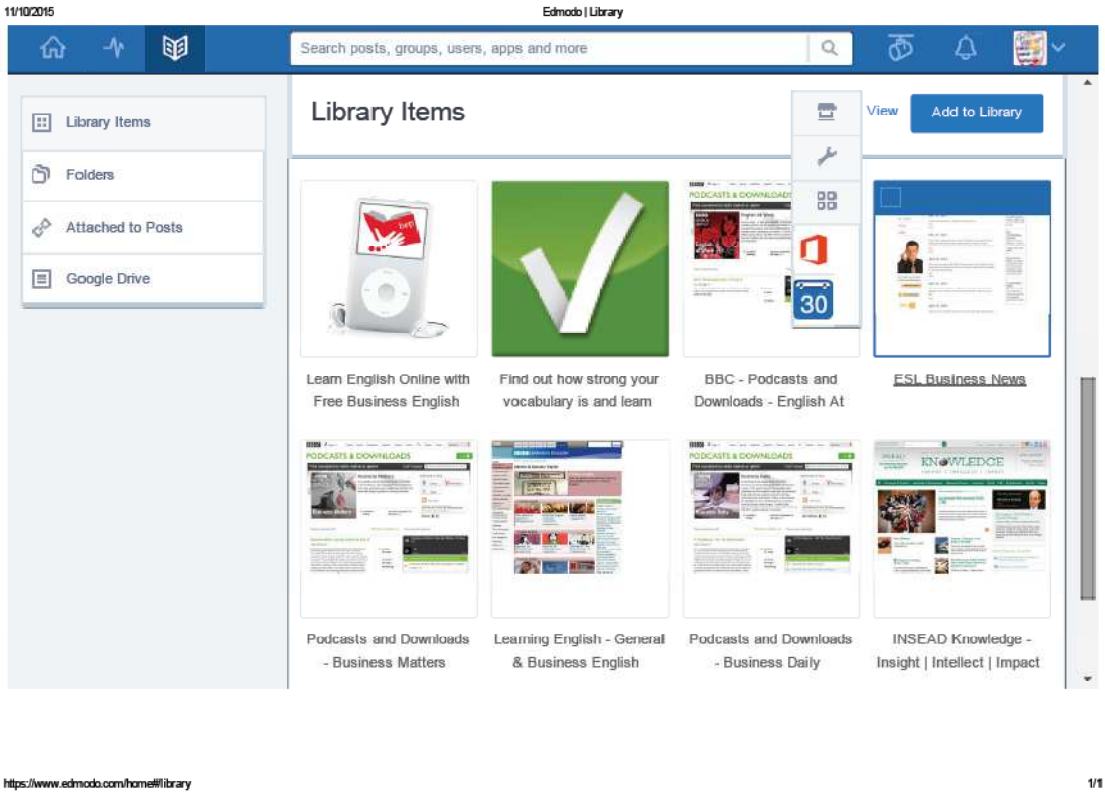


Figure 24: Snapshot of Email Exchange between the Teacher and the Students

5

Alerts and notifications are enabled and students are notified when there is a new note, poll, quiz post or assignment. On the other hand, the teacher may follow the progress of students' activities, turning in the assignments on due dates and any new follow of discussion from any member.

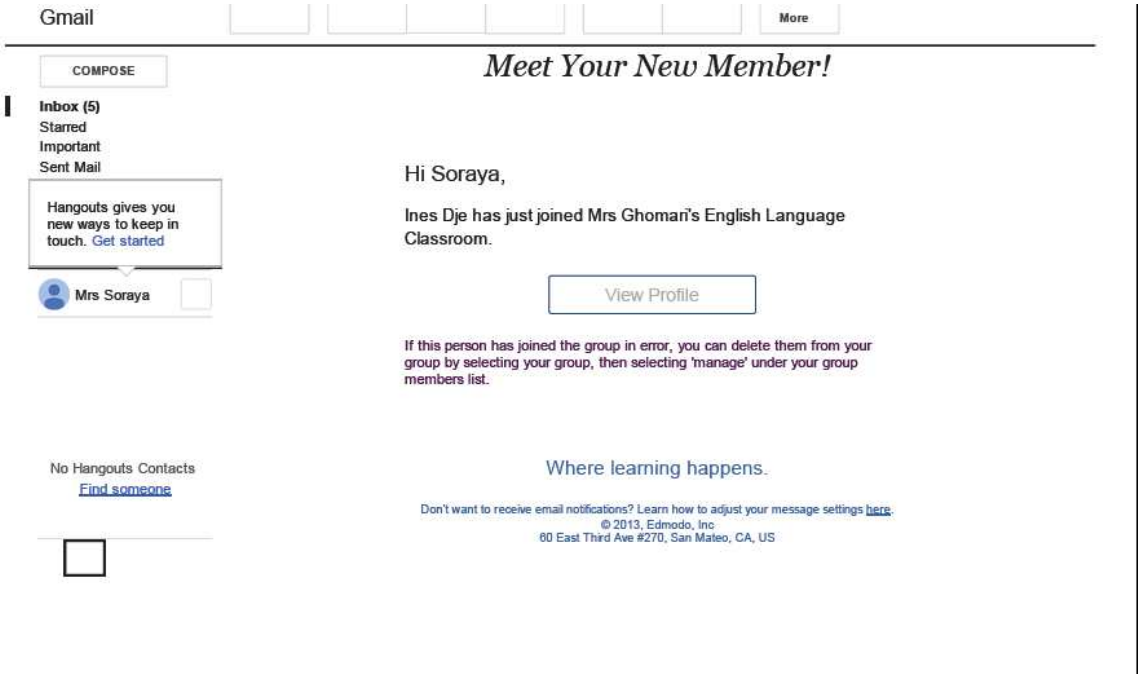


Figure 25: Snapshot of Email Exchange between the Teacher and the Students 6

A poll was sent to the whole group to explore their perception about the usefulness of the tasks in relation to the outlined objectives ; the specificity of the task proposed is that the video covered a theme previously studied during the academic year; the activity was proposed as a sort of revision of the related vocabulary and then consisted of an extension to the already aspects of the language previously acquired/studied; also it was done with the hope of making them tuned to their communicative language objective:

Timing 45 Min

Listening comprehension: forms of business – Part one

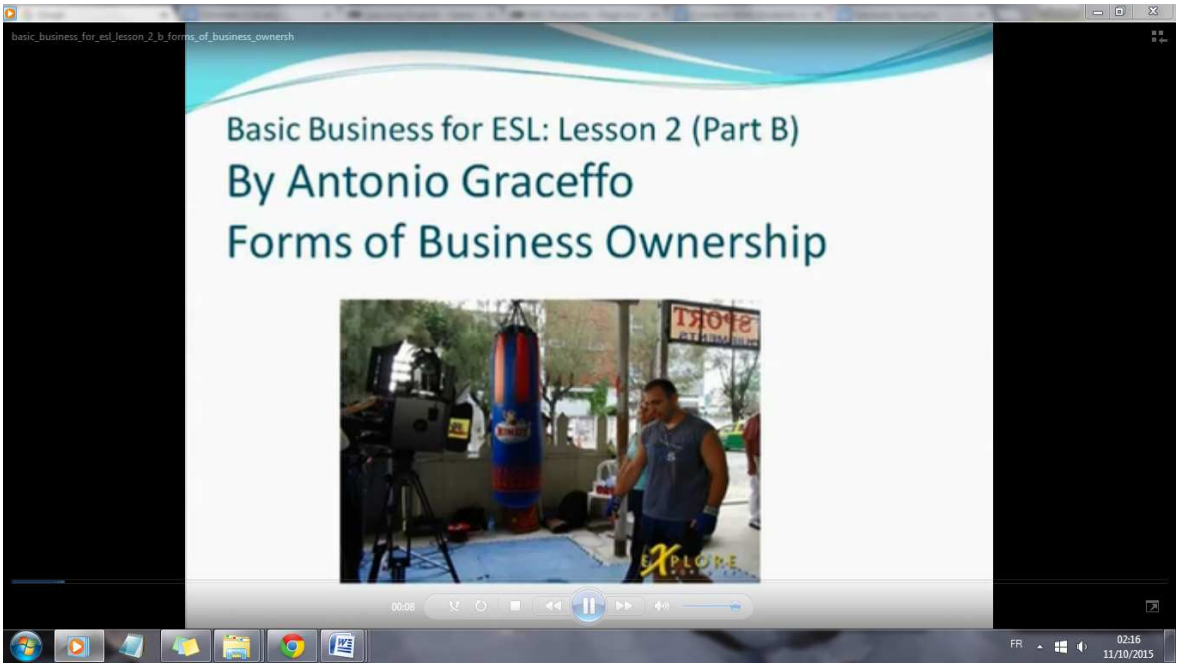


Figure 26: Snapshot of the Video about Forms of Ownership

How to proceed: Go to your Pc menu and click on “démarrer” then on “programmes”, then on “accessoires” and click on “magnetophone” then “load” your answers altogether by specifying the number of the question “ my answer to the first question is….”

- **Please name the audio file by specifying your name followed by the number of the lecture.**
- **Listen carefully to the video “forms of businesses and say whether the following statements are true or false, justify the wrong ones when necessary:**

1. Sole proprietorship companies necessarily involve one worker who is also the only owner of the company.
2. Mc Donalds is an interesting example of a partnership.
3. The partnership agreement is a necessary document between the different proprietors, in which responsibilities of all partners are clearly defined.

Answer the following questions in your own words

1. What are the forms of businesses that were explained in the video?
2. Compare the advantages and the disadvantages of both the partnership and the sole of proprietorship
3. Give an example of what a person may risk if a contract of partnership is not signed by both partners. Do you know a person who encountered such problems? Share the story with us.

