PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

UNIVERSITY OF 8 MAY 1945 GUELMA — **جامعة 8 ماي 1945 قالمة**

FACULTY OF LETTERS AND LANGUAGES — **كلية الآداب واللغات**

DEPARTMENT OF LETTERS AND ENGLISH LANGUAGE — **قسم الآداب واللغة الإنجليزية**

OPTION: LINGUISTICS

Raising EFL Learners' Autonomy through Technology-Based Approach.

Case Study: Master One LMD Students at the Department of English, 8 Mai 1945 University, Guelma.

A Dissertation Submitted to the Department of Letters and English Language in Partial Fulfilment of the Requirements for Master's Degree in Anglophone Language, Literature and Civilizations.

Submitted by:

Mr. MERABET Ramzi

Supervised by:

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Board of Examiners

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Examiner: Mrs. ABDAOUI Fatima	**(MA/B)**	**8 May 1945 University -Guelma**

June 2017

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DEDICATION

To Dounya, Taym & Djana

My dear supervisor Sabrina

My dear professor Tolgui Ladi

My sisters and brother

My father and mother

To everyone with a redline under their names in Microsoft Word

To Ramzi Merabet

ACKNOWLEDGMENTS

Make it a habit to tell people thank you. To express your appreciation, sincerely and without the expectation of anything in return.

Ralph Marston

This work would have never been accomplished without the assistance, encouragement and guidance of my dear supervisor **Mrs. SABRINA LASSOUED**.

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ABSTRACT

This research attempts to inquire into the impact of technology-based approach on EFL learners' autonomy. It initially aims at exploring teachers' and learners' views and attitudes with respect to the topic in question. More than that, it endeavors to assay the outcomes of an adequate implementation of a Technology-Based Approach into EFL classrooms. To this end, the study adopts a set of research approaches and tools: It employs the descriptive approach by means of a questionnaire and an interview. The aforementioned tools allow for the obtainment of quantitative and qualitative data. It also implements a quasi-experimental design via the instrumentality of a self-report Likert scale questionnaire. The sample of the present investigation consists of fifty-two (52) Master One LMD students and twelve (12) teachers at the department of English, 8 May 1945 University, Guelma. The emerging results confirm the main hypothesis which implies that an adequate implementation of a Technology-Based Approach promotes EFL learners' autonomy. The latter calls the attention to the importance of integrating educational technologies in Algerian EFL classrooms.

Keywords: Autonomy, Technology-Based Approach, LMD System, EFL Learners.

LIST OF ABBREVIATIONS

AECT: The Association for Educational Communications and Technology

BA: Bachelor of Arts

BBC: British Broadcasting Corporation

BL: Blended Learning

CAI: Computer-Aided Instruction

CALL: Computer-Assisted Language Learning

CALT: Computer-Assisted Language Teaching

CBT: Computer-Based Teaching

CD-ROM: Compact Disc – Read Only Memory

CK: Content Knowledge

CL: Collaborative Learning

CMC: Computer-Mediated Communication

CRAPEL: Centre de Recherche et d'Applications en Langues

CSCL: Computer-Supported Collaborative Learning

DL: Distance Learning

DTPB: Decomposed Theory of Planned Behavior

EFL: English as a Foreign Language

ET: Educational Technology

FL: Foreign Language

FLL: Foreign Language Learning

GPS: Global Positioning System

ICT: Information Communication Technology

IDT: Innovation Diffusion Theory

IP: Internet Protocol

IT: Instructional Technology

IWB: Interactive Whiteboard

LA: Learner Autonomy

LMD: License Master Doctorat

LMS: Learning Management System

MA: Master of Arts

MALL: Mobile-Assisted Language Learning

MPCU: Model of PC Utilization

PC: Personal Computer

PCK: Pedagogical Content Knowledge

PDA: Personal Digital Assistant

PK: Pedagogical Knowledge

PLEs: Personal Learning Environments

SACs: Self-Access Centers

SALL: Self-Access Language Learning

SDL: Self-Directed Learning

SDT: Self-Determination Theory

TAM: Technology-Acceptance Model

TBA: Technology-Based Approach

TBL: Technology-Based Learning

TCK: Technological Content Knowledge

TCP: Transmission Control Protocol

TK: Technological Knowledge

TPACK: Technological Pedagogical Content Knowledge

TPK: Technological Pedagogical Knowledge

TTF: Task-Technology Fit Model

TV: Television

UK: United Kingdom

US: United States

UTAUT: Unified Theory of Acceptance and Use of Technology

WELL: Web-Enhanced Language Learning

WWW: World Wide Web

ZPD: Zone of Proximal Development

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GENERAL INTRODUCTION

Autonomy appears to be one of Algerian EFL students' biggest drawbacks. For the time being, the LMD system does not seem to fit the actual context, especially with regards to teachers' and learners' roles. This is mainly true since learner-centeredness, which constitutes one of the system's cornerstones, proves to be nonexistent. With no holds barred, it is crystal clear that students at the English department are still teacher-dependent. The latter emerges as one of the major causes underlying the persistent deterioration witnessed nowadays. Given the fact that many scholars such as Rousseau and Einstein agree that students learn better on their own accord, one should strive to inculcate in learners certain autonomous traits and behaviors. To this end, it is important to inquire into the main factors that might foster such an endowment.

Adding fuel to the fire, The Algerian setting witnesses a massive technological shortage. EFL classrooms prove to be extremely in need of high-end tools and materials that would certainly ameliorate the teaching/learning experience. Turning a blind eye to such a significant issue would definitely affect the quality of education. Lately, there appears to be a newly emerging interest with respect to the relationship between educational technology and learners' autonomy. Benson (2011, pp. 124-196) for instance considers the technology-based approach to be one of the chief stimulators of learners' self-reliance. In the same vein, Reinders and White (2016, p. 143) appear to confirm the existence of a unidirectional influence with regards to technology and autonomous learning.

The present research constitutes a modest attempt to empirically examine the relationship between the aforementioned variables. It thereby employs a set of research approaches that allow for inquiring into the impact of Technology-Based Approach on EFL learners' autonomy both quantitatively and qualitatively. For which purpose, it

embraces a collection of research tools such as questionnaires, interviews, and Likert scale questionnaires. This diversified instrumentality is presumed to fortify the research validity which, in turn, reinforces the intended results.

1- Statement of the Problem

The integration of technology appears to be the motto of 21st century education. For the time being, technology has become an integral part, and sometimes a major constituent, in many sectors such as economy, education, and military, to mention but a few. This notable span makes it compulsory to adapt to its demands and requirements (Mumford, 1979, p. 2). The complex nature of technology along with its ability to make the learning experience more customizable, fun-filled and self-directed capture the attention of many researchers. Technology is presumed to play a crucial role in the shift from teacher-centered classrooms to learner-centered ones. This is mainly true as educational technologies substitute teachers in many roles which, consequently, would give more control to learners. On account of that, EFL classrooms seem to break away from the old bilateral form in favor of a triangular form where technology serves as the third constituent in addition to teachers and learners. In the midst of this ceaseless technological and educational boom, Algeria emerges as one of the few countries where technology is quite neglected. Although the implementation of the LMD system is almost one decade old, one might easily observe the absence of the main pillars of such a system: learner-centeredness and technology-based learning. Based on the aforementioned claims, this research endeavors to examine the impact of Technology-Based Approach on EFL learners' autonomy.

2- Aims of the Study & Research Questions

This research aims at examining the impact of the Technology-Based Approach on EFL learners' autonomy. It also attempts to tackle the importance of independent learning and the reasons underlying learners' passiveness. It further endeavors to check both teachers' and learners' degree of familiarization with technology. In addition to

that, it strives to explore EFL classrooms with regard to technological equipment. Therefore, the present study attempts to tackle the following questions:

- What is the impact of Technology-Based Approach (TBA) on EFL learners' autonomy?
- What views and perceptions do EFL teachers have with regard to the impact of TBA on learners' autonomy?
- Do EFL teachers and learners have the needed literacy to establish a Technology-Based classroom?

3- Research Hypotheses

In this study, it is assumed that setting a Technology-Based Approach into EFL classrooms is really important and has a major impact on learners' autonomy. The absence of TBA would probably affect learners' self-reliance and contribute to their passivity. Hence, we hypothesize that:

H_1: If a Technology-Based Approach is adequately implemented in EFL classrooms, learners' autonomy would increase.

The null hypothesis implies that no relation exists between the two variables:

H_0: If a Technology-Based Approach is adequately implemented in EFL classrooms, learners' autonomy would not increase.

4- Research Methodology and Design

a. Research Method

The present investigation adopts a mixture of methods. It follows the quantitative descriptive method which endeavors to extract statistical data with regard to students' views and perceptions on the impact of Technology-Based Approach on their autonomy. It also attempts to obtain non-statistical data via the qualitative

descriptive method. The latter strives to inquire into teachers' views, opinions, and attitudes with respect to the same topic. A quasi-experiment is conducted for the sake of measuring learners' level of autonomy before and after the experimental intervention. Given the fact that the qualitative nature of autonomy makes it empirically immeasurable, the research then opts for tracing the development of certain aspects which might indicate self-reliance (see table 4.1). With this in mind, a Likert scale questionnaire which consists of forty statements divided into eight dimensions is administered as a pretest and posttest. It is important to note that this questionnaire is adapted from a recent research conducted by Hamid Gholami (2016). Further details on the structure of the experiment are demonstrated in the following figure. Nonetheless, a more detailed account can be found in the fourth chapter.

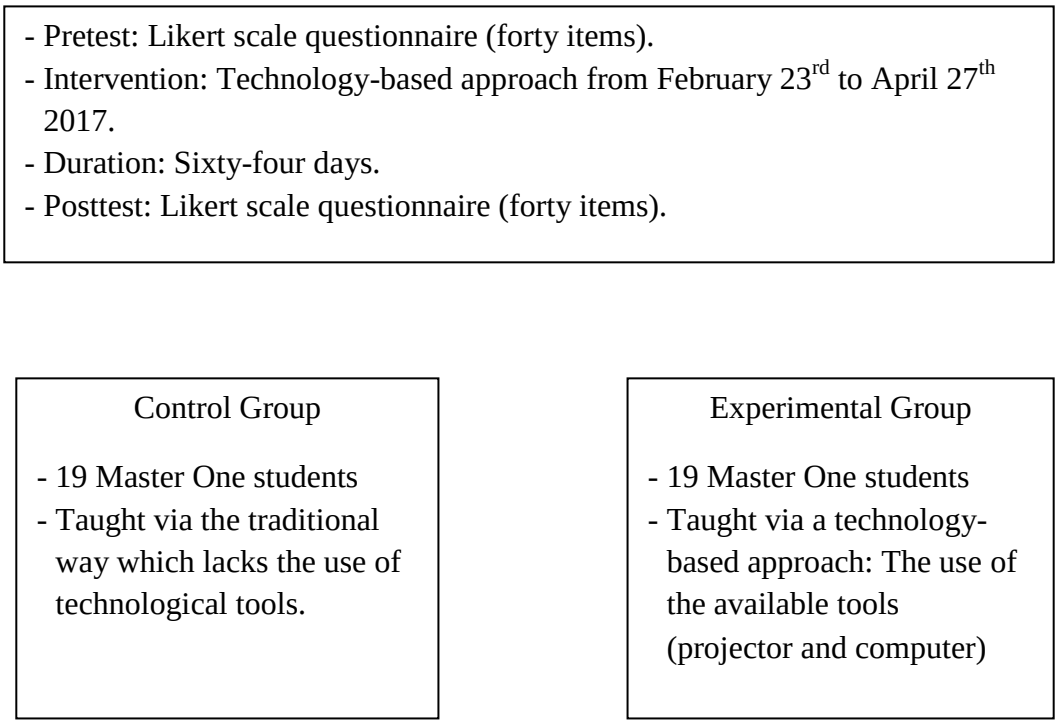

Figure 1. The Quasi-Experimental Design

The experimental intervention targets Master One students in group two. The treatment is manifested through a technology-based approach. The latter makes use of

the set of tools available at the department of English, namely computers and data projectors. Since Master One students are acquainted with in-class presentations, they are asked to make use of technology. Group three students, which belong to the control group, are asked not to depend on technological tools in their presentations. Therefore, it would be possible to trace the impact of technology along with its absence in EFL classrooms.

b. Population of the Study

The population of the study consists of 52 Master one students at the department of English, University of 8 May 1945 Guelma (Krejcie and Morgan, 1970, as cited in Cohen, Manion & Morrison, 2000, p. 94). The sample is chosen randomly and is composed of both sexes. Master One students are supposed to possess the necessary experience that enables them to evaluate the importance of implementing a Technology-Based Approach in EFL classrooms. Moreover, they have already studied for three years at least. Hence, they have experienced the use of technology in learning EFL in addition to its absence in various situations. On account of that, they would serve as the most suitable sample.

c. Data Gathering Tools

Data collection is based on the instrumentality of three main tools: A questionnaire, an interview, and an experiment. The questionnaire forgoes the experiment and sets one's sights on learners' views and attitudes apropos the impact of technology-based approach on students' self-reliance. It thereby explores various facets and paves the way for a concrete embodiment of the quasi-experiment. The interview is earmarked for teachers and it aspires to vet their opinions and perceptions with regard to the issue in question. The quasi-experiment combines a pretest and posttest which appear to be consistent in terms of form and content. As a side note, the aforementioned

components of the quasi-experiment, i.e. the pretest and posttest, take the form of a Likert scale questionnaire.

Structure of the Dissertation

This research is divided into two main parts: the theoretical part encompasses chapters one and two while the practical part includes chapters three and four. The first two chapters tackle the two variables of the present research. Chapter one deals with the history and definition of autonomy; its types and approaches along with the characteristics of autonomous learners and the factors that may affect this ability. The second chapter is devoted to cover Educational Technology (ET) in general and Technology-Based learning in particular. It traces the development of ET in addition to the evolution of various technological tools. The same chapter indicates the prominent forms of TBL and the factors that might affect the implementation of technology in learning. It concludes with describing the impact of TBL on EFL learners' autonomy. The practical part comprises chapters three and four which tackle field investigation and quasi-experimental design respectively. The third chapter is allocated to tackle students' questionnaire and teachers' interview. The fourth chapter is dedicated to the description, analysis and interpretation of the quasi-experiment along with the pedagogical implications derived from the whole research.