5.4.3. Observations and Analyses

2/9 assignments sent on due time, the remaining ones were sent to the teacher's email address and not submitted on the e-learning platform.

Technical difficulty may have influenced the students psychological readiness to carry on the tasks influencing then the submission of the task on due time.

Though the availability of personal contact with the teacher via media (phone, SMS , emails) learners encountering difficulties did not turn back (ask) to the teacher and preferred either to solve the problem through collaborating in private via their Facebook circles or other CMC tools.

It is hypothesized that learners reproduce the same way to resolve problems in class when doing the first task online: when giving a task that is somehow difficult, learners prefer not to turning it in on due date, waiting for the teacher to resolve it. Only few respect due time and follow the teacher's instruction. Learners' autonomy in class situation is reproduced online and those showing motivation in class situation, show it in online class situation.

In addition to that, it is hypothesized that learners not willing to collaborate online in the same platform are more concerned with the final product than by the process of learning and then do not feel that discussing in English with the group members is part of the learning process. They prefer to discuss the item in private and us Facebook to stay in contact, a to collaborate and help each other.

With Edmodo, learners submit their work interact with the teacher access external links, visit RSS feeds, revise already studied lessons download videos, etc. They learn offline and benefit with the many features of face to face encounters. Learning through social networking allows bridge the gap of paralinguistic features, alleviate pressure, motivate learners, helps them to feel psychologically surrounded etc reducing by this way the last decade's problems of learning within the four walls environments and learning online which is enjoyable. With Edmodo, we open the doors of learning to the outside world that is connected, global, full of resources, networked and social.

Figure 27: Edmodo accessed on 25th August, 2013

However, while increasing numbers of students and teachers are reaping the benefits of the opportunities provided by digital technologies, the transition from experimental trials to a deeper change in teaching and learning practices will require an integrated approach at a 'whole university' level.

ESP curriculums as they have been designed until now could not respond to the evolving communicative needs of the workplace because they are designed

independently from the actual economic concerns of the country relying on no more than purely individual visions about what would be considered as the workplace's linguistic demands.

To design an ESP course using ICT within the psycho-pedagogical framework helps us to decipher the number of limitations and challenges that an ESP teachers and/or an ESP designer could face during his enterprise. The issues may be or different type: pedagogical, technological, content-related, teacher-related or learners' related, or even an interplay of several ones.

According to Trajanovic, Domazet, Misic-Ilic (2007) some basic issues concerning course development, especially of a university language course are:

- To determine the level and proportion of general language and ESP
- To focus on all four language skills (listening, speaking, reading, writing) and their integration
- To include additional elements, specific for academic purposes, such as basics of academic reading, writing and oral presentation
- To select and/or create appropriate teaching materials
- To co-ordinate these two different teaching and learning media (the traditional one, in the classroom, and the e-learning one)
- To provide approximately the same options and tasks for both categories of students,
- Taking care that e-learning students do not get deprived of some usual communication activities.

Teachers are not always aware about their learners' learning styles and less aware about their use of the internet to learn, to entertain or to practise language. According to us a better understanding of these aspects is prerequisites for an effective use of ICT in educational settings. In addition to that a thorough understanding of the advantages and limitations of ICT related applications, including social media and SCMC tools are important. For that to be possible, a techno-

educational scanning is necessary that help educators to shift from traditional ways of instruction to more learners centred and technological based.

Successful ICT integration in a t/learning context requires the implementation of strategic organization that is not possible if unless supported by a suitable change process not only at a technological level but also on a psychological and a pedagogical one) Technology is a means, not an end, toward that goal. The strategic use of information technology can enhance student involvement in his learning then helping him to maximize his chances of success.

Instead of looking at the best theory to enable us modify individuals 'behaviour towards adopting a certain way of doing things, in our case persuading learners to integrating technology in their learning process of foreign languages, constantly pushing teachers to adopt technology, we posit the hypothesis that it is more useful to understand what are the underpinning factors which make them change, initiate a change and maintain it.

This implies a shift in the tenets of their profession. More specifically teachers have to embody the role of facilitators and displaying a new set of skills, creating challenging environments for learning to occur. This is what is referred to as paradigm shift. It is then more convenient to consider the idea of a paradigm shift from a change in focus:

- shift focus from teaching to learning;
- shift focus from intention to results; and
- shift focus from working in isolation to working in collaboration.

For Allen the challenge for each teacher lies in "*finding ways to apply new technologies to a learning process with proven educational benefit*". The same task may be presented using different ICT tools. It is worth noting that the final end of language learning task is to enhance one or many aspects of language and not the display of ICT expertise. The teacher should pay attention not to be distracted by the technological aspects at the expense of the learning outcome.

As teachers, we should therefore keep in mind that technology will assist language learning provided that it is applied appropriately.

It should be ensured that three above abilities are integrated into the course. This is a difficult task due to the necessary time that ESP course designer possess, the amount of information that are necessary about the employment setting and the related- communicative activities. Close collaboration between field experts and the ESP course designer is necessary; however it was not possible during the development of the above ICT-ESP based course.

Enough technological knowledge as well as technological pedagogical knowledge is also of paramount importance because it enables to focus on specific language aspects and provide the remedial works in terms of appropriate communicative tasks and ICT choice of tools. Koeher and Mishra's model proves important at course level development using ICT tools to specify the type of involvement of each teacher on the basis of his knowledge areas and degree of involvement.

A holistic approach should be put forward in the repertory of needs at the workplace in terms of tasks rather than on learning targets. No boundaries should be envisaged between academic and professional spheres so as to help teachers to raise learner' awareness about their language learning objectives and support them to construct a coherent learning path in accordance to their future work objectives.

As John Dewey said "You cannot teach today the same way you did yesterday to prepare students for tomorrow.", we need to make sure that our students – the 21st century learners are getting the great education they'll need in the future Providing all students with 21st century skills and making education relevant to today's world are critical to closing both the achievement gap and the global competition gap.

The ESP teacher alone is not in the best position to identify changing occupational needs of future employees and then a simple learner's needs analysis

cannot be to cater for future communicative challenges. Effective future needs analysis model should be based on updated concepts of communicative competence.

Field experts, teachers (with their specific knowledge of language studies, knowledge of pedagogy and technology) should collaborate and act as co-designers in the process of ESP course development , where knowledge of professional field, professional jargon, professional communication, and routine communication exchanges are all important and specify the complex nature of professional environment.

Teachers in particular should be given the opportunity to update, extend and acquire new skills so that they are better equipped to meet changes in the workplace and in society at large as well as putting them in the situation where they can pass on such skills to their learners.

The design of ICT- ESP based courses that are successful and reflect a sound mixing of pedagogy, psychology and technology. Consequently, effective ICT integration in ESP courses is not the sole responsibility of ESP teachers. ICT effectiveness is dependent on:

- Teachers ‘works in collaboration (ESP teachers with varied ICT degree of expertise)
- Fields experts and ESP teachers’ work in collaboration,
- development of a common vision
- development of a strategic plan
- institutional ongoing technological and pedagogical support (workshops,

The aim of ICT-ESP based courses is to enhance the communicative competences of learners and turn them into actual users of the language in the work environment. They should be able to overcome communicative problems when they arise; using effectively the available clues and communicative strategies they developed during their study days.

5.5. Conclusion

This section proposed an attempts of an ICT-ESP based course relying on the SAMR Model of ICT integration. The researcher attempted to design the courses within a psycho-pedagogical framework which considered the specificities of the educational context under study, as well as the psychological and the pedagogical individuals- related variables.

The premise of this course was a basic reading comprehension text which the researcher enriched with the support of ICT tools following a spectrum of ICT integration referred to as the SAMR Model. The teacher is them able to enhance or transform many aspects of the course either through substitution, augmentation, modification or redefinition of the course.

Adequate instructional approaches using ICT will offer learners the opportunity to pursue their own language learning goals with confidence and greater autonomy. Helping students to use different technologies to respond to different learning challenges is important. Assisting them to make a strategic use of technology duplicates opportunities for effective learning experiences outside the realms of the classroom.

One important element brought to light is that of the commitment to time, efforts, and driving force to ICT integration and maintenance in teaching and learning context require. Indirectly, this presupposes for teachers that there is a willingness to evolve, to act differently and to professionally ensure quality education for all.

GENERAL CONCLUSION

The aim of this research work is to explore the feasibility of a framework design which would integrate ICT tools in an ESP course at EPSECG of Oran

All institutions have made educating learners a critical priority. With the advent of technological advances, the challenge that educators and language teachers face is to make the best use of these ICT tools to both meet academic objectives and help learners take charge of their learning processes. Transforming education through information technologies involves primarily a prior knowledge of their potentials and limitations in the attainment of the educational goals.

In view of recent approaches to learning and teaching, a strategic use of information technology can enhance students' involvement in their learning processes.The hypothesis that we move forward is that learners may become communicatively competent and bridge the communicative gap in the workplace with ICT effectively integrated in ESP. This could be possible if (1) psychological as well as pedagogical obstacles regarding ICT are defined and alleviated, and (2) actual workplace communicative needs and challenges are defined and analyzed in view of developing a matching ESP curriculum.

The research work is organized into five distinct chapters. It will be made up of qualitative and quantitative data obtained from questionnaires to teachers and learners and regional economic actors, a learners' focus-group interview as well as a SWOT analysis of the language environment at EPSECG.

Through the research work, the researcher will attempt to answer the research questions:

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT in general and ESP in particular?
2. How can we define a successful ICT integration in ELT?
3. What are the prevailing attributes of success related to ELT in general and ESP in particular?

4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?
5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG.

The specific hypotheses of our research work are as follows:

1. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of a reasoned and principled integration of ICT in English teaching/learning contexts.

2. Both EPSECG's learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.

3. Understanding the possible resistance to change related to ICT uses in ELT in general, and ESP context of EPSECG in particular, helps identifying the necessary strategy to follow in order to overcome the pedagogical and psychological obstacles.

4. Uncovering the type of language learners' ICT uses is important to meet their learning needs and preferences and propose adequate ESP activities.

5. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data (the environment, the learners and the teachers) and propose a practical framework that accounts for the evolving nature of teachers' and learners' pedagogical and psychological specificities.

This research work attempts at outlining the psycho-pedagogical principles that are necessary for an effective ICT integration in an ESP context. The assumption is that it is a prerequisite element for providing an appropriate structural framework

likely to meet students' relevant interests and teachers' expectations in terms of academic attainment and 21st challenges.

As language teachers of EPSECG, the ultimate goal that we would like to attain is to facilitate the teaching and learning of ESP through ICT. Novelty in teaching practices is a sensitive educational issue. To assist teachers grasp the whole potential of the technological tools it is necessary to gauge individual perceptions and attitudes. This could be a tough task and subject to individual skepticism. Individuals may be asked to unveil what constitutes psychological and social weights regarding the acceptance or resistance of novel situations, practices or change in general. In fact, integrating ICT in education could be perceived differently depending on individuals' background experiences. Individual teachers may then welcome positively and accept change; while others may resist change or simply lag behind before redefining and transforming their teaching practices.

Indeed, gaining in-depth understanding of the pedagogical and psychological aspects that are necessary to an effective ICT integration in the foreign language setting in Algeria, will help teachers to respond to students' needs and expectations.

. On the other hand, learning could not stand aside from any innovation. If some teachers are slow to react, learners (GenY) exhibit their new fences and claim out loudly their preferences in terms of accessing and collecting information or constructing knowledge, to cite a few. Teachers, then, are urged to shift their methods of instruction within innovative educational approaches.

In an ever-changing work environment, teachers need to adapt and learn new skills. Communication has become an essential skill in any professional environment and language teachers have the educational responsibility to prepare learners to meet the 21st challenges. Most of the time considered as one of the most important benefits of the use of ICT in education, the autonomy of learners remains an ultimate goal in itself. To reach this goal is somehow to fulfil the objectives of contemporary education that advocates active involvement of all the actors of the educational system; including the educator, the learner and the context in which it evolves.

ICT has certainly revolutionized the way people access information; however the way it is adopted, or implemented in any of aspects of our life is subject to

individual understanding about the limits and possibilities. It is not an *a priori* taken for granted added value. More importantly, this idealistic perception is neither benefitting the teaching and learning of English nor helping educators to grasp all the potential of ICT tools. Instead, it minimizes the attempts to understand the deep-seated factors that may assure its successful integration and contribute by this way to enhance successful language learning experiences.

In the same vein, though experts wholly agree on the inherent potentials of ICT as a lever for change and an opportunity for increased quality education, and effectiveness, they emphasize that, not enough attention is being devoted to questions of how it systematically aid language learning. As teachers and practitioners, we consider that for effective ICT integration to occur, it is necessary to evaluate objectively our practices, and specify clear pedagogical objectives so as to design an adequate framework that assists educators to meet both their educational goals.

To better meet the increasing communicative demands of the workplace, designing a practical framework for an ICT-ESP based course at EPSECG seems of paramount importance. For that a structural systematic research approach should be envisaged.

To achieve this objective, it seems to us interesting to proceed in three phases:

- Firstly, to identify the communicative needs of the economic actors;
- secondly, to survey EPSECG learners' needs in terms of ICT-related educational perceptions, and internet-based practices .Put it simply, we intend to explore how are these practices perceived and envisaged to enhance the English language learning process; and
- Thirdly, to unfold the attitudes and perceptions of English language teachers at EPSECG using ICT tools in their instructional practices. We attempt to find out possible pedagogical obstacles and/or psychological barriers that may hamper its possible effective integration.

The three phases study seems to us a prerequisite to design a psycho-pedagogical framework for ICT-ESP based course, and plan an effective strategy to

alleviate the barriers that constrain its implementation in the cited educational context; and consequently impede the communicative objective which we endeavor to reach. As a matter of consequence:

- English in the workplace should be analyzed in view of proposing a fitting English language variety
- and translate it pedagogically in terms of and appropriate tasks and content curriculum.
- Relevance and efficiency are two factors to consider when designing a framework that aims at bridging the gap of a communicative competence of English in the workplace
- Effective ICT integration is tightly linked to 21st century learning that sees it as being communicative, collaborative, favoring critical thinking to name a few.
- A new approach to learning and teaching with ICT is necessary if one is to expect effective learning experiences to occur.

Through our research work it seems apparent that ICT integration in ESP imposes on us to ensure consistency between the pedagogical, the psychological and the technological variables to fulfill the educational goal we intend to achieve.ICT successful integration in a teaching/learning context requires the implementation of strategic organization that is not possible if unless supported by a suitable change process not only at a technological level but also on a psychological and a pedagogical one.

We expect that a successful ICT integration depends upon the development of a shared vision. ICT policy-makers need to realize that teachers shouldn't be excluded from school policy planning. ICT successful integration in a teaching/learning context (confidence, workplace welfare, self efficacy these enhance motivation, involvement and engagement leading to positive performance, through individual goals setting and responsibility, a sense of ownership, look management of change)

As a summary, researchers concur that teaching English through ICT tools should be framed not only around the tool; but mainly around the 21st century learners. Teaching and learning is a tandem where psychological, pedagogical and

cultural variables melt together imposing a kind of continual adjustment to balance between the evolving needs of learners and the requirements of the curriculum goals. To ensure more effective and truly sustainable learning teachers should be assisted in their educational transition to meet the specificities of the new educational paradigm and propose innovative ways in their teaching practice.

Teaching a foreign language through ICT may constitute a huge challenge for teachers if they lack the grounding concepts that underpin an effective use and integration of these tools. The assumptions made about how teachers should teach and learners learn through ICT integration involves an overall analysis about the outer dimensions that affect an effective framing of a psycho-pedagogical climate.

The design of an ESP course using ICT within the psycho-pedagogical framework helps us to decipher a number of limitations and challenges that an ESP teacher face during his enterprise. The premise of our ESP course was a basic economic Reading Comprehension task which the researcher enriched with the support of ICT tools following a spectrum of ICT integration referred to as the SAMR Model. The teacher has the possibility to enhance or transform many aspects of the course either through substitution, augmentation, modification or redefinition of the course. Teachers may chose to completely or partially modify their teaching practices or redefine their whole approaches to better suit underlying assumptions of ICT-aided instruction. For learners, this may mean to discover other ways to access information, resolve problems, work in collaboration, leading to an enhancement of their learning styles and then increasing opportunities to learn.

To maximize the potentials of ICT in ESP, attention should be paid to issues of culture of learning and culture of teaching. Developing a new culture of learning using technology input, interaction and feedback are the three primary benefits of these technologies to offer authentic language experiences, reduce affective loads, increase motivation, and offer opportunities for flexible self paced activities. Indeed such an approach is to confront actual cultures of teaching and learning using ICT, to balance the possible correlations and disparities with what would constitute an ideal effective integration of ICT and implement the necessary changes to make the paradigm shift possible.

Definitely, understanding the possible resistance to change related to ICT uses in ESP context of EPSECG helps us identify the necessary strategy to overcome the pedagogical and psychological related obstacles. Actually, as far as pedagogical considerations are concerned, a good convergence between objectives, methods when using ICT tools, is not enough to ensure effectiveness. Commitment to time, collaborative efforts, and leading management underneath in-depth reforms are of paramount importance. Professionally, this presupposes that there is a willingness to evolve, and act differently.

Understanding the reasons behind behavioral change is essential in order to allow effective learning to take place. Some psychological theories guide us to understand behavior while others help us intervene for behavioral interventions. The Transtheoretical Model of Behavior Change, for instance, assesses an individual's readiness to act on a new behavior, and provides strategies of change to guide individuals to act and or/ maintain a behavior .

For that to occur the following considerations should be taken into account:

- A clear understanding about the roles and responsibilities of all the members during the planning phase of ICT integration is a prerequisite for future successful prospects.
- Creation of a common vision is an important element for an effective ICT integration to occur, a number of conditions should be met.
- A change of perception towards the pedagogical beliefs is necessary

The planning process should be managed by all the stakeholders: teachers, staff and student. The primary focus is on developing a plan for using ICT as a tool to improve teaching and learning.

A holistic approach should be put forward in the repertory of needs at the workplace in terms of tasks rather than on learning targets. No boundaries should be envisaged between academic and professional spheres so as to help teachers to raise learner' awareness about their language learning objectives and support them to construct a coherent learning path in accordance to their future work objectives.

Field experts, teachers (with their specific knowledge of language studies, knowledge of pedagogy and technology) should collaborate and act as co-designers in the process of ESP course development , where knowledge of professional field, professional jargon, professional communication, and routine communication exchanges are all important and specify the complex nature of professional environment.

The ESP teacher alone is not in the best position to identify changing occupational needs of future employees and then a simple learner's needs analysis cannot be to cater for future communicative challenges. Effective future needs analysis model should be based on updated concepts of communicative competence.

The design of ICT- ESP based courses that are successful reflect a sound mixing of pedagogy, psychology and technology. Consequently, ICT effectiveness is dependent on:

- Confidence
- Collaboration
- Development of a common vision
- Development of a strategic plan
- Ongoing technological and pedagogical support

Building confidence when using ICT tools through the SAMR Model of ICT integration, allows teachers to go smoothly through the upper levels of the SAMR ladder using a process-oriented approach that allows confidence and skills building in a non-threatening environment.