CHAPTER ONE: Autonomy

Introduction

The field of Foreign Language Learning (FLL) has experienced many developmental stages throughout the history of education. This history has witnessed a gradual shift from the traditional teacher-centered classrooms to the present learner-centered ones. The latter has proved Rousseau's vision that he has assumed centuries ago: "Our pedantic mania for instruction is always leading us to teach children the things they would learn better of their own accord" (as cited in Benson, 2011, p. xii). Accordingly, autonomous learning has become one of the major debated issues and a shared educational goal in the late twentieth and early twenty first centuries. In light of the previous ideas, this chapter is an attempt to provide a detailed overview on the notion of autonomy. It outlines the origins and development of autonomy as a concept until its first appearance in FLL. It also covers the different definitions provided by renowned linguists and scholars in the field, in addition to its importance with particular focus on the field of EFL. The chapter also tackles the different levels and domains of autonomy coupled with a detailed account for the approaches that foster autonomous learning. It concludes with the major aspects that characterize autonomous learners along with the possible factors that might affect the development of autonomy.

1.1. History of Autonomy

Etymologically, the word autonomy appeared in the early seventeenth century. It is derived from the Greek word *autonomia* which is in turn derived from *autonomos*, with *autos* referring to "self" and *nomos* standing for "law" (Self-law). Although autonomy appeared in both eastern and western philosophies a long time ago, it entered the field of language learning in the twentieth century as a western concept. The latter gained recognition in philosophy, psychology, education in addition to other disciplines (Benson & Voller, 1997, pp. 3-4). Seemingly, the concept of autonomy is really hard to

be traced as it has several roots, as stated by Gremmo and Riley (1995, p.152) on the origins of autonomy, self-direction, and self-access:

> It would be extremely foolhardy to try to trace these concepts back to any single source or date of origin, especially a recent one, since they have complex relationships with developments in philosophy, political science, psychology and sociology, stretching back many centuries in some cases.

Although it is difficult to trace the origins of autonomy for it relates to many fields of study, it is necessary to investigate and demonstrate its emergence and development in the above disciplines in order to clearly mark its appearance in education, and particularly in the field of language learning.

Despite the fact that its concept did not appear in the field of language learning until 1970s, the idea of autonomy existed long time before this date. Benson (as cited in Riihimäki, 2013, p. 9) provides a well-known quote by Galileo who states, in relation to teaching and learning, that "you cannot teach a man anything; you can only help him find it within himself". Galileo's expression indicates that the idea of autonomy has existed centuries before the connotation of the term for it (i.e. the quotation) asserts that a person's ability to learn lies within himself and what s/he needs is guidance only. Similarly, the fundamentals of learner autonomy seem to share the same ideas of the famous philosopher Jean-Jacques Rousseau who stresses the significance of learners' responsibility which is considered as one of the major characteristics of autonomous learners (Benson, 2011, p. 28). Equally important, the notion of proximal development introduced by Vygotsky marks to certain extent a relevancy to the principles of autonomy. According to Vygotsky (1978, p. 86) the Zone of Proximal Development (ZPD) signifies "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined

through problem solving under adult guidance or in collaboration with more capable peers". Vygotsky's ZPD shares the same fundamentals of autonomy in the sense that it points out that autonomous learning derives from doing things independently (Little, 2007, p. 22).

Benson (as cited in Riihimäki, 2013, p. 10) indicates four major fields that affect the notion of autonomy apart from the area of language learning. The fields encompass the psychology of learning, adult education, educational reform and the philosophy of personal autonomy. For him, ideas about autonomy in the field of psychology of learning mainly stem from constructivism[1]. Benson (as cited in Riihimäki, 2013, p. 10) suggests that if social interaction is the major source of individuals' knowledge, learning will be more successful when learners take charge of it in terms of what and how to learn. Autonomy is also apparent in the field of adult education and self-directed learning which serve in the shaping of autonomous language learning (Riihimäki, 2013, p. 10). Individuals in this field seem to direct and monitor their learning process. Having said that, Benson (as cited in Riihimäki, 2013, p. 10) asserts that autonomy and self-directed learning are slightly different. The former is considered as a quality of the learner, while the latter is viewed as a way of learning. In the same vein, educational reform plays a major role in the progress witnessed within the area of autonomous language learning. Finally, Benson (as cited in Riihimäki, 2013) highlights the idea of personal autonomy in philosophy by referring to Kant (1724-1804) and Mill (1806-1873). These two renowned philosophers play a prominent role in shaping autonomy in its modern sense through discussing the idea of free will and its impact on the society.

[1] Constructivism draws primarily on the work of developmental psychologists, Jean Piaget and Lev Vygotsky. It asserts that humans learn by constructing knowledge; that is, by connecting new information to previously learned knowledge. Both viewed learning as inherently linked to interaction with one's environment; however, Piaget viewed development as the necessary precursor to learning, while Vygotsky viewed learning as preceding development. With its focus on learning leading to development, Vygotsky's perspective came to be seen as more helpful for educational programming (Lenters, as cited in Richey, 2013, p. 64)

Gremmo and Riley (1995) investigate the different social factors underlying the huge interest in autonomy as a notion in language learning. They indicate several major events that played a crucial role in the appearance and spread of this concept. Firstly, Gremmo and Riley proclaim that the concerns, principles and objectives of minority rights movements targeted education in order to spread their ideas, which affected the learning process (1995, p. 152). Besides, another major factor is the response to the behaviourist views which applied findings adapted from animals' experiments to humans in the field of FLL, making learning a mechanistic process in which learners are seen as passive receivers of information. Instead, many researchers started to give major focus to learner-centeredness, "Paolo Freire (1972); Ivan Illich (1970, 1973); Carl Rogers (1941, 1972); Bertrand Schwartz; John Trim (1978), Douglas Barnes (1976); Henri Holec (1979) all emphasized the importance of the learners' role and participation in the educational process" (p. 152). Equally important, the rise of technology as an alternative to some teacher roles, in addition to the availability of many technological tools, represent an important contribution to the spread of autonomous, self-directed learning (p. 153). Finally, the reconstruction of instructional systems due to the increased access to education necessitated a more resilient way of instruction far from the traditional teacher-centred learning processes (p. 154). For these reasons, in addition to other ones, the notion of autonomy has acquired a permanent place in many fields and especially in the area of language learning.

After an exhaustive inquiry into the origins of autonomy, its appearance and evolution in many domains, it is important to deal with its emergence and development in the field of language learning. According to Benson (2011, p. 9) "The concept of autonomy first entered the field of teaching through the Council of Europe's Modern Languages Project, established in 1971". The latter led to the creation of the *Centre de*

Recherche et d'Applications en Langues (CRAPEL) which dominated research in the area of autonomy. Yves Châlon, the first president of CRAPEL, is recognized as the father of autonomy in language learning. After his early death, Châlon was succeeded by Henry Holec, who is an influential figure with respect to learner autonomy. During the 1980s, the notion of autonomy was linked to adult education and self-access learning. However, it begun to set foot in the field of language learning/teaching in the early 1990s due to the increased interest in learner-centeredness (Little, 2007, p. 14). This development, as stated by Little, "brought an important shift of emphasis: learner autonomy now seemed to be a matter of learners doing things not necessarily on their own but for themselves." The concept of autonomy was too influential that Little (1991, p. 2) described it as the "Buzz-word" of the 1990s. Nonetheless, one cannot deny that autonomy is more influential than it used to be in the 1990s as Benson (2007, p. 21) asserted that the number of works published in the 21st century surpasses the works issued in the past twenty-five years. However, although autonomy received huge interest in the field of language learning, it is not acceptable to consider it as a pivotal and/or general characteristic of all learners, as argued by Little: "none of this means, of course, that autonomy is now a defining characteristic of language learners around the world; on the contrary, the practical realisation of language learner autonomy remains elusive" (2007, p. 15).

1.2. Definition of Autonomy and Independent Learning

As stated by Boud (1988) "The notion of autonomy in learning is a many-faceted one and is subject to much debate" (p. 17). Many researchers have attempted to define autonomy. Starting with Trim (1976), autonomy is defined as "an adaptive ability allowing learners to develop supportive structures within themselves rather than to have them erected around them" (as cited in Esch, 1996, p. 37). For Trim, autonomy

is more related to the internal capacities of the learner rather than external ones. As far as one can see, the most renowned definition is that of Holec (1981) who refers to autonomy as "the ability to take charge of one's own learning" (p. 3). This definition provides a precise description of the word autonomy and constitutes the basis for other researchers to elaborate on by providing further clarifications. For instance, Dickinson (1987) proclaims that autonomy is "a mode of learning; one in which the individual is responsible for all the decisions connected with her learning, and undertakes the implementation of these decisions" (p. 27). According to Dickinson, the learner is completely free and responsible for his/her learning process which enables him/her to make decisions and carry them out. Besides, Deci and Ryan (1987) assume that autonomy signifies behaviours and decisions that one is responsible of. Equally, Little (1991) claims that:

> Autonomy is a capacity—for detachment, critical reflection, decision-making, and independent action. It presupposes, but also entails, that the learner will develop a particular kind of psychological relation to the process and content of his learning. The capacity for autonomy will be displayed both in the way the learner learns and in the way he or she transfers what has been learned to wider contexts. (p. 4)

Based on the aforementioned definition, Little links autonomy to the learner's ability to make decisions about his/her learning process far from external restrictions. Little also asserts that autonomy would be apparent through the learning techniques employed by the learner in addition to the way(s) by which s/he conveys what has been acquired. Furthermore, Cotterall (1995) points out that autonomy stands for learners' capacity to utilize a set of strategies for the sake of taking charge of their own learning. Equally important, autonomy can be described as the learner's tendency to be responsible of

his/her own learning through outlining, arranging and regulating the learning process far from teachers' intervention (Hedge, 2000, p. 410). In light of the previous definitions, Benson and Voller (1997, pp. 1-2) identify five major definitions to the notion of autonomy in language learning which, according to them, summarize all the previous attempts to define this term. They describe autonomy as:

> (a) situations in which learners study entirely on their own; (b) a set of skills which can be learned and applied in self-directed learning; (c) an inborn capacity which is suppressed by institutional education; (d) the exercise of learners' responsibility for their own learning; (e) the right of learners to determine the direction of their own learning.

The term independent learning is sometimes used interchangeably or synonymously with autonomous learning. Benson and Voller (1997, p. 2) agree that both autonomy and independence are "problematic concepts because they carry with them meanings from other discourses and from their application in particular instances of language education". Hence, it is quite troublesome to confirm the synonymy between the two terms. Moore (1984) defines independent learning as "working with increasingly less structured teaching materials and with less reliance on traditional kinds of tutor support" (p. 27). Moore's definition implies that independent learning involves more freedom in the learning process together with less restriction and less dependence on teachers' guidance or control. Therefore, decisions concerning the learning process become more related to the learners themselves. Kesten (1987, p. 5) contends that independent learning suggests that the learner, in addition to other learners, have the ability to make decisions in order to cover their learning needs. Although misconception over the relationship between autonomy and independent learning is still apparent, one cannot deny the fact that both terms in addition to other

ones like “self-directed learning, student initiated learning, […] discovery and inquiry, teaching for thinking, learning to learn, self-instruction and lifelong learning” (Kesten, 1987, p. 9) are generally interrelated in terms of their basic meaning and use. According to Souto and Turner (2000, p. 385), “although there still appears to be some confusion as to their meaning, generally speaking these terms are nevertheless interrelated”. Accordingly, independent learning and autonomy are two interrelated terms that denote learners’ ability to take control of their own learning through self-decision making.

Autonomy in learning was and is still subject to much debate. Although many researchers have tried to define this concept, it is clear that the majority of them agree on the same broad definition which considers autonomy as the ability to control one’s own learning through developing certain capacities. Besides, autonomy is linked to decision-making in the sense that it involves the active participation of learners through deciding about their own learning process. Autonomy is also attached to learners’ responsibility since it encourages learners to become responsible through employing the needed strategies in their learning activity. There are many terms that can be used interchangeably with autonomy yet they may hold some slightly different meanings. Among these terms is independent learning which stands for learners’ freedom to direct their learning far from the traditional teacher-centred process.

1.3. Models of Learner Autonomy

Since its appearance in the field of foreign language learning (FLL), the notion of learner autonomy received huge interest which, subsequently, led to a wide range of definitions from different perspectives and points of focus. Although there appeared to be no exact definition of the term autonomy, there have been many attempts to identify models under which these definitions reside (Benson, 2011, p. 62). There are four major versions of learner autonomy within which definitions are categorized. This part

is devoted to provide a brief description of each version, followed by a table that categorizes the renowned definitions of autonomy under their appropriate version. Benson's Model encompasses three versions: technical, psychological and political critical (Benson, 1997). Recently, Oxford (2003, p. 76) expands Benson's model of learner autonomy, which, according to her, lacks the socio-cultural version. The technical version considers learners' autonomy as a set of skills to be utilized outside the educational context, or in situations where they learn by their own like, for instance, self-access centres, for the sake of promoting their independence. This version tackles the notion of autonomy in terms of situations where learners engage in the learning process through self-discovery, self-decision and without teachers' intervention (Benson, 1997; Oxford, 2003; Le, 2009). According to Oxford, although the technical version is important, fostering learners' autonomy is not solely linked to external conditions. As a result, she asserts that "without psychology […] the technical perspective would be inert" (2003, p. 82). Psychological autonomy stands for the set of internal features and characteristics that motivate learners to take control over learning (Oxford, 2003; Le, 2009). In this respect, this version regards attitudes, abilities, learning strategies, and styles as major contributors to learners' autonomy (Oxford, 2003, p. 77). In view of the previous idea, "interaction, creativity, and meaning negotiation lay the foundation for psychological autonomy" (Le, 2009, p. 41). The third version can be called socio-cultural, socio-cognitive or socio-interactionist. Based on the socio-cultural perspective, cognitive and language development result from social interaction (Oxford, 2003, p. 85). In other words, "autonomy is […] gained through social interaction with a more capable, mediating person in a particular setting" (p. 78). The political-critical perspective to learner autonomy sheds light on power, access and ideology (Oxford, 2003, p. 88). To put it another way, Oxford (2003) explains that

political-critical autonomy "involves gaining access to cultural alternatives and power structures; developing an articulate voice amid competing ideologies" (p. 79). In other words, this version promotes learners' free will and ability to choose what characterizes their learning situations, far from any imposed ideologies. After a brief description of the four major versions of learner autonomy under which definitions are categorized, it is now possible to indicate the different renowned definitions under their appropriate versions. The following table is retrieved from Le (2009, p. 49).