As far as limitations are concerned, the present research work, within the time constraints and the actual available information could not cover some important issues:

1. Research needs to be conducted to measure how informal learning experiences contribute to the whole learning process and thereby affect learners' achievements using ICT out and in educational contexts,

2. Developing objective measuring methods of specific knowledge areas to assess the effects of different ICT tools on specific learning experiences
3. Measuring the effects of specific uses of ICT with specially designed instruments
4. Measuring the long-term impact of ICT on the development of new skills,
5. Measuring the effects of specific uses of ICT on students' approaches to learning generally

For future studies, additional factors should be considered. It seems to us as a prerequisite if ESP pedagogy is to be transformed and learning to be enhanced.

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Appendices

- **Appendix A :** Questionnaire to Teacher Information and Communication Technology Usage Survey
- **Appendix B :** Questionnaire to Learners
- **Appendix C :** The Learners' Focus Group Interview
- **Appendix D :** The Economic Actors' Questionnaire
- **Appendix E :** The SWOT Grid Analysis: a Summary

Appendix A

Questionnaire to Teachers

Information and CommunicationTechnology Usage Survey

Software Usage

Software Usage	Good	Average	None
Word Processors (Word etc)			
Spreadheet (Excel)			
Presentation software (Power Point)			
Databases (Access)			
Computer Aided Instruction Software			
Web page Development Tools (Front Page, Dreamweaver)			
Web Browsers (Nescape, Mozzila, Explorer, Google Chrome)			
Search Engines (Google, Yahoo, Bing)			
Electronic Mail (Email)			
Discussion Lists and Newsgroups			
Chat and/ or Forum			
Electronic Encyclopedia and /or Atlas			
Instructional Films (video, CD, VCD, etc)			

Usage of Instructional Tools and Materials

Usage of Instructional Tools and Materials	**Frequently**	**Sometimes**	**Never**
Overhead Projector			
Opaque projector and/or Document Camera			
Multimedia Computer			
Computer- Projector System			
Internet/Web Environment			
Television/Video			
Radio Cassette Recorder			
Video Camera			
Slide Projector			
Printed Matirials (journals, books,worksheets, etc)			

Professional Development about ICT

Professional Development About ICT	**I prefer**	**Neutral**	**I don't prefer**
Information Resources			
Internet			
Printed Materials (Manual or Journal, Etc)			
Self Experiment			
Participating Seminars or Taking Courses			
In- Service Education			
Support Resources	**I prefer**	**Neutral**	**I don't**

			prefer
Experienced Teachers on ICT			
Colleagues			
Other colleagues in different schools			
Technical support units in the schools			

Factors that Encourage Technology Usage

Factors Encourage Technology Usage	**Important**	**Neutral**	**Not Important**
Rewarding The Technology Usage Efforts of Teachers in Instructional Activities			
Investment of The Institution on Infrastructure of Instructional Technologies			
Investments of The Institution on The Support Services of Instructional Technologies			
Developing The Policies And Plans for Diffusion of The Instructional Materials			
Providing Support for The Projects Towards The Expansion of Instructional Materials			
Carrying Out The Studies For Integration of Technology Into Curriculum			
Reducing Work Load to Provide Opportunities to Teachers for Developing Instructional Materials			

Perceptions about use of ICT

Perceptions about use of ICT	Agree	Neutral	Disagree
I don't use computers as much as other resources (books, overhead projectors, etc.) for instructional purposes			
I know what to do for using computers in instructional environments			
I am aware of the opportunities that computers offer.			
I can answer any question my students ask about computers			
I am not sure that I am computer-literate for use computers in my classes			
I don't want to use computers			
I think that I can use instructional technologies in class activities more effectively day by day			
I believe that tools like email, forum and chat will make communication with my colleagues and students easier			
I think that technology supported teaching makes learning more effective			

I think the use of instructional technologies increases the interest of students toward courses			
I think the use of instructional technologies increases the quality of courses			
I think the use of instructional technologies makes it easier to prepare course materials (assignments, handouts, etc)			
It is hard for me to explain the use of computer applications to my students			
I can handle different learning preferences of my students having different learning styles by using instructional technologies			
I think technology makes effective use of class time			
I think technology makes effective use of class time			
I think technology makes effective use of class time			
I don’t prefer to be assessed about my instructional technology based applications by any other professionals.			

Barriers to technology usage

Barriers to technology usage	Agree	Neutral	Disagree
Inefficient time to prepare materials based on technology			
Inefficiency of teachers' technical knowledge to prepare materials based on technology			
Problems about accessibility to existing hardware (computer, overhead projector, etc)			
Inefficiency of institutions computer laboratory			
Inefficiency of institutions technical infrastructure about instructional technology			
Inefficient number of media (printer, scanner, etc) for effective use of computers			
Shortage of computers used by teachers			
Absence of reward systems for encouraging technology usage			
Poor technical and physical infrastructure of learning environments			
Inadequacy of computers used by learners			

Inefficiency of guidance and support by administration			
Inefficiency of financial resources for technology integration			
Inefficiency of instructional software/ electronic resources			
Scarcity in resources on technology for attaining information			
Deficiency in support services in material development/technology usage			
Lack of interest of teachers in technology usage Difficulties of improper teaching methods for technology usage			
Inadequacy of the courses of technology offered to students			

Appendix B

Questionnaire to Learners

Please help us know more about your preferences using information and communication technologies (ICTs) tools when learning English as a Foreign Language (EFL) by answering the following questions as objectively as possible. The information provided will remain anonymous and will be used only for research purposes.

-I-

Male…… Female…… Age……. Hometown……..

What was your mark of English in the Bac Exam?

……

-II-

How do you evaluate you level of English? (underline the proposition you chose)

Elementary Intermediate Advanced

what are the difficulties you encounter when learning English? (underline the proposition(s) you chose)

- **Reading Comprehension**
- **Listening Comprehension**
- **Oral Expression**
- **Written Expression**
- **Grammar**

How do you evaluate the level of the activities proposed in the English language classroom? (Reading comprehension texts and grammar lessons) (Underline the proposition you chose)

Easy **Intermediate** **Difficult**

What do you think about the time allocated to the English language sessions? (Underline the proposition you chose)

Sufficient **Not Sufficient**

Among the following propositions, what is the one that best describes your vision of English in terms of importance? (Underline the one you chose)

- **English is important for me in my studies**
- **English is not important for me in my studies**
- **English is important for me during my studies and in the future**
- **English is not really important for what I intend to do in the future**
- **English is not really important in the present situation but it will be very important in my future career.**
- **English is not really important for my future job but it is still important to learn as an international language nowadays.**

What are the economic sectors /jobs that you intend to be employed in?

……

-III-

According to you, what should be done in order to make the English sessions more interesting? (underline the proposition you chose)

- **Changing the teaching methodology**
- **Developing the oral/listening/written expression skills**
- **Integrating information and technological tools in the teaching /learning process**
- **Adding the number of hours devoted to the teaching of English per week.**
- **Others, please suggest propositions.**

……

According to you which technology among the following ones is the most interesting nowadays? (Underline the proposition you chose)

- **Internet ansd associated applications(social media, chats, emails, surf, download, etc)**
- **mp3 readers**
- **mp4 readers**
- **smartphones and their associated applications**
- **tablettes**
- **notebooks**

Please explain your choice (s)

……
……
……
……
……
……

Do you use one/ some of them? Which one/ ones?

……

Do you use one/some of them in your English learning? Which one/ones?

……

Please explain your how you use it (them) for educational purposes.

……

Do you think that teaching foreign languages, English should be more technologically-based?

Yes **No**

Why?

……
……
……

Thanks for your collaboration

Appendix C

The Learners' Focus Group Interview

The questions that we have asked to students are as follows:

- What do you think about your level in English till now?
- Do you practice English between friends? If no, why?
- What are the constraints that you are facing that prevent you from communicating orally?
- Do you use English when doing group projects?
- Do you present academic works in English, apart during English courses?
- According to you, why is English important nowadays?
- Do you think that you will need English for your future life?
- Do you use English when you use internet? How?
- Do you encounter any difficulties when working on the internet without your mastery of English?
- Do you intend to develop your English language in order to take benefits of your internet use?
- Do you think that internet helps you develop your English learning, how?
- What are the internet applications that you use in which you use English?
- What could teachers do to assist you meet your English communicative needs?

Appendix D

The Economic Actors' Questionnaire

OPERATEURS ECONOMIQUES vs EPSECG : DEFIS LINGUISTIUQES

Introduction

Ce questionnaire vise à examiner les contraintes linguistiques et communicationnelles que rencontrent les opérateurs économiques en terme d'anglais comme langue internationale à tout développement économique à l'internationale. En nous aidant à répondre à ce questionnaire, nous pourrons non seulement rapprocher opérateurs économiques, spécialistes de langues étrangères et responsables des préparatoires mais aussi à joindre nos efforts respectifs pour mieux cerner les problèmes et surtout de trouver des solutions adéquates.

Les informations fournies ne seront pas disséminées pour des besoins autres que ceux de la recherche afin d'apporter des réponses concrètes aux préoccupations communicationnelles des entreprises d'une part et du but suprême des écoles préparatoires de fournir au marché du travail des personnes qualifiés qui soient capables d'allier compétence technique et linguistiques nécessaires dans un monde hyper-connecté et régit par l'économie de marché.