Table 1.1

Summary of Major Definitions of Learner Autonomy (LA)

Models of LA	**What LA is**	**What LA involves/ Main focus of LA**	**Authors**
Technical		learning taking place outside classroom	
Psychological	Ability	taking charge of learning by determining objectives, defining contents and progressions, selecting learning methods and techniques, monitoring, and evaluating Learning	Holec (1981)
	Capacity	detachment, critical reflection, decision-making, and independent action	Little (1991)
		taking control over learning at different levels: learning management, cognitive management, and learning content	Benson (2001)
	Qualities	stance towards the world, desire to learn, sense of self, metacognitive capacity, management of change, independence from educational processes, strategic engagement with learning, and capacity to negotiate	Breen and Mann (1997)
	Responsibility	cooperating with the teacher and others, monitoring, making effort to use available opportunities	Scharle and Szabo (2000)
	Knowledge Skills Motivation Confidence	taking responsibility for necessary choices as a communicator, a learner, and an individual	Littlewood (1996)
	Strategies Knowledge Attitudes	knowledge about learning strategies (cognitive, self-management), knowledge about language learning (metacognitive), and knowledge about learner attitude	Wenden (1991)
	Readiness Willingness	taking charge of learning, acting independently and in co-operation with others, actively participating in learning process, critically reflecting on learning	Dam (1995)
	Personal Dimension	explaining and justifying intellectual, moral and emotional Actions	Candy (1991)

	state of being	being freed from internal and external obstacles that may hinder the learning process	Tort-Moloney (1997)
Social	membershipping social relations Interaction Universalization	coping with problems arising in the learning process and developing one's own agenda for learning, seeing and noticing for oneself how the target language is constituted and how it functions, autonomy is embedded in every Learner	Riley (1999) Oxford (2003) Holliday (2003)
Critical	Struggle Voice	becoming the author of one's own world, creating one's own meanings, pursuing cultural alternatives among the cultural politics of everyday life	Pennycook (1997)
Political		becoming aware of social context and constraints in learning process	Benson (1997)

1.4. The Importance of Autonomy

Autonomy has proved its importance in the field of language learning for it contributes to the effectiveness of the learning process along with learners' ability to take charge of their learning. According to Benson (2006, p. 34):

> Autonomous learners have acquired the learning strategies, the knowledge about learning and the attitudes that enable them to use these skills and knowledge confidently, flexibly, appropriately and independently of a teacher. Therefore, they are directly involved in their own learning process and the knowledge construction is based on their learning needs.

In other quarters, Benson asserts that learners' autonomy facilitates the acquisition and development of certain strategies that improve the learning process in addition to the required learning knowledge. He further argues that learners reach a certain level where they become able to make use of these strategies with high level of self-reliance which, according to him, makes them the major regulators over the learning process. Dam (1995, p. 82) affirms that involving learners in learning through providing them with opportunities to regulate the teaching process improves the learning outcomes. She also contends that learning would proceed smoothly if learners are conscious of the

instructional content and the process by which input is delivered. David Little (2016) suggests that there are three major arguments in favour of promoting learners' autonomy, the last of which is particular to the field of foreign language learning. He pinpoints that learners' reflective involvement in the learning process has a crucial impact on its success and accomplishment. Moreover, he adds that the issue of the absence of motivation would not occur if learners are aware and responsible of their learning. He further explains that even if learners are not enthusiastic to learn, they would carry on learning due to the strategies and skills that they have already developed as autonomous learners. Hence, they become able to get over tentative motivational obstacles. The third argument which is apparent when it comes to second/foreign language learning is related to the impact of autonomy on effective communication in the foreign language. Little points out that language use is the major source underlying effective communication. Hence, learners who are highly autonomous possess the needed skills that facilitate the internalization of the aspects of effective communication. In short, autonomy is very important in learning as it provides learners with skills to facilitate learning and improve their educational outcomes.

Knowles (1975, p. 14) asserts that "[…] there is convincing evidence that people who take the initiative in learning learn more things and learn better than do people who sit at the feet of teachers, passively waiting to be taught". Knowles declares that learners who self-direct their learning and rarely depend on teachers achieve more learning outcomes than those who extremely rely on teachers as major, and sometimes sole, source of knowledge. Psychologically, effective learning takes place when learners are given the opportunity to decide about what and how to learn (Candy, 1991, p. 24). Little (1991, p. 8) holds that the fact that learning is regulated by learners

according to their objectives and plans contributes to its effectiveness and purposefulness. He further argues that constraints between learning and living that used to exist in the old teacher-centred curriculums would not exist since learners take full responsibility of their learning. Finally, he suggests that harmony between learning and living would facilitate transmitting this sense of autonomy to all life domains which, therefore, improves people's social participation and effectiveness. Put in a nutshell, many researchers confirm the positive impact of autonomy on learners, either within the learning environment or outside it. Hence, it is very important to promote autonomous learning in addition to the necessary skills that enable learners to take charge of what and how to learn.

1.5. Levels and Domains of Autonomy

1.5.1. Levels of Autonomy

According to Littlewood (1999; 2002), there are two major levels of autonomy: reactive and proactive. The former is considered as an inevitable stage towards achieving the latter. On the one hand, reactive autonomy indicates a learning situation where the teacher is responsible of deciding about the learning direction. In such a case, learners follow an already set-up direction but they regulate their learning through independently organising instructional materials and resources that enable them to achieve their goals. On the other hand, proactive autonomy stands for a situation where learners decide about both learning direction and regulation of resources. Proactive learners self-direct their learning independently, far from teachers' intervention. This enables them to take full charge of the learning process through initiating and regulating activities, organising resources and evaluating their progress and learning outcomes. Littlewood (2002) argues that in order to proceed from reactive to proactive autonomy, classrooms should substitute cooperative learning by collaborative learning.

The former refers to learning directed by teachers or syllabuses while the latter designates learning directed, monitored and regulated by learners. The table below taken from Littlewood (2002, p. 35) summarises the transition from reactive to proactive autonomy concurrent with the shift from cooperative to collaborative learning.

Table 1.2

Levels of Autonomy

Activities for communicative development	**Activities for communicative and cognitive development**	**Activities for communicative, cognitive and personality development**
Students work independently towards objectives defined by teacher or curriculum	→	Students work independently towards objectives they themselves have defined
Cooperative learning techniques, e.g., jigsaw learning	→	Collaborative learning techniques, e.g. project work
Reactive autonomy	→	Proactive autonomy

1.5.2. Domains of Autonomy

Littlewood (1996) identifies three domains of learners' autonomy: autonomy as communicator, learner, and person. Firstly, autonomy as a communicator denotes learners' ability to communicate in appropriate way through employing a set of communication strategies in specific situations. Secondly, autonomy as a learner refers to learners' ability to get involved in independent learning situations through a convenient implementation of learning strategies. Thirdly, autonomy as a person builds upon the two previous domains and functions through aiding learners in their personal lives as it utilizes both communication and learning strategies. According to Littlewood (1996), the three domains of learners' autonomy are interrelated and affect each other

in different ways. For instance, although learning strategies are related to autonomy as a learner, they also influence learners' communicative competence since they provide them with new vocabulary. Therefore, developing learners' autonomy in one domain would certainly affect the other domains.

1.6. Approaches to Foster Autonomy

As autonomy appeared to be of essential importance in the learning process, many researchers show interest in finding a systematic way or approach to raise it. As a matter of fact, autonomy cannot be taught or learned for it is an intrinsic capacity within individuals. Instead, it is as Benson (2001, p. 110) indicates, fostered or developed. Benson (2011, pp. 124-196) mentions six major approaches to the development of learners' autonomy; these approaches are: resource-based, curricula-based, technology-based, classroom-based, learner-based and teacher-based. Le (2009, p. 56) states that "resource-based approaches place emphasis on the provision of opportunities for learners to direct their own learning mainly through individual interaction with the materials provided." In other words, this approach asserts learners' control over the learning process through independent selection and manipulation of the learning materials. Self-access centers (SACs) are one of the major forms of this approach. SACs prove to be efficient in the promotion of learners' autonomy. According to Gardner and Miller (2011, p.78) "[the] major goal of the promotion of self-access learning is the fostering of autonomous learning". The curriculum-based approach advocates the negotiation between teachers and learners in order to decide about the content of instruction (Le, 2009, p. 66). As a result, it extends "the idea of learner control to the curriculum as a whole" (Smith, 2015, p. 87). According to Le (2009, p. 68), there are two major forms of the curriculum-based approach: "The weak version involves learners' project work in which determinations on content and

methods are made by themselves. In the strong version, the syllabus […] is selected, organized, negotiated, and renegotiated by teachers and learners" (p. 68). In sum, decisions about the content are made by learners in the weak versions. On the other hand, syllabus design is made by teachers and learners in the strong version. The third approach is the technology-based approach. It stresses the importance of autonomous interaction with technological tools in the learning process (Smith, 2015, p. 85). The major forms of this approach are Computer Assisted Language Learning (CALL) and Computer Mediated Communication (CMC). A study conducted by Dang and Robertson (2010) marked a noteworthy relationship between CMC and learners' autonomy. However, as argued by Le (2009, p. 66), research in the field of educational technology is still inadequate to prove its positive impact on learners' autonomy.

The classroom based approach highlights learners' control over the learning process inside the classroom. This approach opts for changing the teacher-learner relationship through enabling learners to have responsibility and control over the learning process and its objectives in addition to the assessment of what they achieve in learning (Le, 2009, p. 77). According to Smith (2015, p. 87), "teachers need to negotiate control and responsibility with learners, specifically in the setting of goals, the learning process, and determining evaluation and assessments." Put simply, this approach favors a shift concerning the regulation of the aspects of the classroom context from teachers to learners. Le (2009, p. 80) points out that this approach embraces cooperative learning, portfolios, self-assessment and peer-assessment in addition to other instructional methods. In contrast to the previous approaches which focus on allowing learners to take charge of the learning process, the learner based approach focuses on the provision of skills, techniques and strategies that improve learners' independence (Le, 2009, p. 92). "Learner-based approaches emphasize the

direct production of behavioral and psychological changes in the learner, which enable them to take greater control over their learning and become better language learners." (Smith, 2015, p. 85). In short, this approach attempts to foster learners' autonomy through the incorporation of specific skills and strategies, with major focus on metacognitive strategies. Finally, the teacher-based approach proclaims that learners' autonomy is more likely to improve if appropriate teacher development and education is achieved. Otherwise stated, in order for autonomy to be fostered within the learning context, teachers should be aware of its importance and impact on the learning process as a whole (Le, 2009, p. 73). Little (1995) claims that learners' independence is primarily based on teachers' autonomy which, hence, necessitates a serious account for teachers' education. Cut to the chase, the six approaches provided by Benson endeavor to determine an appropriate way through which learners' autonomy can be fostered. Each of these approaches tackles certain aspects and takes many forms of application. It is hard or even impossible to choose among them the most successful one. Instead, as claimed by Benson (as cited in Riihimäki, 2013, p. 27) "it seems likely that it [autonomy] will be fostered most effectively through a combination of approaches". Therefore, instead of adhering to one specific approach, it is better to opt for an eclectic way where different aspects from these approaches are selected and applied.

1.7. Characteristics of the Autonomous Learner

As stated by Rousseau (as cited in Candy, 1991, p. 102), an autonomous learner is the one who "is obedient to a law that he prescribes to himself". Based on the previous definitions of autonomy, it is assumed that an autonomous learner is the one who decides about the major aspects underlying the learning process. s/he also takes responsibility for the selection of appropriate instructional materials and eventually evaluates himself due to his high level of awareness. With this in mind, the

characteristics of autonomous learners can be summed up in six main aspects: Self-direction, self-determination, self-regulation, self-monitoring, self-assessment and finally responsibility for Learning.

1.7.1. Self-direction

Self-directed learning (SDL) is one of the major features of autonomous learners. In this context, SDL stands for the processes by which learners take charge of several aspects in learning. It accounts for learners' prominent role which is manifested through self-assessing their needs, setting goals and objectives, indicating the necessary instructional tools and materials and opting for appropriate learning strategies (Knowles, 1975, p. 18). Enabling learners to take charge of the previously mentioned aspects would certainly enhance their awareness and concern towards the learning process, which results in better learning outcomes. In brief, SDL promotes learners' independence as it advocates the provision of more freedom regarding the major aspects of the learning process.

1.7.2. Self-determination

Another important quality that should be highlighted when dealing with the characteristics of autonomous learners is self-determination. Deci and Ryan are the two most prominent figures in self-determination research as they have contributed tremendously in shaping the Self Determination Theory (SDT). Self-determination is an intrinsic form of motivation which is influenced by inherent desire for growth and innate psychological needs. In light of this definition, self-determined learners strive to satisfy three major needs: competence, autonomy and psychological relatedness (Deci & Ryan, 1985; Ryan & Deci, 2000). Notably, Self-determination is related to autonomy in the sense that "when students' basic psychological needs for autonomy, competence,

and relatedness are supported in the classroom, they are more likely to internalize their motivation to learn and to be more autonomously engaged in their studies" (Niemiec & Ryan, 2009, p. 140). To put it another way, learners become more motivated and independent when classrooms consider their three major needs.

1.7.3. Self-regulation

Another characteristic of learners' autonomy is self-regulation which denotes self-generated thoughts, feelings, and actions that aim to help learners achieve certain educational objectives (Zimmerman, Bonner, & Kovach, 1996, p. 2). Along similar lines, Zimmerman (1989, p. 329) describes self-regulated learners as the ones who are "meta-cognitively, motivationally, and behaviourally active participants in their own learning process". Zimmerman's views rest on the assumption that self-regulated learners are active contributors to the learning process in three ways: Meta-cognitively, through organizing, setting goals, keeping record of their learning process (self-monitoring) and assessing their performance periodically (self-assessment). Motivationally, through clearly expressing their interest and desire to learn, striving to do their tasks and attributing success or failure to themselves since they possess a high level of confidence and self-efficacy. Behaviourally, through attempting to provide a suitable learning context where they can perform more successfully (Zimmerman, 1986, 1989). Therefore, self-regulation constitutes a major quality of autonomous learners owing to the fact that it contributes to their independence through metacognitive, motivational and behavioural processes.

1.7.4. Self-monitoring

Self-monitoring is a sub-skill within self-regulation. It is a quality of high achievers; it refers to the learners' intentional observation of explicit and implicit

aspects of their learning outcomes (Zimmerman, Bonner, & Kovach, 1996, p. 2). In other words, "self-monitoring is the process of having individuals record data regarding their own behaviour for the purpose of changing its rate" (Coleman & Webber, 2002, p. 103). Chang (2010, p. 300) stresses the pivotal importance of self-monitoring as it affects learners self-regulation, in addition to its impact on the pace of learning and its success. Accordingly, self-monitoring is considered as one of the features of autonomy whereby learners record their learning outcomes.