Pour répondre veuillez souligner votre choix de réponse avec une autre couleur. Merci

SECTION 1 :

Informations sur L'entreprise

1. SECTEUR D'ACTIVITE :

2. NOMBRE D'EFFECTIF : 0-5 5- 15 +20 +50 + 100

3. PRODUITS : SERVICES PRODUITS

4. ACTIVITES : INTERNATIONALE NATIONALE REGIONALE

5. DATE DE CREATION DE L'ENTREPRISE

SECTION 2

Besoins Linguistiques

Quel est le département /secteur de votre activité qui nécessite les besoins en langues anglaise

……

Choisissez vous votre partenaire étranger par rapport à votre maitrise/ou pas de la langue anglaise ?

……

Pensez vous que la non-maitrise en langue anglaise est un frein à votre développement économique ?

……

Quelles sont les aspects de l'anglais qui sont souvent indispensables dans votre travail ?

- L'écrit technique (correspondance, emails, traductions, présentations, rapports d'activités, etc.)
- L'écoute et la compréhension (lors des négociations, signature de contrat, rendez-vous d'affaires, conférences audio ou vidéo (Ex : téléphone, Skype), etc.)
- L'expression orale : négociations, déplacement à l'étranger, présentation des produits de la société, etc.
- La lecture et la compréhension du document technique : rapport technique, correspondance ,etc.)
- Tous les aspects de la langues,

Vous pouvez cocher plus d'un choix.

SECTION 3

Votre expérience de terrain nous intéresse : point de vue et commentaire

<u>Dans votre entreprise qui s'occupe de la communication en anglais :</u>

- Vous-même : gérant de l'entreprise
- Le responsable de la communication
- Le responsable commercial

- Le responsable Marketing
- Le traducteur /interprète officiel
- Autre.

Pouvez-vous commenter votre choix SVP :

.....

- **Pouvez vous nous décrire le profil idéal du responsable en anglais que vous recruterez sans hésiter en citant (les points indispensables, les compétences techniques et linguistiques requises, les contraintes dont il sera amené à gérer, le salaire que vous êtes éventuellement prêt à offrir)**

.....

- **Pouvez-vous nous relater une expérience négative lors de vos recrutements de responsables de communications.**

.....

Nous vous remercions pour votre collaboration. Si lesrésultats de notre enquête vous intéresse veuillez nous contacter pour plus d'information à l'adresse suivante: **Soraya.ghomari@gmail.com** en précisant vos coordonnées.

Appendix E

The SWOT Grid Analysis: a Summary

STRENGTHS	WEAKNESSES
• Young teachers • Small number of teachers • Availability of ICT equipments (language lab, data projectors, computers for each student)Availability of ICT training and assistance • Small number of teachers	• Unclear course design using ICT • Unclear pedagogy how to teach English with ICT • Unclear understanding about which technologies to use for which purposes • No prior knowledge about blended learning, e-learning, • Lack of awareness from students about pedagogical values of internet applications, social media, chats, etc • Teachers' reluctance towards ICT integration • Lack of confidence when integrating ICT • Negative perceptions about its usefulness in the short and long term • Unavailable prompt technical support. • Lack of time
OPPORTUNITIES	**THREATS**
• Motivation of students with good school entrylevel • FL courses which are enriched digitally • Supportive pedagogical environment • Positive perceptions about teachers as transmitters of knowledge • Internet broadland • Multiplication of internet access • Digitalization of the school library • FL courses which being enriched digitally • Access to online libraries from the school	• Lack of collaboration • Students who get accustomed to hyper structured courses now not able to respond to the evolving communicative needs of the workplace • individual visions about the workplace's communicative competencies • Teachers' fear of losing time during lectures because of lack of available technicians • Students who do not find the ICT –based courses appealing (the same course design as in class courses) • students who do not perceive the limits and potentials of ICT • administration staff eager to have instant results of progress and success in FL, • Absence of global educational project integrating ICT • success stories in other educational contexts that do not meet the local context

Summary

This research work explores Technology Enhanced Language Learning from a psychological point of view. More specifically it seeks to understand what could constitute possible affordances and constraints for learners and teachers to take full advantage from ICT- based educational experiences. The context that our research study concentrates on is that of an ESP course at EPSECG of Oran.

Researchers concur that teaching English through ICT tools should be framed not only around the tool; but mainly around the 21st century learners. It is therefore imperative to reconsider ingeniously our teaching practices so as to meet the specificities of the learners' new culture of learning.

. The ultimate goal that we would like to attain is to facilitate the teaching and learning of ESP through ICT. The main hypothesis that we move ahead is that learners may become communicatively competent and bridge the communicative gap in the workplace with ICT effectively integrated in the ESP curriculum. This could be possible if psychological as well as pedagogical obstacles regarding ICT use in ESP are clearly defined and alleviated.

The objective of this research work is the threefold:

1. To show that a successful integration of ICT in the teaching of English as a foreign language more specifically in an ESP context cannot take place in isolation,
2. To explain that the technological level of integration in our English language learning context is not sufficient to guarantee either effective communication use or efficient foreign language teaching to take place.
3. To assert the importance of reconsidering the psychological and pedagogical factors which prove to be determinant in the teaching and learning of English for Specific Purposes through ICT.

The research work is organized into five distinct chapters. It will be made up of qualitative and quantitative data obtained from questionnaires to teachers and learners and regional economic actors, a learners' focus-group interview as well as a SWOT analysis of the language environment at EPSECG.

Through the research work, the researcher will attempt to answer the research questions:

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT in general and ESP in particular?
2. How can we define a successful ICT integration in ELT?
3. What are the prevailing attributes of success related to ELT in general and ESP in particular?
4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?
5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG.

The specific hypotheses of our research work are as follows:

1. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of a reasoned and principled integration of ICT in English teaching/learning contexts.

2. Both EPSECG's learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.

3. Understanding the possible resistance to change related to ICT uses in ELT in general, and ESP context of EPSECG in particular, helps identifying the necessary strategy to follow in order to overcome the pedagogical and psychological obstacles.

4. Uncovering the type of language learners' ICT uses is important to meet their learning needs and preferences and propose adequate ESP activities.

5. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data (the environment, the learners

and the teachers) and propose a practical framework that accounts for the evolving nature of teachers' and learners' pedagogical and psychological specificities.

This research work attempts at outlining the psycho-pedagogical principles that are necessary for an effective ICT integration in an ESP context. The assumption is that it is a prerequisite element for providing an appropriate structural framework likely to meet students' relevant interests and teachers' expectations in terms of academic attainment and 21st challenges.

Through the research work, it seems apparent that in order to assist teachers grasp the whole potential of the technological tools, it is necessary to gauge their perceptions about both their ICT usages (uses and competences). On the other hand, exploring learners' actual uses of ICT was revealed to be of paramount importance and may suggest informed future educational applications. Indeed, responding to the learners needs is helping them to prepare them to be competitive, raise their effectiveness and employability.

For that, it seems important to account for the needs of students before expecting implementing any change relating to any aspect of instruction. The integration of ICT in education is also a cultural revolution that needs a reconsideration of educational-surrounding artefacts that underlie the paradigm shift; only then we can expect providing an effective, targeted instruction that benefits all learners.

In this very beginning of this new century, the demand for communicative competence for English language increases. Teaching English in the Algerian higher educational institutions, however, meets some difficulties in guarantying the attainment of communicative competence in English for its students. This deficiency is the natural outcome of traditional non-native classroom environment that suffers an acute lack of interpersonal interactions in the target language and no exposure to authentic environments, two basic elements in the acquisition of a foreign language. The researcher posits the general hypothesis that learners become communicatively competent and bridge the communicative gap in the workplace if ICT is effectively integrated in the ESP curriculum. This could be possible if psychological as well as pedagogical obstacles regarding ICT use in ESP are clearly defined and alleviated.

Through our research work, we come to the conclusion that teaching and learning is a tandem where psychological, pedagogical and cultural variables melt together imposing a kind of continual adjustment to balance between the evolving needs of learners and the requirements of the curriculum goals. Conversely, to ensure effective learning opportunities, a reconsideration of the underlying factors of the learning environment imposes itself. Indeed, to ensure more effective and truly sustainable learning teachers should be assisted in their educational transition to meet the specificities of the new educational paradigm and propose innovative ways in their teaching practice.

Enabling change in ESP teaching/ learning through ICT integration requires the implementation of strategic organization that is not possible unless supported by a suitable change process on both a psychological and a pedagogical level. A pedagogical framework when teaching a foreign language using ICT then stands as a set of principled actions that might help the educator fit the right methodology to the existing variables including: learners, the institutional context, and the expected outcomes.

On the other hand, initiating change imposes on us voicing out what is perceived as possible obstacles for innovative practices to disseminate. In fact, exploring actual ICT uses and understanding why learners and teachers resist using ICT helps framing the necessary strategy to follow in order to better respond to learners' communicative needs and expectations. For that we should evaluate the potential that ICT brings to our educational context alongside the pedagogical culturally-rooted practices that embody the psychological specificities of both teachers and learners.

The need for designing a framework that accounts for the psychological, the pedagogical as well as the technological/ organizational considerations for successful ICT integration in a foreign language teaching/learning environment seems to us necessary if one is to expect pedagogy to be transformed, learning to be enhanced, and local economy to be developed.

According to The International Association for the Evaluation of Educational Achievement (IEA) (2003) for educational change to occur, it is necessary that

essential conditions for any innovation to be sustained and transferred in educational contexts through:

- Providing support (technical, pedagogical, psychological),
- Shifting from providing technology first to training teachers first,
- Changing teaching beliefs with technology and initiating educational paradigm shifts,
- Building up of leadership capacity at the school,
- Promoting positive attitudes towards technology and language,

As a consequence, expecting successful language learning experiences to take place using ICT is subject to a number of considerations.

- Psychological principles of perceptions and attitudes regarding both the technological tool and the type of EFL instruction are of a great importance,
- Teachers and learners through their perceptions and attitudes define their culture of learning and teaching and this influence the way they experience learning and teaching,
- The notion of effectiveness is tightly linked to our visions of priorities, objectives, challenges and success in a globalised world,
- The implementation of (any) innovation in the classroom not only requires from the teachers to use new materials, but also to change their behavior and beliefs about education (Fullan, 2001),
- Positive teachers' attitudes towards technology is widely recognized as a necessary condition for effective use of information technology in the classroom (Woodrow, 1992),
- The amount of confidence a teacher possesses in using technology may greatly influence effective ICT implementation in the classroom,

- The way ICT is used and its impact on learning and teaching is very much determined by the vision and understanding of both teachers, learners and the school culture in general.

In our case, ICT integration in our language learning contexts misses beforehand strategic planning where clearly defined objectives ought to be set, processes of integration to be discussed and organized and relative stakeholders to be consulted . In sum, it requires the implementation of strategic organization that is not possible unless supported by a suitable change process at psychological pedagogical and organizational levels.

Abstract

The aim of this research work is an attempt to design a practical framework to integrate effectively ICT in ELT and more precisely in an ESP context, in this case EPSECG of Oran. For so doing, we try to account the underlying factors affecting its success and suggest an adequate plan of action. More precisely we seek to explore the perceptions and attitudes of teachers and learners when using technology. We posit the following hypothesis: to ensure quality education in the 21st century in general and teaching English as a foreign language in particular using ICT, we need as practitioners to line up the triadic dimensions : the psychological, the pedagogical and the technological altogether. Only then the conditions under which the principles of 21st century education could be met, that are: the need for effective communication, the need for successful collaboration, and the need for the development of problem solving strategies. Put together these factors define in a whole psycho-pedagogical framework for ICT integration in TEFL that we propose.

Keywords: ICT Integration, Perception, Innovation, TELL, Educational Psychology

Résumé

Pendant longtemps l'intégration des nouvelles technologies dans les instituions éducatives a fait l'objet de formalités techniques et rien d'autre. Le potentiel académique attribué à l'intégration de celles-ci a quant à lui été très souvent amplifié sans pour autant faire l'objet de recherches approfondies pouvant sensibiliser et/ou encourager les éducateurs à les intégrer dans leurs pratiques d'enseignement. Par conséquent, l'introduction des TICE est restée au stade embryonnaire, et l'enthousiasme manifesté au début à vite laissé place à la frustration des enseignants. Le présent travail de recherche nous amène à questionner les facteurs sous- jacents d'une intégration réussie des nouvelles technologies dans la pratique enseignante des langues étrangères, en occurrence l'anglais à but spécifique. Pour ce fait, le contexte éducatif choisi s'est porté sur l'Ecole Préparatoire en Sciences Economiques, Commerciales et de Gestion d'Oran ou l'anglais à orientation économique et commercial est délivré. A ce titre, notre recherche s'est portée principalement sur les facteurs psychopédagogiques et technologiques. L'analyse de l'environnement éducatif local a fait l'objet d'une attention particulière car c'est celui qui définit les comportements et les usages des enseignants et enseignés et met en exergues les tensions qui peuvent y avoir influant ainsi sur l'efficacité des mesures mises en place en termes de résultats académiques escomptés.

Mots clés : Psychologie de l'éducation, intégration des TICE dans l'enseignement des langues étrangères, perception de l'innovation pédagogique,

خلاصة الأطروحة

الهدف من هذا البحث هو محاولة وضع إطار عملي لدمج تكنولوجيا الإعلام والاتصال على نحو فعال في تدريس اللغة الانجليزية وبدقة أكثر تعليم اللغة الإنجليزية لأغراض خاصة، في المدرسة التحضيرية في العلوم الاقتصادية، التجارية وعلوم التسيير بوهران. للقيام بذلك، سنحاول حساب العوامل الكامنة التي تؤثر على نجاح الإطار العملي واقتراح خطة مناسبة للعمل به. وعليه فتكون الفرضية كالتالي: لضمان جودة التعليم عموما في القرن الحادي والعشرين، وتدريس اللغة الإنجليزية كلغة أجنبية باستخدام تكنولوجيا الإعلام والاتصال بشكل خاص نحن، كممارسين، بحاجة للاعتماد على الابعاد الثلاث المتكاملة: النفسية، والتربوية والتكنولوجية مجتمعة.ولكن لن يتأتى هذا ما لم نأخذ العوامل الثلاثة الأساس بعين الاعتبار فيما يتعلق بالمعلمين والمتعلمين على حد سواء: (1) مواقفهم وتصوراتهم بحسب القيمة المضافة المتعلقة بتكنولوجيا الاعلام والاتصال، و (2) معرفتهم وخبراتهم فيما يتعلق التدريس والتعلم باستعمال التكنولوجيا. ويتجلى لنا تطوير وتعزيز بيداغوجيا تعليم اللغة الإنجليزية لأغراض خاصة كضرورة ملحة. وضعت هذه العوامل معا في الإطار النفسي والتربوي الذي نقترحه لوصف ادماج تكنولوجيا الاعلام والاتصال في تدريس الإنجليزية كلغة أجنبية.

الكلمات الرئيسة: دمج تكنولوجيا الاعلام والاتصال، والإدراك، والابتكار، *التعلم المدعم بالتكنولوجيا*، علم النفس التربوي .

Summary

This research work explores Technology Enhanced Language Learning from a psychological point of view. More specifically it seeks to understand what could constitute possible affordances and constraints for learners and teachers to take full advantage from ICT- based educational experiences. The context that our research study concentrates on is that of an ESP course at EPSECG of Oran.

Researchers concur that teaching English through ICT tools should be framed not only around the tool; but mainly around the 21st century learners. It is therefore imperative to reconsider ingeniously our teaching practices so as to meet the specificities of the learners' new culture of learning.

. The ultimate goal that we would like to attain is to facilitate the teaching and learning of ESP through ICT. The main hypothesis that we move ahead is that learners may become communicatively competent and bridge the communicative gap in the workplace with ICT effectively integrated in the ESP curriculum. This could be possible if psychological as well as pedagogical obstacles regarding ICT use in ESP are clearly defined and alleviated.

The objective of this research work is the threefold:

1. To show that a successful integration of ICT in the teaching of English as a foreign language more specifically in an ESP context cannot take place in isolation,
2. To explain that the technological level of integration in our English language learning context is not sufficient to guarantee either effective communication use or efficient foreign language teaching to take place.
3. To assert the importance of reconsidering the psychological and pedagogical factors which prove to be determinant in the teaching and learning of English for Specific Purposes through ICT.

The research work is organized into five distinct chapters. It will be made up of qualitative and quantitative data obtained from questionnaires to teachers and learners and regional economic actors, a learners' focus-group interview as well as a SWOT analysis of the language environment at EPSECG.

Through the research work, the researcher will attempt to answer the research questions:

1. Why is it important to develop a psycho-pedagogical framework when integrating ICT in ELT in general and ESP in particular?
2. How can we define a successful ICT integration in ELT?
3. What are the prevailing attributes of success related to ELT in general and ESP in particular?
4. How can we achieve a successful integration of ICT in the ESP context of EPSECG?
5. How can we achieve a *sustainable* integration of ICT in ESP context of EPSECG.

The specific hypotheses of our research work are as follows:

1. Developing a psycho-pedagogical framework for ICT integration is necessary to maximise the chances of a reasoned and principled integration of ICT in English teaching/learning contexts.

2. Both EPSECG's learners' and teachers' perceptions and attitudes regarding ICT use have to be taken into consideration when designing the framework.

3. Understanding the possible resistance to change related to ICT uses in ELT in general, and ESP context of EPSECG in particular, helps identifying the necessary strategy to follow in order to overcome the pedagogical and psychological obstacles.

4. Uncovering the type of language learners' ICT uses is important to meet their learning needs and preferences and propose adequate ESP activities.

5. Developing a *sustainable* integration of ICT in ESP context of EPSECG imposes on us to confront all available data (the environment, the learners

and the teachers) and propose a practical framework that accounts for the evolving nature of teachers' and learners' pedagogical and psychological specificities.

This research work attempts at outlining the psycho-pedagogical principles that are necessary for an effective ICT integration in an ESP context. The assumption is that it is a prerequisite element for providing an appropriate structural framework likely to meet students' relevant interests and teachers' expectations in terms of academic attainment and 21st challenges.

Through the research work, it seems apparent that in order to assist teachers grasp the whole potential of the technological tools, it is necessary to gauge their perceptions about both their ICT usages (uses and competences). On the other hand, exploring learners' actual uses of ICT was revealed to be of paramount importance and may suggest informed future educational applications. Indeed, responding to the learners needs is helping them to prepare them to be competitive, raise their effectiveness and employability.

For that, it seems important to account for the needs of students before expecting implementing any change relating to any aspect of instruction. The integration of ICT in education is also a cultural revolution that needs a reconsideration of educational-surrounding artefacts that underlie the paradigm shift; only then we can expect providing an effective, targeted instruction that benefits all learners.

In this very beginning of this new century, the demand for communicative competence for English language increases. Teaching English in the Algerian higher educational institutions, however, meets some difficulties in guarantying the attainment of communicative competence in English for its students. This deficiency is the natural outcome of traditional non-native classroom environment that suffers an acute lack of interpersonal interactions in the target language and no exposure to authentic environments, two basic elements in the acquisition of a foreign language. The researcher posits the general hypothesis that learners become communicatively competent and bridge the communicative gap in the workplace if ICT is effectively integrated in the ESP curriculum. This could be possible if psychological as well as pedagogical obstacles regarding ICT use in ESP are clearly defined and alleviated.