1.7.5. Self-assessment

Another worth mentioning quality of autonomous learners is self-assessment, which is considered as one of the features that indicate learners' control over learning (Holec, 1981, p. 3). According to Cooker (2012, p. 53), self-assessment is a beneficial way that promotes second language learners' autonomy as it allows for the establishment of self-tailored norms by which learners can judge the quality of their performance, rather than depending on external evaluation. Self-assessment and autonomy constitute what is known as autonomous assessment. The latter is defined as any assessment that primarily aims to develop learners' independence (Lamb, 2010, p. 101). Significantly, self-assessment enables learners to track their progress and success, and supplies them with valuable feedback on the effectiveness of the strategies and methods that they are employing in learning (Gardner, 2000, pp. 51-52).

1.7.6. Responsibility for Learning

Responsibility is considered as one of the major cornerstones underlying autonomous learning. Holec (1981, p. 3) pinpoints that the ability "to take charge of one's learning is to have […] the responsibility for all the decisions concerning all aspects of this learning […]". In this respect, autonomy and responsibility are two

interrelated terms since the improvement of the former necessitates the existence of the latter. In view of Holec's definition, Little (2007, p. 1) proclaims that autonomous learning starts when responsibility is accepted based on the assumption that successful learning is the result of learners' own effort. In brief, autonomy and responsibility are two interconnected notions that encourage learner's active participation in the learning process. With this in mind, fostering learners' autonomy entails promoting their sense of responsibility (Scharle & Szabo, 2000, p. 4).

1.8. Factors Affecting Learners' Autonomy

1.8.1. Metacognitive Strategies

Almost all researchers agree on the same broad definition of meta-cognitive strategies which stands for the set of actions and processes that enable learners to monitor, plan and evaluate their learning activity through an adequate adjustment of their strategies (O'Malley et al., 1985; O'Malley, Chamot & Kupper, 1989; Oxford, 1990; Auerbach & Paxton, 1997). To put it another way, Materna (2007) describes metacognition as "knowing what you know and knowing what you don't know as well as knowing those strategies to use to learn what you don't know" (p. 91). That is to say, metacognition covers knowledge of the actual level, the target level and the appropriate strategies that should be employed for learning. Holec's description of the autonomous learners marks a clear relationship between autonomy and meta-cognition since the former builds upon the aspects of the latter. In this respect, he states that an autonomous learner is "a learner who fixes objectives, defines learning content, selects learning methods, and monitors and evaluates the process towards the objectives" (1981). Equally important, Wenden (1987) contends that "metacognition is one aspect of autonomy". In view of the previously discussed ideas, there is a clear relationship between autonomy and meta-cognition as learners' awareness of the strategies utilized

in the learning process and how to use them would certainly contribute to their independence.

1.8.2. Motivation

Many researches have been conducted in order to understand the relationship between motivation and autonomous learning. As a matter of fact, these investigations provide valuable insights and findings in relation to these two important notions. Nonetheless, researchers are still debating over whether motivation precedes autonomy or vice versa. According to Gardner (1985, p. 10), motivation stands for "the combination of effort plus desire to achieve the goal of learning the language plus favourable attitudes toward learning the language". In other words, motivation is described as the learner's willingness to reach a specific objective which, accordingly, appears through the efforts s/he puts into achieving that objective. As claimed by Oxford and Shearin (1996), motivation infers the extent to which learners might be involved in second language learning. Masgoret and Gardner (2003) maintain that a motivated learner can be described as studious, attentive, depends on strategies in learning, makes efforts and ascribes failure/success to specific aspects. With this in mind, there is a clear link between motivation and autonomous learning as both notions build upon the same characteristics.

Factually, motivation and autonomy are considered by many renowned researchers to have reciprocal influence. Accordingly, both notions appear to affect each other in a remarkable way. Dickinson (1995, pp. 173-174) asserts that "enhanced motivation is conditional on learners taking responsibility for their own learning . . . and perceiving that their learning successes and failures are to be attributed to their own efforts and strategies". Said differently, responsibility and self-attribution which are characteristics of autonomy affect the degree to which learners are motivated.

Similarly, Ushioda points out that "autonomous language learners are by definition motivated learners" (1996, p. 2). Spratt, Humphrey and Chan (2002) claim that motivation precedes autonomy. Dörnyei and Csizér (1998) empirically provide ten commandments that serve in motivating language learners. Depending on the results of their empirical study, they conclude that promoting learners' autonomy plays a significant role in enhancing learners' motivation. In short, both autonomy and motivation work hand in hand and influence each other mutually.

1.8.3. Self-Access Language Learning and Technology-Based Learning

Among the most important aspects that might influence FLL autonomy is Self-Access Language Learning (SALL). However, before tackling this specific notion, it is preferable to have a general idea about Self-Access Centers (SACs). The latter refers to the "system which makes materials available to language learners so that they can choose to work as they wish, usually without a teacher or with very limited teacher support" (Sturtridge, 1992, p. 4). In other words, SACs are centers that enable learners to gain access to learning materials by their own and according to their pace and desires, far from any kind of intervention from the teacher. SACs are employed in FL learning through SALL. The latter attempts to provide the needed materials by which learners can learn the language, as argued by Sheerin "[t]he essential prerequisite to self-access learning is the provision of self-access materials within an organized framework so that students can get what they need" (1989, p. 7).

Although many researchers link between self-access and autonomous learning, SALL does not necessarily lead to learner autonomy since the promotion of the latter does not depend on SACs themselves but rather on the way through which SACs are utilized. In light of the previous idea, Sheerin (1997, p. 54) affirms that "[it] is the way teachers and learners use self-access facilities which determines whether independent

learning takes place". Therefore, it is illogical to limit the development of learners' autonomy to SALL and SACs due to the fact that independent learning may take place in different contexts. Nonetheless, SALL and autonomous learning share the same characteristics in terms of taking charge of what/how to learn. Accordingly, there is a close relationship between self-access and autonomous learning as the former may serve as "one context in which autonomy can be developed" (Salvia, 2000, p. 97). Benson (2011, p. 10) states that the early SACs such as the ones at CRAPEL and the University of Cambridge were seen as an opportunity to develop self-directed learning. However, as SACs recently spread in a rapid way, self-access has become a synonym to autonomy (p. 11).

As SACs opt for the integration of technological tools in the learning process, SALL has become synonymous with Technology-Based Learning (TBL) (Benson, 2011, p. 11). In this respect, research into the field of autonomous learning takes a new direction as researchers start to investigate the nature of the relationship between learners' autonomy and TBL. Benson declares that

> Researchers on autonomy emphasise that learners who engage in technology-based learning do not necessarily become more autonomous as a result of their efforts. A great deal depends on the nature of the technology and the use that is made of it (2011, p. 11).

In other words, autonomous learning is not always related to what learners do in order to learn. Instead, it might be related to the kind of technological tools coupled with the way(s) through which these tools are utilized. Reinders and White (2016, p. 143) contend that "early thinking considered a direct and often one-directional impact of the use of technology on learners' independence by providing them with access to resources and the possibility of working at times and in locations of their own

choosing". Therefore, they explain that TBL influences the learning process through providing learners with appropriate materials along with the ability to control when, where and how to learn. Reinders and White (2016, p. 150) also agree that the gap between autonomous learning and educational technologies is diminishing gradually, they provide a figure (p. 151) in which they demonstrate a possible fusion between autonomy and technology.

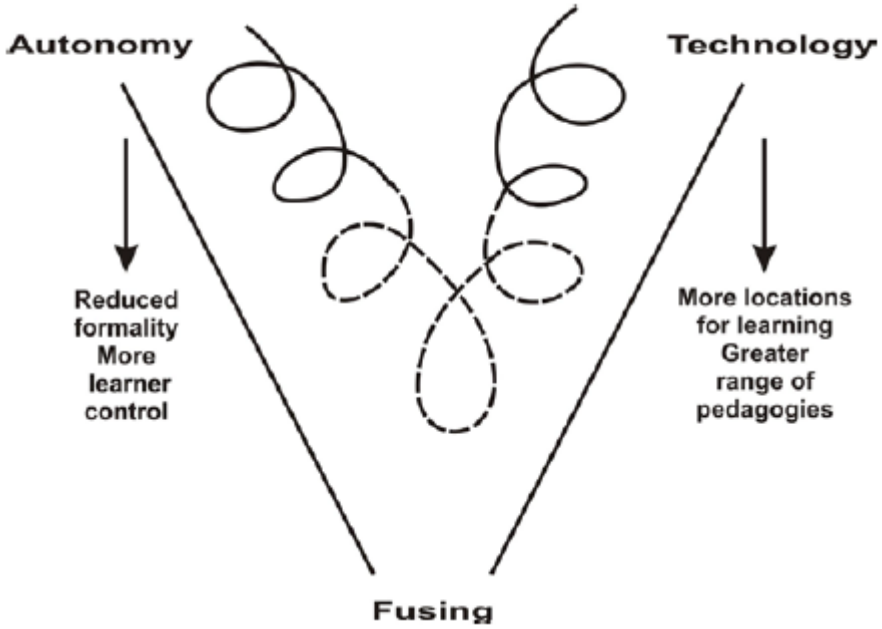

Figure 1.1. A Model of Convergence

(Retrieved from Reinders and White, 2016, p. 151)

1.8.4. Learner Training

Learner training proves to be of pivotal importance for learners to develop autonomy. Wenden (1991, p. 163) assumes that learner training stands for "the learning activities organized to help language learners improve their skills as learners; includes learning to use strategies; knowledge about the language learning process; and attitude and development to support autonomous use of the strategies and knowledge". Otherwise stated, learner training covers the set of tasks and activities employed to enable learners develop certain skills and strategies and eventually make use of them

autonomously. Learner training is grounded on the fact that the most appropriate task of teachers should consist of aiding learners to develop their learning approaches (Holland & Shortall, 1997, p. 109). In this respect, Brown (2001, p. 208) maintains that teachers' mission comprises "enabling learners to eventually become independent of classrooms – that is, to become autonomous learners". Consequently, learner training is considered as one of the most influential aspects that affect learners' independence. The purpose behind incorporating learner training within EFL classrooms can be summarized by Ellis and Sinclair (1989, p. 10) who proclaim that learner training attempts to "start the learners on their own journeys towards self-knowledge and self-reliance". Therefore, it can be described as the process by which learners acquire a set of skills and techniques that facilitate their learning activity and contribute to their awareness regarding the use of these strategies along with developing their sense of independence and self-direction (Williams & Burden, 1997, p. 147).

As a matter of fact, several approaches were introduced by researchers in order to implement an appropriate way of learner training whereby autonomy could be fostered or promoted. Accordingly, many models of learner training, with slightly different focuses, have appeared (Wenden 1991; Stern 1992; Ryan 1997; Nunan 2003 & Brown 2001). Nunan (2003) provides a nine steps program to make learners move from "total dependence on the teacher to autonomy" (p. 195). This program consists of three content-oriented aspects and six process-oriented steps and they are organized as follows:

1. Make instruction goals clear to learners.
2. Allow learners to create their own goals.
3. Encourage learners to use their second language outside the classroom.
4. Raise awareness of learning processes.

5. Help learners identify their own preferred styles and strategies.
6. Encourage learner choice.
7. Allow learners to generate their own tasks.
8. Encourage learners to become teachers.
9. Encourage learners to become researchers.

Following this program, Nunan (2003) assures that learners would proceed from total dependence to independence.

1.8.5. Teacher Autonomy

An autonomous teacher is the one who is conscious of all the aspects underlying the acquisition of pedagogical skills, in addition to the appropriate way(s) of employing them in the teaching process (Tort-Moloney, as cited in Le, 2009, p. 73). Teachers' autonomy is one of the decisive factors that influence learners' independence. In this respect, Thavenius (1999, p. 160) reinforces the link between teachers' and learners' autonomy by defining the former:

> Teacher autonomy can be defined as the teacher's ability and willingness to help learners take responsibility for their own learning. An autonomous teacher is thus a teacher who reflects on her teacher role and who can change it, who can help her learners become autonomous, and who is independent enough to let her learners become independent.

In view of this definition, Thavenius attests that teachers' autonomy is defined in terms of their readiness to contribute in developing learners' responsibility in addition to their ability to become autonomous learners. Equally important, Little (as cited in Lamb, 2008, pp. 270-271) affirms that learners' autonomy is dependent on teachers' autonomy. He further explains his assumption by providing two major arguments. Firstly, it is impossible for teachers to develop a skill in learners while they lack

knowledge about it. In other words, teachers cannot foster learners' autonomy if they do not really know what autonomy stands for. Secondly, classroom management and task determination depend to a certain extent on teachers' capacity to employ their skills autonomously. In a similar view, Reinders and Balcikanli (2011) argue, in relation to teachers' autonomy, that learners' autonomy can be fostered via two major ways: teachers' autonomy in addition to the set of strategies they use for this purpose. Briefly, teachers' autonomy has a notable impact on the appropriateness of the learning environment which, therefore, would enable learners to learn autonomously (Yan, 2010).

Conclusion

Given the fact that education is continuously evolving, there is no doubt that this evolution is bringing more freedom to learners and new roles to teachers. Numerous researchers assert that autonomous learning has a crucial impact on learners' knowledge, instructional outcomes, communicative competence, the effectiveness of the learning process, and even on their lives (Knowles, 1975; Candy, 1991; Little, 1991, 2016; Dam, 1995; Benson, 2006). These claims, which are empirically proved, explain the huge interest in autonomy and the desire to make learners self-direct their learning activity to a certain extent, far from the traditional teacher-centred classrooms. Put in a nutshell, autonomy as a notion in FLL has captured the attention of many researchers in the previous three decades. Until now, misconceptions over the theoretical foundations of the concept in addition to its adequate and appropriate implementation in FL classrooms are still subject to rigorous discussions (Benson, 2011). Although autonomy receives huge scholarly contributions, these notions are not clearly digested yet especially in terms of the degree to which autonomy should be supported, teacher roles, and the factors that influence the promotion or development of

autonomy. Nevertheless, this notion is still proving its impact on education in general and FLL in particular.

CHAPTER TWO: Educational Technology

Introduction

The unceasing development of Educational Technology (ET) results in a successful, well-organized teaching and learning activity. The latter witnesses the integration of a plethora of technological innovations and tools that continuously reshape classrooms' organization and instructional approaches. The contribution of ET to the field of FLL makes it one of the major teaching and learning necessities. In light of its undoubtable significance, ET appears to have an influence on a wide range of aspects that constitute the educational field, namely teaching methods, teachers' knowledge, and learners' skills along with several other constituents of the teaching and learning process. This chapter is an attempt to trace the development of ET and Technology-Based Learning (TBL), with a major focus on the different forms of TBL and the implementation of technology in the educational domain.