Through our research work, we come to the conclusion that teaching and learning is a tandem where psychological, pedagogical and cultural variables melt together imposing a kind of continual adjustment to balance between the evolving needs of learners and the requirements of the curriculum goals. Conversely, to ensure effective learning opportunities, a reconsideration of the underlying factors of the learning environment imposes itself. Indeed, to ensure more effective and truly sustainable learning teachers should be assisted in their educational transition to meet the specificities of the new educational paradigm and propose innovative ways in their teaching practice.

Enabling change in ESP teaching/ learning through ICT integration requires the implementation of strategic organization that is not possible unless supported by a suitable change process on both a psychological and a pedagogical level. A pedagogical framework when teaching a foreign language using ICT then stands as a set of principled actions that might help the educator fit the right methodology to the existing variables including: learners, the institutional context, and the expected outcomes.

On the other hand, initiating change imposes on us voicing out what is perceived as possible obstacles for innovative practices to disseminate. In fact, exploring actual ICT uses and understanding why learners and teachers resist using ICT helps framing the necessary strategy to follow in order to better respond to learners' communicative needs and expectations. For that we should evaluate the potential that ICT brings to our educational context alongside the pedagogical culturally-rooted practices that embody the psychological specificities of both teachers and learners.

The need for designing a framework that accounts for the psychological, the pedagogical as well as the technological/ organizational considerations for successful ICT integration in a foreign language teaching/learning environment seems to us necessary if one is to expect pedagogy to be transformed, learning to be enhanced, and local economy to be developed.

According to The International Association for the Evaluation of Educational Achievement (IEA) (2003) for educational change to occur, it is necessary that

essential conditions for any innovation to be sustained and transferred in educational contexts through:

- Providing support (technical, pedagogical, psychological),
- Shifting from providing technology first to training teachers first,
- Changing teaching beliefs with technology and initiating educational paradigm shifts,
- Building up of leadership capacity at the school,
- Promoting positive attitudes towards technology and language,

As a consequence, expecting successful language learning experiences to take place using ICT is subject to a number of considerations.

- Psychological principles of perceptions and attitudes regarding both the technological tool and the type of EFL instruction are of a great importance,
- Teachers and learners through their perceptions and attitudes define their culture of learning and teaching and this influence the way they experience learning and teaching,
- The notion of effectiveness is tightly linked to our visions of priorities, objectives, challenges and success in a globalised world,
- The implementation of (any) innovation in the classroom not only requires from the teachers to use new materials, but also to change their behavior and beliefs about education (Fullan, 2001),
- Positive teachers' attitudes towards technology is widely recognized as a necessary condition for effective use of information technology in the classroom (Woodrow, 1992),
- The amount of confidence a teacher possesses in using technology may greatly influence effective ICT implementation in the classroom,

- The way ICT is used and its impact on learning and teaching is very much determined by the vision and understanding of both teachers, learners and the school culture in general.

In our case, ICT integration in our language learning contexts misses beforehand strategic planning where clearly defined objectives ought to be set, processes of integration to be discussed and organized and relative stakeholders to be consulted . In sum, it requires the implementation of strategic organization that is not possible unless supported by a suitable change process at psychological pedagogical and organizational levels.

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Bridging the communicative competence gap of the English language in the workplace through an ICT-ESP based approach of teaching in Algeria

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Abstract

Initiating change imposes on us voicing out what is perceived as possible obstacles for innovative practices to disseminate. In fact, exploring actual ICT uses and understanding why learners and teachers resist using ICT helps framing the necessary strategy to follow in order to better respond to learners' communicative needs and expectations. For that we should evaluate the potential that ICT brings to our educational context alongside the pedagogical culturally-rooted practices that embody the psychological specificities of both teachers and learners. The present research paper intends to explore the underlying factors influencing an effective ICT-based approach to the teaching of English for Specific Purposes, best exemplified at the Preparatory School of Economic Sciences, Commerce and Management of Oran in Algeria, henceforth EPSECG

Keywords: ICT in education; TELL; Communicative Competence; ESP

1. Introduction

The need for designing a framework that accounts for psychological, pedagogical as well as technological/organizational considerations for successful ICT integration in a foreign language teaching/learning environment seems to us necessary if one is to expect pedagogy to be transformed and learning to be enhanced and

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local economy to be developed. Our idea is that an ICT-ESP based approach to learning/teaching ESP is necessary if one is to expect communicative competence to be developed and improved.

Reviewing the literature about the psychological and pedagogical aspects of ICT in the English Foreign language Teaching and Learning situations, more precisely in an ESP context of EPSECG will help us transcend the theoretical aspect of technology integration and attempt to match it to more contextual EFL/ESP teaching and learning everyday concerns. For that we will try to explore what seems to us represent the necessary constituents for a successful ICT use i.e. teachers' and learners' attitudes towards ICT in teaching and learning, and pedagogical and methodological concerns for framework design,

For the purpose of this study we ask the following questions: what are the pedagogical and psychological principles underlying the ICT- based approach needed to bridge the gap of the communicative competence in English language in the workplace? Put otherwise, how can our understanding of teachers' and learners' attitudes and perceptions helps us to design effective language learning experiences using technology?

The hypotheses which we put forward are as follows: the need for designing a framework that accounts for psychological, pedagogical as well as technological/organizational considerations for successful ICT integration in a foreign language teaching/learning environment seems to us necessary if one is to expect pedagogy to be transformed and learning to be enhanced, and local economy to be developed.

2. The background

2.1. ESP and communicative competence

English through its international standing has become the most obvious mark of globalization. Foreign language learning and teaching faculties strive in vain to provide an adequate training matching the constraints of both academic curriculum and actual business world requirements to the future English language communicating professionals. Teaching English in the Algerian university, however, faces some difficulties in guarantying the attainment of communicative competence in English for its students. This deficiency is the natural outcome of traditional non-native classroom environment that suffers an acute lack of interpersonal interactions in the target language and no exposure to authentic environments, which are two basic elements in the acquisition of a foreign language.

In the Algerian context, English language ability prevents many young Algerians from conducting their jobs effectively when working in multinational companies or when being in charge of international affairs. English language researchers for professional and specific purposes acting within foreign language university -based departments lack the actual side of English in the workplace and are short of providing the adequate resources and tools that would help their students to be communicatively competent.

ESP curriculums as they have been designed until now could not respond to the evolving communicative needs of the workplace because they are designed independently from the actual economic concerns of the country relying on no more than purely individual visions about what would be considered as the workplace's linguistic/ communicative demands.

The national plan to implement five preparatory schools of economics, commerce and management throughout the country with the necessary infrastructure, and human resources aims at improving a qualitative training for the future business and economic leaders of the country. ESP instruction in the context of EPSECG stands as a bridge between English for Occupational Purposes EOP, and English for International Communication. The curriculum is oriented along economic-general themes and introductory registers together with grammar and language structure basics; nonetheless, little is done towards communicative competencies to be built. At present, instructors introduce the ESP program for the English language courses simply by selecting materials from available economic texts in different areas of specialization along with materials designed for teaching English for general use.

Stephen Littlejohn and David Jabusch (1982) generally defined communication competence as the ability and willingness of an individual to participate responsibly in a transaction in such a way as to maximize the outcome of shared meaning. According to the author:

> "it is important to draw a clear distinction between communication competence and proficiency. While a proficient communicator possesses critical communication skills and knowledge, by comparison, a competent communicator also is motivated to use those skills and knowledge to achieve desired outcomes in an appropriate manner for the situation. This distinction is especially important in terms of evaluating competence in communication." (Littlejohn and Jabusch, 1982).

Competence is contextual, then developing an ICT–ESP based approach in view of bridging the gap of communicative competence, the researcher should take into consideration aspects of relevancy to the local context (norms and attitudes) so as to find a balance and design ESP curriculums which mirror the peculiarities of the economic sector and functionality of the international language so as to meet the demands of more global challenges.

Brian Spitzberg (1984) used these assumptions to develop a model of communication competence that is constituted of motivation (affect), knowledge (cognition), and skills (psychomotor abilities).According to the author, effective communication then is tightly related to people's perceptions of the outcomes of a communication interaction. Responding to the learners' needs is therefore helping them to get a step forward to the main aim that preparatory schools expect to reach which is to prepare learners to be competitive in a fast-growing globalized world.

2.2. ICT in Language learning contexts: enablers and obstacles

ICT diffusion, integration and adoption in a society is culturally-bounded. As any innovation, it may be welcomed or resisted (Britain and Liber, 2004). Technology brings new opportunities for managing complexity, where there were previously none. The choices we make affect both the pedagogy and the flexibility available to learners. Innovation in one aspect of life necessarily influences another or other aspect (s) creating a number of changes that affect the way people live, react, evolve and perceive the future. In educational realms this may be viewed as challenging obstacles towards academic improvement, learners' attainment (Cox and Abbott, 2004) or professional development. Exploring actual ICT uses and understanding why learners and teachers resist using ICT helps framing the necessary strategy to follow in order to better respond to learners' communicative needs and expectations. Diverse studies on assimilating innovative technologies in education systems report that the main factors for failure or success are linked mainly to the teachers' attitudes (Hattie 2009; Fullan and Smith 1999). Attitudes towards computers influence teachers' acceptance of the usefulness of technology, and also influence whether teachers integrate ICT into their classroom (Akbaba & Kurubacak, 1998; Clark, 2001; Huang and Liaw, 2005). According to Zhao and Cziko (2001) it is necessary for teachers to have the appropriate skills, knowledge and attitudes to integrate ICT into the curriculum and create real opportunities for effective learning to take place. It is clear that the use of technological resources in the language learning processes provides a good source of "authentic" (Richards & Renandya, 2002) situations to use the language and enhances collaborative learning. On the other hand, much learning occurs outside the realm of the classroom. It is then necessary not to focus our attention to the restricted realm of the classroom and the possible changes that occur or do not occur there. With the advent of technology in our daily life activities, language and social activities are prolonged and enriched outside the physical classroom context, before PC's monitors and through other channels of communications, including computer mediated communication channels and social networks handheld technology devices or smart phones, to cite a few. The language teacher is then urged to take part of this newly-defined cultural microcosm and adapt pedagogically by extending learning beyond the traditional classroom setting bringing adequate content and activities to learners eager to consume media-based learning materials.

2.3. ICT integration in ESP through ICT in Algeria

Technology can bring a lot to education. In education, it has gone through many stages of development influencing teaching and learning. The challenge for teachers is to continually fine-tune to learners' needs through adjusting their teaching approach to empower them through knowledge construction or skill- building in situations

beyond the ones in which they are acquainted. ICT offers unprecedented opportunities to enhance learning through the impressing possibilities it offers to educators to better meet learners' styles of learning and help them to be prepared for the workplace challenges through the enhancement of their competences and the development of their skills.

Responding to the learners needs is therefore helping them to get a step forward to the main aim that preparatory schools expect to reach which is to prepare learners to be competitive in a fast-growing globalized world, and train them to be the future national economic leaders in their respective economic sub-sectors.

To facilitate the entry of Algeria into the information society the following national ICT initiatives have been introduced:

- The project of the ministry of education to equip all schools with computers by 2005,
- The connection of educational institutions under the ministry of culture to the internet project in 2012,
- The Ousra'TIC project (Computer for Every Home Initiative) in 2006,
- The Tempus ID@A project of e-learning (2005-2008),
- The Academic Research Network ARN in 2012. (Adapted from Info Dev report on Algeria, 2007 and International TelecommunicationUnion Report on Algeria, 2014)

On the other hand, by the end of 2013, the total number of internet users in Algeria in a population of over 38m was that of 6 million representing a penetration rate of 16, 5 %. The sector demonstrated an important expansion since it shifted from 4m in 2009 to over 6m by the end of 2014. Despite its considerable population size, internet usage in Algeria remains low since it represents only 2, 7% of the whole African internet users, ranking it 8th out of 10 Africa top internet countries far from South Africa and Egypt with more than 63m and 43m internet users respectively according to the latest 2013 Internet World Stats Report.†

New studies entitled WebDialn@ (meaning 'our web' in the Arab Algerian accent) by Med&Com and Ideatic were carried out for a duration of 6 weeks during 2012 and polled 13 600 internet users through an online survey, made available online on 33 popular Algerian sites. The questions turned on ADSL, mobile internet, Social networks, e-commerce, etc. The typical Algerian web user is described as male (68.3%), women represent just 31.7% of Algerian web users. The majority of users are aged between 26 and 35 representing by this way more 60% of the whole surveyed population. More than 63% of them hold a university degree and 18% are high school students.

In 2010 the total number of Facebook users in Algeria was estimated by Facebook over a 1m.‡ According to recent stats (2013) the overall estimation is that of 4 million Facebook users§ which amounts 11% of the general penetration rate of the country and more than 65% of the whole Algerian users. Youtube readership on the other hand increased from just 300,000 visits a day in April 2011 to 700,000 in the beginning of 2012.

As far as education is concerned, ICT has been introduced into Algerian educational system from in the late 1990s. A wave of governmental decisions helped its dissemination across a large range of educational institutions under the provision of hardware, personal computers and ICT labs. The aim was to achieve the potential benefits of teaching and learning through ICT, and making by this way ICT as an integral part of the curriculum. However the enthusiasm underlying its widespread into schools did not last due to the obstacles encountered when attempting to integrate it into daily teaching and learning practices. Learners were asked to attend ICT overloaded theoretical courses, teachers were asked to teach using ICT without any former training or ineffective training that did not respond to their concerns or anxieties .It proved then to be a burden instead of being a supporting means to teaching

‡http://www.internetworldstats.com/af/dz.htm#links

§ 4,111,320 Facebook subscribers on Dec 31/12, 11.0%, retrieved from http://www.internetworldstats.com/africa.htm#dz

or learning. Parallel to this learners experienced frustrated imposed ICT courses where theoretical notions largely surpassed practical experiences, a necessary condition to allow effective learning to occur.

3. The study

The research theory upon which we have built our methodology is referred to as Exploratory Practice. It is mainly based on "*existing pedagogical practice as a research tool"*. In this sense, Allwright and Lenzuen (1997) described it as follows:

> "Exploratory Practice is a sustainable way of carrying out classroom investigations that provides language teachers (and potentially the learners also) with a systematic framework within which to define the areas of language teaching and learning that they wish to explore, to refine their thinking about them, and to investigate them further using familiar classroom activities, rather than 'academic' research techniques, as the investigative tools." (Allwright and Lenzuen, 1997: 73)

In the following paragraph a broad overview is presented about the sitting and the participants, as well as the research instruments that we used to analyze the educational context, psychological and technological aspects related to both teachers and learners.

To describe the educational context we use the SWOT analysis grid and underline the areas where strength and opportunities exist as well as weaknesses and threats which may exist. It is important to have a global view about all possible environmental variables that influence both teaching and learning to effectively take place.

To explore the perceptions and attitudes of learners and teachers using different ICT tools and related applications; and suggest effective ways to better integrate ICT in English language teaching and learning respectively, questionnaires to both teachers and learners were used. As far as the teachers' questionnaire is concerned, the ICT Usage Survey was adopted. The learner's questionnaire consists of different sections relating to actual uses of ICT. This will help us discover which type of internet users they are and reflect on possible pedagogical activities that may be designed to meet their learning styles through technology.

Questioning learners in terms of their actual ICT uses or surveying teachers' ICT usages is not enough, if taken in isolation. The data should be analyzed within a more global examination of the educational context at hand. The obtained results, put together, inform us the plan strategically and guide us in our attempt to design a psycho-pedagogical framework for ICT integration in an ELT context, i.e.; in an ESP course at EPSECG of Oran. Our research procedures are based on observation, questionnaires to learners and teachers as well as a SWOT Audit of EPSECG. The four levels of analysis are as follow: pedagogical evaluation, psychological evaluation, organizational evaluation and technological evaluation.

4. Preliminary results and final conclusions

This is merely a qualitative interpretation of the first results obtained through the questionnaires and the SWOT analysis of the educational context.

Teaching and learning is a tandem where psychological, pedagogical and cultural variables melt together imposing a kind of continual adjustment to balance between the evolving needs of learners and the requirements of the curriculum goals. Conversely, to ensure that more flexible access to learning opportunities appropriate redesign of the learning environment as well as a reconsideration of the underlying factors (psychological and pedagogical) impose themselves; it is necessary to seek innovative approaches, which ensure more effective and truly sustainable learning. Enabling change in ESP teaching/learning through ICT integration requires the implementation of strategic organization that is not possible unless supported by a suitable change process on both a psychological and a pedagogical level. A pedagogical framework when teaching a foreign language using ICT then stands as a set of principled actions that might help the educator to fit the right methodology to the existing variables including: learners, the institutional context, and the expected outcomes.

On the other hand, integration in schools misses beforehand strategic planning where clearly defined objectives have to be set, processes of integration to be discussed and organized and relative stakeholders to be consulted to better evaluate the enablers and obstacles intrinsic to any process of change underlying any innovation

adoption. When willing integrate effectively ICT in the teaching /learning ESP, educational, psychological, organisational and innovation issues should be raised. Our primary goal to design framework is to decipher the interplay of the different variables that may influence teachers and learners to maximize the potential benefits of technologies in language learning/teaching contexts favoring by this way more meaningful language learning experiences.

Christensen (1998) states that "teachers' attitudes toward computers affect not only their own computer experiences, but also the experiences of the students they teach". It is necessary to evaluate/audit our practices, depict the whole teaching practice and state clear pedagogical objectives so as to refine the structural change/plan that is necessary to go through to meet our objectives. Teachers may choose to completely or partially modify their teaching practices or redefine their whole approaches to teaching and then adopt new teaching methodologies that better support underlying assumptions of ICT aided instruction. For learners this may mean to discover other ways to access information, resolve problems, work in collaboration, etc. In a whole an enhancement of their learning styles and then an increasing opportunities to learn. To maximize the potentials of ICT in ESP should be paid to issues of culture of learning and culture of teaching. On the other hand, understanding the possible resistance to change related to ICT uses in ESP context of EPSECG, helps identifying the necessary strategy to overcome the pedagogical and psychological obstacles.

We expect that a successful ICT integration depends upon the development of a shared vision (Hughes & Zachariah, 2001). ICT policy-makers need to realize that teachers should not be excluded from school policy planning. ICT successful integration in a teaching/learning context requires the implementation of strategic organization that is not possible unless supported by a suitable change process at psychological and pedagogical levels. According to Gulbahar & Guven (2008): "providing schools with hardware, software and in-service training is not enough [...] there must be active involvement of the teachers concerned in the whole change process so that there is the element of "ownership" of the innovation"

On the other hand, Bryderup & Kowalski (2002) stress the importance of developing ICT school plan which defines the pathway to realize these goals is determinant towards ICT integration; and teachers engaged in this enterprise are likely to apply ICT in an innovative way Kozma (2003).Ultimately, we need to reflect on the pedagogical implications that ICT integration may engender in terms of changing roles, learning process, educational approaches and course design.

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