2.1. History of Educational Technology (ET)

Given the fact that Educational Technology has been approached from different perspectives, it appears to designate different things to different people. Accordingly, the history of ET is influenced by these various definitions which encompass both broad and precise understandings of the term. Consequently, the development of this concept is traced differently depending on what scholars consider as ET. In view of the previous facts, this part covers the history of ET in its broadest sense, taking into account a large timeline which stretches from the time of the Sophists (450 B.C - 350 B.C) until the present day.

According to Pathak and Chaudhary "ET has a long history. Its beginning can be traced back to the time when tribal priests systematized bodies of knowledge and early cultures invented pictographs or sign writing to record, preserve, transmit and reproduce information" (2011, p. 1). Accordingly, each era has witnessed a specific

way of processing information for the sake of achieving a certain educational purpose. Seemingly, the Sophists are considered to be the pioneers of mass education due to the fact that they have implemented knowledge systematically and created instructional technologies and materials (Lucido & Borabo, 1997, p. 1). Moreover, they have initiated the techniques of analysis which were developed depending on philosophy and rhetoric (Pathak & Chaudhary, 2011, p. 1). Another important period in the history of ET is related to the emergence of Scholasticism[1] during the middle ages. Scholastic philosophy has developed a new instructional method under the leadership of Pierre Abelard whose method "consisted of the presentation of the pros and cons of certain propositions but leaving the formulations of conclusions to his students" (p. 2). Abelard's ideas have contributed to the foundation of Scholastic education and have influenced other prominent figures like Peter Lombard and St. Thomas Aquinas who opted for similar instructional methods. In the same vein, J. A. Comenius is another renowned icon in the field of ET. He is considered as the father of modern instructional technology thanks to his 1658 unique publication Orbis Pictus (The World in Picture) which is an illustration-based textbook (Lucido & Borabo, 1997).

Pathak & Chaudhary (2011) point out that "the period from 1700 to 1900 was marked by the evolution of new scientific outlook, development of new educational theories, learning theories and founding of experimental psychology" (p. 2). During this period, many researchers have attempted to develop new educational methods such as Joseph Lancaster's *Monitorial System*[2], Pestalozzi's instructional system which led to the development of the concept of *Anschaung* (The development of insight), Pestalozzi and Froebel's concept of *Kindergarten* and Friedrich Herbart's concept of

[1] A philosophical movement dominant in western Christian civilization from the 9th until the 17th century and combining religious dogma with the mystical and intuitional tradition of patristic philosophy especially of St. Augustine and later with Aristotelianism (Merriam Webster).

[2] An educational system formerly in use by many charity schools that consisted in employing older pupils to teach the younger ones (Merriam Webster).

Apperception which, according to Pathak & Chaudhary, is defined as "a process of relating new ideas to old ones, and of assimilating them into a totality of appreciative mass". Other prominent figures include Edward Thorndike and John Dewey who, according to Lucido and Borabo (1997) "formulated the scientific theory of learning and the scientific method, respectively" (p. 1). Put in a nutshell, many researchers have contributed to the development of ET through their innovative instructional methods and theories.

The period that precedes the industrial revolution is characterized by heavy dependence on simple educational tools such as the blackboard and chalk, to name but a few. During this period "Educational Technology was considered synonymous with simple aids like charts and pictures" (Aggarwal, 2011, p. 10). However, an international exhibition in 1873 at Vienna has witnessed a presentation of charts and maps in addition to other media by an American school; this show has quickly gained recognition and appreciation and was acknowledged as a major landmark in the history of audio-visual education. Another important turning point in the history of ET has been initiated in 1920 by the British Broadcasting Corporation (BBC) which provided a remarkable contribution to education through school broadcasts. By 1952, instructional broadcasting has been integrated in many American schools while almost all UK schools incorporated radios during the same period (Aggarwal, 2011, pp. 11-12). A stunning educational invention has taken place in 1920 as the psychologist S. L. Pressey developed a teaching machine called *Drum Tutor*[3] which, according to Pathak and Chaudhary (2011, p. 3), functions through providing stimulus, registering responses and indicating results. It is worthy of note that Pressey's machine has influenced skinner's theory of *conditioning* during the 1950s and 1960s.

[3] A self-teaching machine which could teach and test students through displaying a range of questions and options (Sampath, 1984, p. 255).

The post Second World War era has witnessed the spread of television. The latter has revolutionized the field of education and as assumed by Pathak and Chaudhary (2011, p. 3) "it had the potential to replace all the teaching aids available so far. It could take the learners out of the four walls of the classroom". The next worth mentioning leap in the development of ET is the integration of computers in learning which took place during the 1970s. As a matter of fact, computers have reshaped education especially after the development of *artificial intelligence*[4] during the 1990s. "Computer-based learning enhances human learning as it takes place through dynamic relationships. The next logical development is computer networking. This technology connects the learner to the rest of the world" (Pathak & Chaudhary, 2011, p. 3). Today, ET is increasingly influenced by the unparalleled interest in social media networks in addition to the availability of a wide range of technological devices that serve as important instruments in education.

Cut to the chase, Aggarwal (2011, pp. 12-13) cites five major stages that ET has passed through. During the first stage, ET has been conceived as a synonym to audio-visual aids due to the fact that education witnessed dependence on audio-visual items like charts, maps, models along with other concrete materials. The electronic revolution characterizes the second stage. Therefore, this period encompasses different equipment such as projectors, radios and televisions. Mass media and the increased need for communication are considered as the pillars of the third stage which, additionally, embraces computer-assisted instruction. The fourth stage is marked by more autonomous ways of instruction as programmed learning and teaching machines were developed in a way that makes learning more individualized. The last stage is affected by the adoption of the concept of system approach which is defined by Ryan (1975) as

[4] A branch of computer science dealing with the simulation of intelligent behavior in computers and the capability of machines to imitate intelligent human behavior (Merriam Webster).

“a scientific, systematic, and rational procedure for optimizing outcomes of an organization or structure, by implementing a set of related operations to study an existing system, solve problems, and develop new or modify existing systems” (p. 121). Based on this concept, ET becomes a way through which teaching and learning activities are created, implemented and evaluated according to specific criteria and objectives.

2.2. Definition of ET and Technology-Based Learning (TBL)

Thomas (1987, p. 1) contends that “There is no universally-agreed-upon definition of educational technology”. As a matter of fact, ET symbolizes different things to different people. Accordingly, the term might refer to “electronic gadgetry” such as computers, televisions, tape recorders and projectors. Similarly, it might stand for “nonelectrical instructional materials” such as books. Furthermore, ET might go beyond physical objects to cover more abstract methods of instruction which are referred to by Thomas as “operating systems” (1987, p. 1). As a result of its flexible and constant evolution, ET is defined differently throughout history. Seemingly, the definition of ET receives a remarkable attention from The Association for Educational Communications and Technology (AECT) which attempts continuously to provide a clear connotation of the term. Hence, it offers three main definitions (1977, 1994, and 2008) which outline the development of ET in terms of what it stands for.

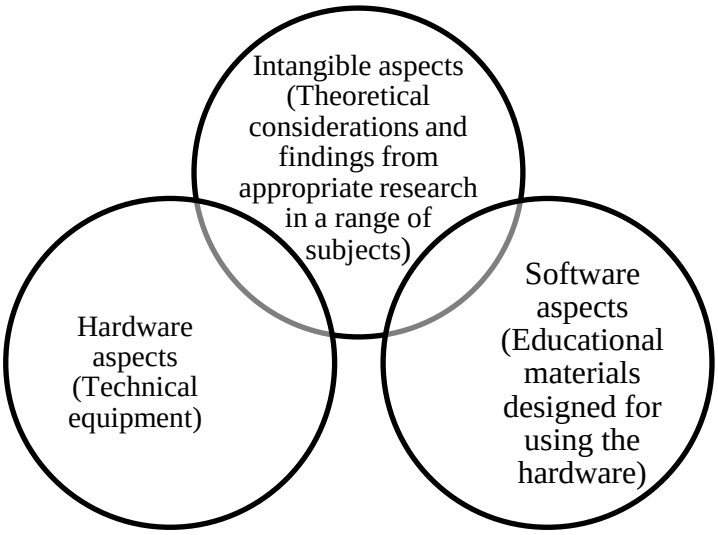

Figure 2.1. The Relation Between Different Aspects of ET

(Pathak & Chaudhary, 2011)

The AECT defines ET as "a complex and integrated process of people, procedures, ideas, devices, and organization for analyzing problems and devising, implementing, evaluating, and managing solutions to those problems, involved in all aspects of human learning" (AECT Task Force on Definition and Terminology, 1977, p. 1). This definition considers ET as a system whereby learning problems are targeted and processed through the provision of potential solutions. AECT's 1994 definition replaces *Educational Technology* by *Instructional Technology* (IT) and describes it as "the theory and practice of design, development, utilization, management and evaluation of processes and resources for learning" (Seels & Richey, 1994, p. 1). In other words, IT covers the creation, development, regulation and use of certain methods and procedures in learning. The most recent definition of ET provided by AECT (2008) assumes that "Educational technology is the study and ethical practice of facilitating learning, and improving performance by creating, using, and managing appropriate technological processes and resources" (Definition and Terminology Committee of the Association for Educational Communications and Technology, 2008, p. 1). In light of

the previous definition, ET attempts to facilitate and ameliorate learning through supplying suitable technological materials, taking into account certain ethical aspects that should be respected.

Other definitions of ET include the one provided by Unwin (1968, p. 115) which considers ET as the process of executing newfangled techniques and strategies through controlling and regulating media and environments for the sake of facilitating the learning process. Along similar lines, Leedhan (1973, p. 155) maintains that ET refers to the systematic dependence on new methods and media in teaching and learning. Relatedly, Sampath (1984) views ET as a "behavioral science approach to teaching and learning" (p. 30) and argues that ET aims at "the development, application and evaluation of systems, techniques and aids in the field of learning" (p. 31). Garrison and Anderson's definition (2003, p. 34) focuses on tools rather than techniques due to the confusion that might occur when considering "all systematic designs … as technologies". Accordingly, they describe ET as "those tools used in formal educational practice to disseminate, illustrate, communicate, or immerse learners and teachers in activities purposively designed to induce learning". Put differently, ET here stands for media utilized to establish, regulate, and ensure a successful learning activity. As far as one can see, ET is defined variously and tackled from many points of view in the sense that some definitions are highly inclusive while others opt for a more exclusive perspective. Notwithstanding, almost all definitions agree on the fact that ET makes use of the latest tools and techniques to improve learning.

One of the major discussed concepts when talking about ET is Technology-Based Learning (TBL). Although many scholars assume that TBL is synonymous to ET, other researchers consider it to be more practical in light of the fact that it stands

for the concrete implementation of technology in learning. In this regard, Koller, Harvey and Magnotta (2008) define TBL as:

> The learning of content via all electronic technology, including the Internet, intranets, satellite broadcasts, audio and video tape, video and audio conferencing, Internet conferencing, chat rooms, e-bulletin boards, webcasts, computer-based instruction, and CD-ROM. TBL also encompasses related terms, such as online learning and web-based learning that only include learning that occurs via the Internet, and computer-based learning that is restricted to learning using computers. (p. 4)

This definition clearly outlines the scope of TBL which covers learning via all electronic media. Equally, it indicates that TBL comprises other ways of learning such as internet-based and computer-based learning.

2.3. Forms of Technology-Based Learning

2.3.1. Information and Communication Technologies (ICTs)

As described by Blurton (1999, p. 46), ICT represents a "diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information". Said differently, ICT stands for the set of technological devices that function through initiating, processing, manipulating and storing data. With this in mind, ICT; therefore, comprises a wide range of devices such as computers, smartphones, World Wide Web (WWW) resources, video-conferencing, satellites, televisions, and radios in addition to several other hardware and software items. ICT is the result of the fusion between computer and telecommunication technologies. Nowadays, ICT dominates almost all life domains and sectors including education, military, commerce and other fields. As a matter of fact, the importance of ICT in education is unquestionable since it is considered as "one of the pillars upon which

quality education for all can indeed become a reality, because of its unique capacity to bring the world together, even the most remote and disadvantaged of communities" (Kennah, 2016, pp. 8-9).

Bodomo (2010, p. 10) summarizes the features of ICTs into four main points: multimedia integration, flexibility, connectivity and interactivity. Multimedia integration pinpoints that ICTs enable the combination of a spectrum of tools and devices that aim at communicating and disseminating meaningful data. The use of computers and similar devices makes it possible to combine text, image and sound together. Due to its flexible nature, ICT enables both synchronous and asynchronous communication as well as information exchanging. In other words, one might utilize the same tool to engage in either a direct, live exchanging activity or an indirect, delayed communication. Another important quality of ICT is that of connectivity. The use of technological tools bridges the gap between people from different areas in the world and turns the latter into a small village where communication is not affected by distance. Perhaps the major feature of ICT is interactivity which results from the previous three qualities. Accordingly, ICT enables users to control the communicative event in terms of information content and the ways of exchanging that content.

2.3.2. Computer-Assisted Language Learning (CALL)

Given the fact that CALL's definition is continuously evolving, it is better to provide a broad understanding of the term before going into further details. Hence, CALL is defined by Beatty (2010, p. 7) as "any process in which a learner uses a computer and, as a result, improves his or her language". Apparently, this definition denotes a general understanding of CALL as an activity whereby learners develop their mastery over the language depending on the computer as a major educational medium. Along similar lines, Gamper and Knapp (2002, p. 331) pinpoint that CALL is a field of

investigation that covers the utilization of computer-based methods and techniques along with novel media in the field of language learning and teaching. Similarly, Levy (1997, p. 1) contends that CALL stands for "the search for and study of applications of the computer in language teaching and learning". Evidently, the previously mentioned definitions agree on the fact that CALL refers to the process of using computers and similar media in language learning and teaching.

According to Beatty (2010, p. 8), CALL involves several areas of inquiry such as materials design, technologies, pedagogical theories and modes of instruction. Besides, CALL is manifested through word processing, games, Computer-Mediated Communication (CMC), corpus linguistics, WWW resources, Personal Digital Assistants (PDAs), and smartphones, not to mention but few (p. 58). Furthermore, there are several terms related to CALL such as Computer-Aided Instruction (CAI) which refers to any learning activity that makes use of the computer, Computer-Assisted Language Teaching (CALT) which stands for the use of computers in teaching, Web-Enhanced Language Learning (WELL) which denotes CALL with dependence on WWW resources in addition to many other terms (pp. 10-11).

The development of CALL has passed through three major phases. According to Wang and Kaplan (2004, p. 144), "CALL has evolved from a Behavioristic model, to communicative and integrative models, to include finally a more collaborative approach". To put it another way, CALL's development is in harmony with developments in technology and language learning. With this in mind, CALL was first influenced by the principles of Behaviorism during the 1960s and 1970s. Accordingly, computers served as a source of drill-and-practice activities. The 1980s and 1990s witnessed a shift of interest from vocabulary and grammar to communication and interaction which characterize the Communicative approach. As a result, CALL was

integrated in order to stimulate interaction. The same period witnessed the appearance of Integrative CALL which emphasizes the importance of authentic learning environments and the integration of language skills depending on computers. The twenty-first century is characterized by the emergence of Collaborative CALL. The latter conceives technology as an instrument that can be used to achieve social and personal development (pp. 144-145). Along similar lines, this period has also witnessed "the integration of computing facilities into many aspects of daily life" (Beatty, 2010, p. 39) in addition to the emergence of a spectrum of technological devices that contribute to the efficiency of CALL.

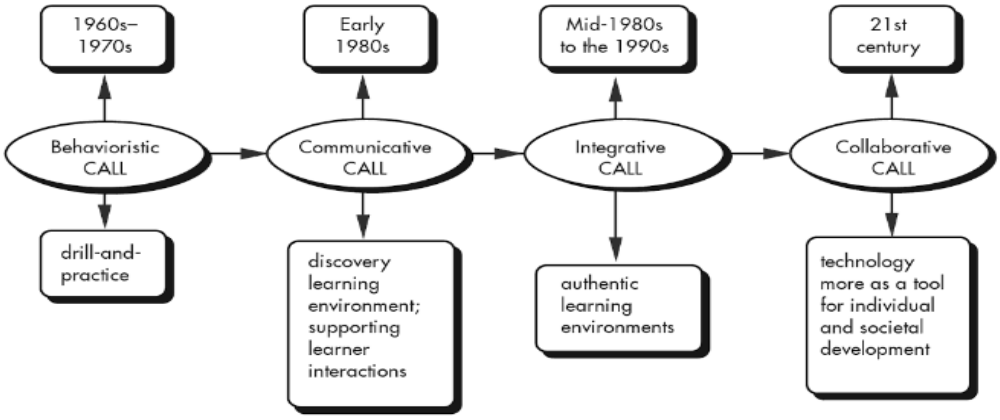

Figure 2.2. The Evolution of CALL (Wang and Kaplan, 2004, p. 145)

2.3.3. Computer-Mediated Communication (CMC)

Herring (1996, p. 1) provides a broad but simple definition of CMC, she avers that "CMC is communication that takes place between human beings via the instrumentality of computers". In other quarters, CMC refers to any communicative event that involves dependence on the computer as a medium of interaction between human beings. December (1996) offers a more technical definition of CMC by describing the process through which computer-mediated communication operates.

> Internet-based, computer-mediated communication involves information exchange that takes place on the global, cooperative collection of networks using the TCP/ IP protocol suite and the client-server model for data communication. Messages may undergo a range of time and distribution manipulations and encode a variety of media types. The resulting information content exchanged can involve a wide range of symbols people use for communication. (p. 24)

Put in a nutshell, CMC makes use of a wide range of tools and applications to ensure communication between senders and receivers. It functions through the "the medium of the computer and allied technologies such as PDAs, mobile phones, and blackberries; and through media like the internet, email, chat systems, text messaging, YouTube, Skype, and many more to be invented" (Bodomo, 2010, p. 6). Therefore, the word *computer* does not necessarily mean desktops and personal computers; it rather covers a wide range of technological devices and applications.

2.3.4. Distance Learning

According to Williams, Paprock, and Covington (1999, p. 2), Distance Learning (DL) "refers to the teaching-learning arrangement in which the learner and teacher are separated by geography and time". DL stands for institutionalized education that gathers separate groups, materials, learners and teachers depending on technological tools (Simonson, 2003). DL might be synchronous, i.e. based on real-time interaction between students and teachers. It might also be asynchronous in the sense that learning occurs indirectly as learners can get access to the instructional materials whenever they want without the need for direct, live interaction with teachers. Keegan (as cited in Schlosser & Simonson, 2009, pp. 4-5) identifies five main characteristics that distinguish DL from other ways of instruction. According to him, DL is different from

face-to-face/traditional learning in that it necessitates a permanent separation between the learner and the teacher. Be that as it may, this does not imply that DL is not institutionalized (formal). Accordingly, he argues that DL is managed by an educational body that takes the responsibility of preparing instructional materials and providing assistance to students. Therefore, DL is different from self-learning where learners take full charge of the learning process. Additionally, DL involves dependence on technological tools such as computers, videoconferencing, and other items that mediate between teachers and students and store, manipulate and disseminate learning materials. Another important feature of DL is its two-way communication which enables learners and teachers to interact and discuss ideas. Finally, Keegan assumes that DL involves a permanent absence of the learning group and embraces a more individualized learning activity.

As claimed by Williams, Paprock, and Covington (1999, pp. 4-5), DL involves three major levels of development, each level is characterized by specific ways of learning and appropriate set of tools. Starting with the first level (1880s onwards), DL took the form of audio and videotapes in addition to radio broadcasting. That being the case, it proved to be both passive and asynchronous due to the fact that interaction was not possible since the previously mentioned tools allow for one-way communication only. The 1960s marked the beginning of the second phase of DL which was influenced by the integration of computers in learning. The latter allowed for two-way communication and was characterized by dependence on electronic mails, Computer-Mediated Conferences (CMCs), audio and video tele-training. This period is described as moderately active. The third phase begun during the 1990s; it is highly interactive owing to the fact that it encompasses a wide range of instructional media such as virtual classrooms, internet, online video, TV network collaboration along with other forms.

2.3.5. Self-Access Centers (SACs)

SACs stand for the "system which makes materials available to language learners so that they can choose to work as they wish, usually without a teacher or with very limited teacher support" (Sturtridge, 1992, p. 4). In other words, SACs are centers that enable learners to gain access to learning materials by their own and according to their pace and desire, far from any kind of intervention by the teacher. SACs are employed in FL learning through Self-Access Language Learning (SALL). The latter attempts to provide the needed materials by which learners can learn the language, as argued by Sheerin "[t]he essential prerequisite to self-access learning is the provision of self-access materials within an organized framework so that students can get what they need" (1989, p. 7). SACs are considered by many researchers to be one of the most important prompters of learners' autonomy due to the fact that they provide full access to learners to take total charge of their learning. SACs put learners in situations where they have to decide on the type and nature of content to be learned which; consequently, pushes them to become more responsible and conscious of what they should learn.

2.3.6. Blended Learning

The contentious nature of Blended Learning (BL) makes it really problematic to sort out a single definition. BL might cover a wide range of learning modes and a plethora of instructional tools. Nonetheless, the majority of definitions consider BL to refer to situations where traditional, conventional, face-to-face learning, is combined with online, technology-mediated learning (Bonk & Graham, 2006; Garrison & Vaughan, 2008; Picciano, Dziuban & Graham, 2013; Stein & Graham, 2014). It is important to note that the blending process is not that simple in the sense that it does

not take place randomly. Rather, it should be purposeful and based on effective ICT tools (Garrison, as cited in Richey, 2013, p. 23).

According to Stein and Graham (2014, pp. 14-17), BL has three main benefits. First, it facilitates the learning process for it provides different learning modes that respect learners' learning styles and situations. In other words, BL provides online learning for students who cannot engage in a traditional learning activity where attendance is usually compulsory. Hence, it gives them the opportunity to pursue their studies and to work or care for their families simultaneously. Besides, BL offers traditional face-to-face mode of learning which is conceived by many learners as crucial for the sake of socialization and for the creation of relationships between learners and teachers. Concisely, the eclectic nature of BL proves to be effective as it accounts for the different learning modes that students favor.

Second, BL contributes to the effectiveness of learning. This idea is proved by a US Department of Education report (2009) which, after scrutinizing numerous empirical studies that compared conventional learning to online learning, found that students who engaged in online learning activity performed better than those who followed traditional learning. The same study compared online courses with blended courses and concluded that BL is more advantageous than online learning (Yates et al., as cited in Stein and Graham, 2014, p. 15). Seemingly, BL is better than the other modes of learning for many reasons. BL provides more attractive instructional design in the sense that it depends on content designers and educational technologists. It also grants learners more assistance and explicit guidance in contrast to face-to-face learning where guidance takes place only in the classroom. Equally important, BL facilitates access to learning materials and allows for more independent, individualized learning where learners manage to learn according to their own needs. Finally, BL triggers

interaction and improves engagement as it allows learners to interact freely and to engage in discussions and collaborations far from the anxiety and pressure that they usually encounter in traditional face-to-face learning situations.

Third, BL decreases the amount of money and resources exploited to arrange a learning activity. To put it another way, BL reduces learning expenses, especially in the case of international students who are usually obliged to travel in order to learn. Likewise, it reduces dependence on campus resources such as classrooms which; therefore, enables institutions to overcome certain challenging lacks of physical classrooms. Succinctly, BL is considered as one of the most effective learning modes whereby learners engage in both online and traditional instruction which improve their course-engagement and interest and eliminate the obstacles carried within conventional learning situations.

2.3.7. Mobile Learning (M-Learning)

M-learning is approached from different perspectives seeing that researchers disagree on what exactly should be ‘mobile’. As a result, the emerging definitions are categorized into three main types: techno-centric, context-centric, and learner-centric. In this regard, a broad definition of m-learning might consider the latter as “any type of learning that takes place in learning environments and spaces that take account of the mobility of technology, mobility of learners and mobility of learning” (El-Hussein & Cronje, 2010, p. 20). Said differently, the techno-centric definition of m-learning sheds more light on technological tools. Therefore, it advocates the utilization of flexible, mobile, portable and wireless technological devices such as personal digital assistants (PDAs), personal computers (PCs) and smartphones, to name but a few. On the other hand, the context-centric understanding of the term implies learning that takes place through depending on daily life contexts and situations. In other words, “to utilize our

everyday life-worlds as learning spaces" (Pachler, Ben, & Cook, 2010, p. 6). Finally, the learner-centric m-learning gives more importance to the mobility and flexibility of learners themselves; it emphasizes connectivity rather than mobility of technological devices in the sense that learners take more control over their learning process. Consequently, learning becomes a day-to-day activity that does not necessarily require a formal classroom. For this reason, the gap between formal and informal education fades gradually (Anderson, as cited in Richey, 2013, p. 215).

2.4. Educational Technology Tools

2.4.1. Digital Libraries (DLs)

Digital libraries (DLs) are defined as online systems that enable learners to have access to a wide range of educational materials such as books, journals, articles and several other electronic materials. DLs constitute a network of resources and provide users with the ability to create, search, and use these resources according to their own needs. DLs combine a network of people, technological tools and electronic content (Lesk, 1997; Borgman, 2000; Bishop, Van House & Buttenfield, 2003; Candela et al., 2007). Bidgoli (2003, pp. 505-507) cites numerous advantages of DLs. Remote access is one of the major qualities of DLs as they enable learners to search and use materials from any location and at any time, in contrast to the limited access that traditional libraries offer. Moreover, DLs allow access to rare and fragile materials that might not be accessible in traditional libraries such as old books and documents. Additionally, DLs' materials usually contain hyperlinks which facilitate moving between a wide range of sources unlike traditional libraries where content is printed and presented in separate papers. Having said that, DLs involve some limitations such as unfamiliarity with technology and/or unavailability of technological tools.

2.4.2. Electronic Portfolios

Electronic portfolios or e-portfolios stand for the set of artifacts, achievements, accomplishments, career-information and experiences displayed electronically in order to provide a general overview of the skills that characterize an individual, a group or an organization. E-portfolios cover different types of content such as texts, images, audio and video (Greenberg, 2004, as cited in DiMarco, 2008; Lorenzo & Ittleson, 2005). Barrett (2010, p. 292) defines e-portfolios as "an electronic collection of evidence that shows your learning journey over time. Portfolios can relate to specific academic fields or your lifelong learning. Evidence may include writing samples, photos, videos, research projects, [and] observations by mentors and peers". According to Greenberg (2004, as cited in DiMarco, 2008, p. 1657), there are three types of e-portfolios: a) *Showcase e-portfolio* which refers to the type of e-portfolios that are organized at the end of the creation of content. b) *Structured e-portfolio* which stands for the type of e-portfolios that have a pre-determined structure or organization. c) *Learning e-portfolio* which designates e-portfolios where organization evolves as the content is being created. Lorenzo and Ittleson (2005, p. 2) assert that e-portfolios are not simply a collection of artifacts since they have more important functions. E-portfolios allow the author to interact with those who see his/her work and receive feedback from them which; in addition to the author's self-reflection on the work displayed in his/her e-portfolio, help in the creation of "meaningful learning experience" (p. 2).

2.4.3. Smartphones and Interactive Whiteboards (IWBs)

It is important to note that the field of ET encompasses a myriad of technological devices that can facilitate the teaching and learning process. Among these tools are Smartphones, Interactive Whiteboards and Projectors, along with many other devices. Nowadays, smartphones prove to be one of the most effective educational

mediums. A smartphone is a "mobile device that mostly unifies functionalities of a mobile phone, a PDA, an audio player, a digital camera and camcorder, a GPS receiver and a PC" (Himmelsbach, 2013, p. 10). As affirmed by Liu, Tao and Cain (2016, p. 316), smartphone-based learning provides more interactional opportunities outside of the classroom and makes learning more self-directed. They also assert that this type of learning can best be integrated in the field of FLL through what is known as Mobile-Assisted Language Learning (MALL).

One of the most influential classroom instruments is the interactive whiteboard (IWB). Although it shares the same design and look of the traditional whiteboard, the IWB is characterized by interactivity as a major feature in the sense that it makes use of computers and projectors to display content. IWBs allow for a wide range of operations through direct interaction with the screen. Resultantly, it is also different from the projector and computer which do not allow for screen-touch operations (Kopp, 2012, p. 25). Despite the fact that IWBs exist since a long period of time, the integration of such intelligent innovation within the Algerian pedagogical context did not see the light which; subsequently, affects negatively the quality of education.

2.5. Factors Affecting Technology-Based Learning (TBL)

2.5.1. Personal Learning Environments (PLEs)

As one of the most recent areas of research, PLEs raise a lot of questions regarding their appropriate meaning. The debate over the definition of PLEs results in two distinct points of view that approach this term differently. The first interpretation of PLEs considers the latter as a concept or an approach that designates how learning should be carried out and what form it should take. The second understanding of PLEs adopts a more concrete perspective as it describes PLEs as a set of technological tools and systems (Fiedler & Väljataga, 2011). The conceptual understanding of PLEs

regards it as a new pedagogical approach that rejects the *one size fits all* quality of Learning Management Systems (LMS). Accordingly, it describes PLEs as the set of tools, resources, services, and communities that individuals make use of in order to meet certain educational objectives (Willson et al., 2006; Kerres, 2007; Downes, 2007; Attwell, 2007). In this regard, the choice of tools and resources is made by learners themselves, in contrast to the institutionalized set of tools and resources that LMS impose on learners.

The second interpretation of PLEs is also supported by numerous researchers. Dron and Bhattacharya (2007) agree that "PLEs are a collection of interoperating applications that together form an individual's learning environment". A shared vision is adopted by Milligan et al. (2006) who maintain that "in a Personal Learning Environment (PLE), the learner would utilize a single set of tools, customized to their needs and preferences inside a single learning environment" (p. 507). That being the case, PLEs here stand for the pre-determined set of tools that learners use according to their needs and objectives and; therefore, constitute their learning environments. In light of this perspective, Milligan et al. (2006) attempt to design a reference model which comprises the appropriate tools that might constitute learners' PLEs. Nonetheless, many researchers agree on the fact that PLEs should better be interpreted as a pedagogical approach rather than a limited collection of tools since the latter is subject to continuous development (Fiedler & Väljataga, 2011).

PLEs have revolutionized the field of educational technology and contributed heavily to the remarkable change that targeted both teachers' and learners' roles. In a PLE, learners are free to choose the appropriate set of technological tools and resources that help them to meet their learning needs. With this in mind, a learner might opt for dependence on smartphones, blogs and specific websites as tools and sources of

learning. This choice is totally individual which; therefore, leads to a more self-directed learning experience since the learner is the only one responsible for the design of his learning environment. The introduction of PLEs into the educational stream plays a crucial role in changing learners' position from content-consumers (LMS) to content-creators. What helped in the creation of a more interactive self-monitored and self-customized learning environment is the evolution of Web 2.0 services. In this regard, Severance, Hardin & Whyte (2008) agree that:

> PLEs start with the current and expanding capabilities of the World Wide Web, especially those referred to often as 'Web 2.0' capabilities, those involving individual site customization of appearance, resource feeds, tools and tool placement, and increasingly group or social interactions, and add organizing mechanisms and tools focused on educational efforts to produce an environment that can be optimized for learning. (p. 48)

In brief, PLEs have reshaped TBL through providing a more personal learning activity where learners take full charge of what and how to learn which; consequently, makes them more responsible, aware and autonomous.

2.5.2. Technological Pedagogical Content Knowledge (TPACK)

Given the fact that the 21st century has made it compulsory for teachers to acquire an acceptable tech-literacy, researchers in the educational domain spot light on the nature of knowledge that teachers should possess in order to guarantee an effective utilization of technological tools (Koehler, Mishra, Kereluik, Shin, & Graham, 2014, pp. 101-102). Accordingly, Mishra and Koehler (2006) provide a framework that indicates the different types of knowledge required in order to make an effective use of technology in classrooms. This framework is called *Technological Pedagogical Content Knowledge* or TPACK. The latter is an extended version of Shulman's (1986)

Pedagogical Content Knowledge (PCK) which assumes that effective teaching takes place when teachers blend both *Pedagogical Knowledge* (PK) and *Content Knowledge* (CK).

The TPACK framework consists of three major components. First, Content Knowledge (CK) which stands for knowledge about the subject matter or content of the course. Second, Pedagogical Knowledge (PK) which refers to the set of teaching methods, approaches, skills and strategies that teachers should internalize and implement within the teaching and learning activity. Finally, Technological Knowledge (TK) which implies teachers' awareness of the available technological tools such as books, chalk, computers, internet…etc., and how to implement them within the instructional process (Koehler et al., 2014, p. 102). A typical technology-equipped teaching activity should consider these three components. The blending of these three components results in three types of relationships: *Technological Content Knowledge* (TCK), *Pedagogical Content Knowledge* (PCK) and *Technological Pedagogical Knowledge* (TPK). The three resulting links constitute TPACK.

TCK designates the mutual relationship between technology and the subject matter. PCK, on the other hand, is defined by Shulman (1986, p. 8) as "an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction". That is to say, it symbolizes how teachers employ their teaching methods, strategies and skills in order to display the content in a way that meets students' needs and expectations. TPK, finally, stands for how TK affects teachers' PK. With this in mind, TPACK can be described as "knowledge about the complex relations among technology, pedagogy, and content that enable teachers to develop appropriate and context-specific teaching strategies" (Koehler et al., 2014, p. 102).

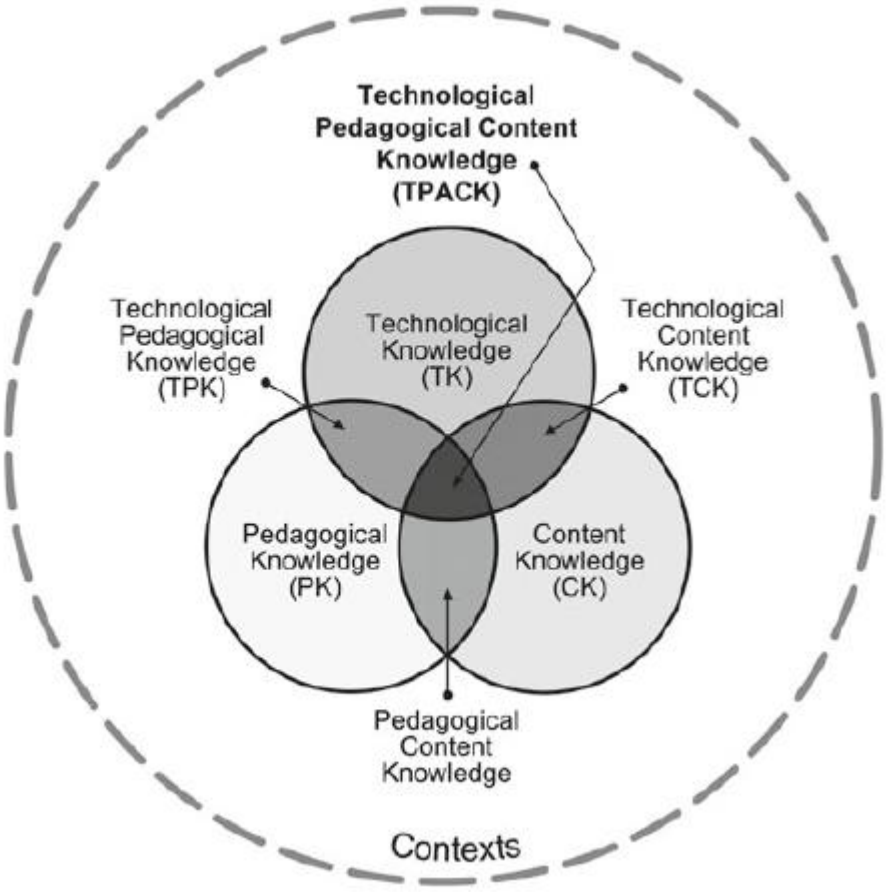

Figure 2.3. The Technological Pedagogical Content Knowledge Framework (Koehler et al., 2014, p. 103).

2.5.3. Collaboration

Factually, the influence between collaboration and TBL is reciprocal as both of them affect each other in different ways. Collaborative Learning (CL) is broadly defined as the activity within which individuals work together in order to accomplish certain shared goals (Dillenbourg, 1999; Johnson & Johnson, 2003; Srinivas, 2011). Johnson & Johnson (2003) indicate that CL is characterized by positive interdependence, accountability and self-monitoring. Recently, interest in the relationship between collaboration and technology is increasing for many researchers attempt to find an appropriate way to structure a technology-based collaborative

learning activity (Roberts, 2005; Iinuma, 2016). One of the resulting forms of the combination between collaboration and ET is what is known as Computer-Supported Collaborative Learning (CSCL). Iinuma (2016, p. 30) indicates that "the advancement of ICT along with the attention on collaborative skills, led to studies on CSCL". The latter is defined as the integration of computers in order to mediate and support effective collaborative learning situations (Iunuma, 2016, Koschmann, 1996). Consequently, the mutual influence between TBL and CL appears clearly through the former's ability to provide some technological tools to facilitate collaboration, and the latter's use of these tools in order to create new collaborative learning methods and approaches which serve to enrich TBL.

2.5.4. Technical support

A typical TBL environment is not only the one that consists of a wide range of technological devices and tools. It is rather the place where technology is maintained by technical support. Researchers claim that technical support is one of the major aspects that affect the implementation of a successful TBL activity (Siddiqui, 2009, p. 60). Technical barriers such as internet problems, frozen software, outdated hardware…etc. impede the successful integration and utilization of ICTs in teaching and learning (Waghid, 2016, p. 30). Consequently, "even teachers who enjoy using computers will stop using technology if the equipment is unreliable" (Siddiqui, 2009, p. 60). With this in mind, the provision of appropriate technical support should not be ignored so that teachers can dedicate their full time to teaching, rather than wasting it in fixing unexpected technical breakdowns.

2.5.5. Technophobia and Technophilia

Technophobia is defined as one's unease about using technological tools and the inability to accept them which; sometimes, can lead to certain aggressive reactions. It

affects people's attitudes, emotions and behaviors in the sense that they become anxious about coping with technology. As a result, they usually face various emotional and behavioral breakdowns (Rosen & Weil, as cited in Brosnan, 2002, p. 13). Technophobia can affect both teachers and learners. Hence, it obstructs the effective integration of TBL, and sometimes results in a total refusal to make use of technology in teaching and learning. In contrast to technophobia, techno-philia stands for one's enthusiasm and enjoyment that result from making use of technological tools such as computers, smartphones…etc. (Merriam Webster). Technophiles are people who utilize technological items intensively and show more interest when content is displayed via interactive technological instruments. For these reasons, this type of people usually accepts and tolerates the integration of TBL in teaching and learning.

2.5.6. Digital Divide

Broadly speaking, the digital divide is "the gap between those who can access and benefit from digital technology and the Internet and those who cannot" (Jacobson, as cited in Richey, 2013, p. 84). In view of Jacobson's definition, the digital divide stands for the gulf between the groups who have wide access to technological tools and materials and those who do not or only have a limited access. The digital divide affects TBL due to the fact that some regions might be technologically-well-equipped while other regions might not have the same access to those technologies. In this case, it would be difficult to appropriately implement a technology-based instructional program. Another serious problem usually occurs at the individual level where certain students have the capacity to afford the acquisition and usage of educational technologies while others cannot afford it. Consequently, this restrains the application of a technology-based approach in the teaching and learning activity.

2.6. Models of Technology Acceptance in Education

In point of fact, there are many theories and models that trace the process through which users accept and utilize technological tools and innovations. These models and theories cover the Technology Acceptance Model (TAM), the second version of TAM (TAM^2), Unified Theory of Acceptance and Use of Technology (UTAUT), the Innovation Diffusion Theory (IDT), the Task-Technology Fit Model (TTFM), the Decomposed Theory of Planned Behavior (DTPB), and the Model of PC Utilization (MPCU), to mention but a few. This part will only tackle the most prominent models: TAM, TAM^2, UTAUT and IDT.

2.6.1. Technology Acceptance Model (TAM)

TAM is a model of technology acceptance and usage developed by Davis in 1989. According to this model, there are three factors that influence and determine learners' acceptance and utilization of technology, namely *Perceived Usefulness*, *Perceived Ease of Use* and *Behavioral Intentions*. The perceived usefulness is defined by Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance" (p. 320). The perceived ease of use stands for the degree of effort that technology requires. These two factors affect the user's behavioral intention which; in turn, determines or predicts the actual use of technology. In other words, where the level of behavioral intentions is high, the actual action would probably occur (Teo, 2011; Jacques, 2010).

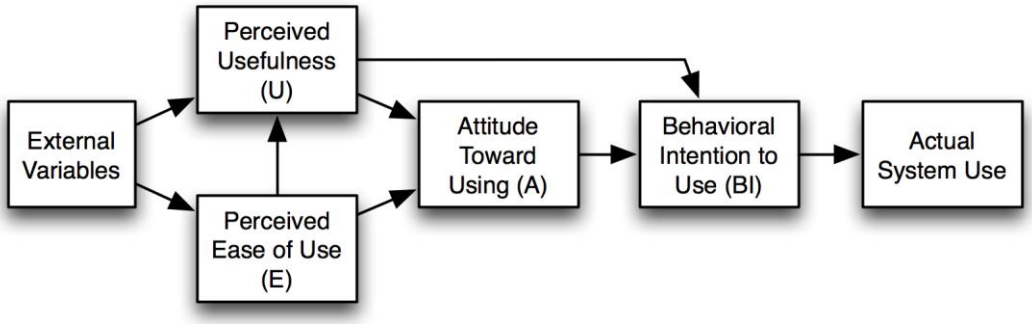

Figure 2.4. The Technology Acceptance Model (Davis, Bagozzi, & Warshaw,1989).

2.6.2. TAM^2 and the Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh and Davis (2000) extend the first version of TAM which ignores many external factors. Therefore, the new TAM encompasses other components "such as experience, voluntariness, subjective norm, and job relevance" (Scott & Lewis, 2017, p. 1242). All these factors affect the users' perceived usefulness (Figure 2.5). The TAM was subject to development for the second time as Venkatesh, Morrris, Davis, & David (2003) blended several models and theories of technology acceptance to formulate the Unified Theory of Acceptance and Use of Technology (UTAUT). This new model covers four major components (as cited in Scott & Lewis, 2017, p. 1242):

- Performance expectancy: The degree to which an individual believes that using the system will help him or her to attain gains in job performance.
- Effort expectancy: The degree of ease associated with the use of the system.
- Social influence: The degree to which an individual perceives that important others believe he or she should use the new system.

- Facilitating conditions: The degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system.

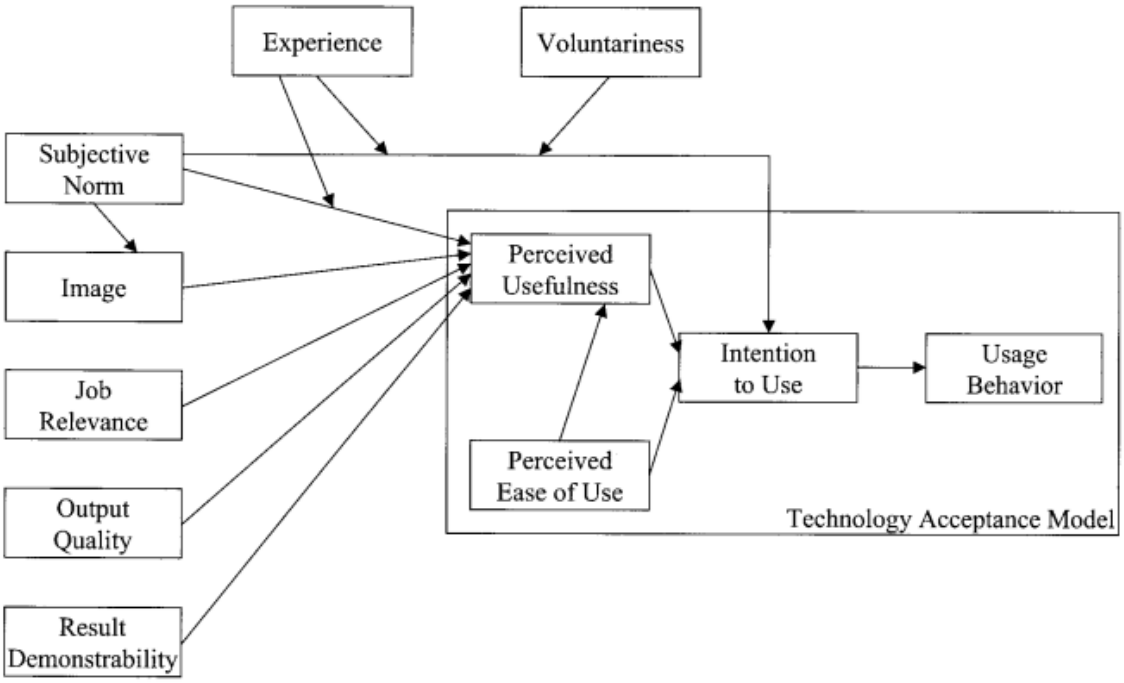

Figure 2.5. Extension of the Technology Acceptance Model (TAM^2)

(Venkatesh & Davis, 2000, p. 188).

2.6.3. Innovation Diffusion Theory (IDT)

IDT is a technology acceptance model that attempts to trace a relevant way of describing how users adopt or accept the use of technology. Based on this theory, a person passes through five main stages (Figure 2.6): The knowledge stage is the first step; it takes place when the user gets to know about a specific innovation. Right after knowing about this innovation, the user forms a kind of attitude towards it (Persuasion stage). The user then decides on whether to utilize the encountered innovation or not (Decision stage). Then, s/he proceeds to actually using the innovation (Implementation stage). Finally, s/he chooses either to carry on the task or not (Confirmation stage) (Jacques, 2010, p. 130). The first stage (Knowledge stage) includes five innovation

predictors which are: relative advantage (similar to TAM's perceived usefulness), compatibility (similar to TAM 2 perceived relevance), complexity (TAM's perceived ease of use), trial-ability and observability (similar to TAM 2 perceived output). Seemingly, all these innovation predictors are similar to the components of the first and second versions of the Technology Acceptance Model (TAM) with the exception of trial-ability. The latter is defined by Jacques (2010, p. 131) as the amount of effort incorporated in experimenting with the encountered innovations and systems and the difficulties in having access to technology.

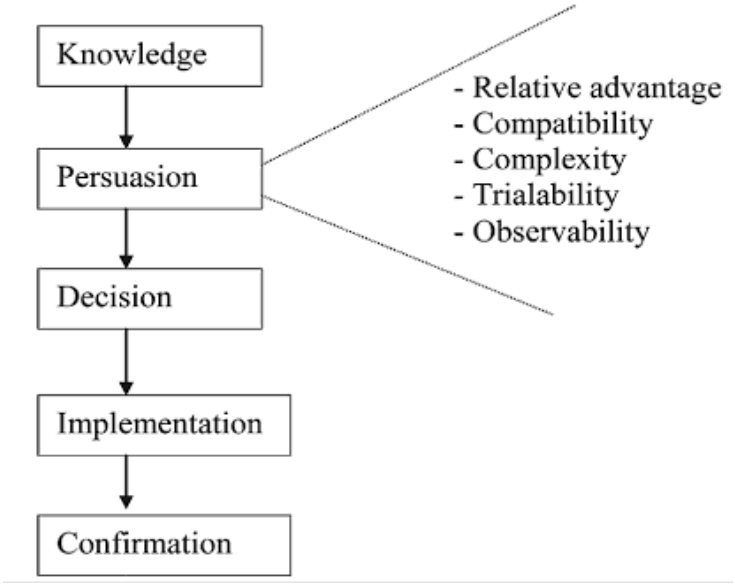

Figure 2.6. The Five Stage Model of the Innovation-Decision Process (Rogers, 2003, as cited in Jacques, 2010, p. 131).

2.7. The Impact of the Technology-Based Approach on Learners' Autonomy

Reinders and White (2016, p. 143) affirm the presence of a straightforward and unidirectional impact of technology-based learning on learners' autonomy. This is mainly explained by the fact that TBL helps in making resources more reachable and accessible. It also enables learners to overcome the boundaries of place and time, which adds to the customizability of the learning experience. Reinders and White (2016, p.

150) also agree that the gap between autonomous learning and educational technologies is diminishing gradually. On account of that, they provide a figure (p. 151) in which they demonstrate a possible fusion between autonomy and technology (see figure 1.1). In the same vein, Benson (2011, pp. 124-196) pinpoints that the technology-based approach is among the major stimulators of learners' autonomy. This approach stresses the importance of autonomous interaction with technological tools in the learning process (Smith, 2015, p. 85).

Practically speaking, there are four noteworthy case studies which look into the impact of TBL on learners' autonomy. Dang and Robertson (2010) examine the effect of implementing a web 2.0 Learning Management System (LMS) on EFL learners' autonomy. The induced results show that TBL affects Vietnamese learners' independence seeing that it allows them to initiate, monitor and evaluate the learning process(s). In a similar investigation, Ankan and Bakla (2011) scrutinize the relationship between blogging and learners' decision-making, content-selection, self-reflection, and detachment. As far as one can see, these components usually characterize autonomous learners. The results derived from this research confirm the presence of a relationship between TBL and learners' autonomy. Monteverde and Gaona's (2011) research explores the impact of SACs on learners' self-reliance. The findings obtained highlight the importance of computers and their crucial role in making students decide on the suitable learning tools and materials. Finally, Mutlu and Eröz-Tuğa (2013) examine the relationship between CALL and autonomy in a private school in Ankara, Turkey. The findings originated from this experiment affirm that students who were taught via CALL increased their responsibility, motivation, learning strategies and involvement in extra-curricular activities.

Conclusion

There is no doubt that Educational Technology is continuously evolving. For this reason, the educational domain in general, and the field of Foreign Language Learning in particular are subject to constant change and development. The latter manifests itself via the integration of novel technology-based instructional approaches such as CALL, CMC, and BL along with other forms. This systematic implementation appears to reinforce the instructional activity in the sense that it leads to a more interactive teaching/learning experience. The innovative nature of TBL affects both teachers and learners as it substitutes the former in many roles and enables the latter to have more control over learning. In sum, ET keeps on widening the gap between conventional and modern learning. This is quite apparent in its attempts to redefine learning by making it more of a daily activity that is open to all knowledge-seekers rather than a context-limited one.

CHAPTER THREE: Field Investigation

Introduction

Since the two previous chapters go through autonomy and TBL with a fine-tooth comb, it is now possible to explore learners' and teachers' views and attitudes regarding the relationship between these two variables. With this in mind, the present chapter summarizes findings from students' questionnaire and teachers' interview. It also endeavors to analyze and interpret these findings so as to derive more contextualized insights. The latter would probably allow us to confirm or reject the main hypotheses along with answering the research questions.

3.1. Students' Questionnaire

3.1.1. Population of the Study

The present research targets Master One students (Academic year 2016-2017) at the department of English, 8 May 1945 University, Guelma. The selection of this promotion in particular is related to the fact that Master students are presumed to possess a sufficient background knowledge and competence that enable them to recognize their educational level and to share their perceptions far from any reservation. Equally, they have already received at least four years of university instruction which, therefore, has influenced their learning experience. Furthermore, they would be of great help in terms of providing insights into the integration of educational technologies in FL classrooms and its impact on their learning abilities, or autonomy in particular since they have already experienced both the presence and absence of technological tools inside and outside of the classroom. In light of the previous reasons, a random sample consisting of 52 students out of 60 learners has been selected. The representativeness of the sample (S) has been ensured since the number of respondents corresponds to Krejcie and Morgan's (1970) sampling table (as cited in Cohen, Manion & Morrison,

2000, p. 94). Accordingly, 52 questionnaires have been administered to Master One students in three groups.

3.1.2. Description of Students' Questionnaire

The design of this questionnaire is grounded on the theoretical part of the present research. It encompasses twenty-three (23) questions structured under four main sections (Appendix A). Almost all questions are close-ended for they include an already specified set of options which make the findings obtained mainly quantitative. Simultaneously, some of the questions provide the ability to share further insights or different ideas as they include a space for students to opt for the options which they do not find within the pre-specified list. The last question is an open-ended one and it aims at giving students an opportunity to provide further comments and suggestions with regards to the integration of technology in EFL classrooms and its impact on their autonomy. It is important to note that this questionnaire serves as an introductory tool that aims at inquiring into students' perceptions and beliefs with respect to the impact of implementing Technology-Based Learning (TBL) on their autonomy. Hence, it would contribute to the validity of this research along with reinforcing the success of the quasi-experiment.

The first section consists of three main questions and it is devoted to gather data concerning general information about the students such as their level in English. Section two encompasses six questions (From Q_4 to Q_9). It deals with autonomous learning in general as it covers questions that address learners' autonomy, degree of dependence/independence, teacher roles, and the aspects that characterize an autonomous learner in addition to the factors that affect the promotion of this ability. Section three comprises thirteen questions (From Q_{10} to Q_{22}). It tackles the utilization of technological tools in the learning process, the degree to which learners are

familiarized with educational technologies, and then it moves to cover the impact of integrating a Technology-Based Approach (TBA) on learners' autonomy. The questionnaire concludes with an open-ended question which attempts to give students the opportunity to share further suggestions and comments on the topic under investigation (Section four, Q_{23}).

3.1.3. Administration of Students' Questionnaire

The administration of students' questionnaire took place on February 9th, 2017 at the department of English, 8 May 1945 University, Guelma. The questionnaire has been distributed in three groups and it has been answered immediately. Both teachers and students welcomed the administration of the questionnaire and were cooperating willingly. The process went smoothly and students did not face any difficulty or ambiguity as the questionnaire has been corrected and re-corrected for three times to ensure its validity and to avoid any kind of ambiguity. The overall process took 20-25 minutes.

3.1.4. Data Analysis and Interpretation

3.1.4.1. Analysis of Results and Findings from Students' Questionnaire

Section One: General Information

Question One: How long have you been studying English?

Table 3.1

Period of English Instruction

Years	Number (N)	Percentage (%)
11	45	86.53%
More than 11	7	13.46%
Total	52	100%

As indicated in table 3.1, the vast majority of students (86.53 %) claims that they have been studying English for eleven years. This implies that they did not fail in their academic career. 13.46 % of students state that they have been studying English for more than eleven years. This suggests that they have failed in their studies once or that they used to belong to the classical system where the Bachelor of Arts (BA) degree requires four years. In general, all students received an adequate amount of English instruction.

Question Two: Why are you studying English?

Table 3.2

Reason for Studying English

Reason	Number (N)	Percentage (%)
Personal choice	46	88.46%
Administrative choice	5	9.61%
Other(s)	1	1.92%
Total	52	100%

Concerning the reason for studying English, the absolute majority of students (88.46%) asserts that it is their personal choice. This indicates that they are interested in studying English which, in turn, probably designates their motivation and determination. The latter might signal their attempts to develop a kind of autonomy. Only few students (9.61 %) point out that they are studying English due to an administrative choice. This might imply that they are not interested in studying English as it was imposed on them. Only one student (1.92 %) opts for other reasons and said that s/he is studying English because s/he was unable to move elsewhere. This suggests

that s/he was obliged to choose English due to some external factors over which s/he had no control.

Question Three: How would you describe your level in English?

Table 3.3

Appreciation of English Level

Level	Number (N)	Percentage (%)
Very good	0	0%
Good	27	51.92%
Average	25	48.07%
Bad	0	0%
Very bad	0	0%
Total	52	100%

As it is noticed in the previous table, the majority of students (51.92 %) declares that they have good level. This hints that they have acquired the basic commands of the language which will enable them to go further in their educational careers. Less than half of the students (48.07%) assume that they have an average mastery of English. This suggests that they have internalized the basic knowledge of English but they are still required to improve their mastery level to meet the requirements of their degree. No student (0 %) indicates that his/her English level is very good. This implies that all students need to improve their mastery of the English language. Likewise, 0 % opts for bad or very bad which means that all students do not face serious difficulties that might hinder their learning process. All in all, students' level is average to good.

Section Two: Autonomous Learning

Question Four: Do you consider yourself as an autonomous learner?

Table 3.4

Autonomous Learner

Option	Number (N)	Percentage (%)
Yes	43	82.69%
No	9	17.30%
Total	52	100%

As it is displayed in table 3.4, a significant percentage of students (82.69 %) declares that they are autonomous learners. This implies that the majority of students possess certain skills that enable them to engage in independent learning. Surprisingly, 17.30 % of students state that they are not autonomous learners. This might suggest that they favor the traditional teacher-centered approach or that they are not aware of the importance of independent learning.

Question Five: To what extent do you depend on teachers?

Table 3.5

Dependence on Teachers

Extent	Number (N)	Percentage (%)
1	1	1.92%
2	4	7.69%
3	11	21.15%
4	23	44.23%
5	8	15.38%
6	3	5.76%
7	2	3.84%
Total	52	100%

Concerning the degree of dependence on teachers (table 3.5), only one student (1.92 %) states that s/he is totally dependent on teachers. This indicates that s/he is a passive as s/he does not make any effort to learn by her/himself. 7.69 % of students admit that they are dependent on teachers. This might suggest that they appreciate the teacher-centered approach. Surprisingly, a significant percentage of students (21.15 %) assumes that they are often teacher-dependent. This might indicate that students lack an adequate training and instruction on how to become autonomous. Twenty three students (44.23 %) declare that they are both self-dependent and teacher-dependent. This might be explained through the fact that some teachers still take full control of the learning activity while others give students the opportunity to direct their learning. 15.38 % of students claim that they are more self-dependent in learning while only three students (5.76 %) assert that they are usually self-dependent. Two students (3.84 %) agree that they are totally independent, which insinuates that they are totally in favor of a learner-centered approach.

Question Six:

a) What is/are the actual role(s) that your teachers are playing? (More than one option)

Table 3.6a

Actual Teachers' Roles

Extent	Number (N)	Percentage (%)
Controller	35	67.30%
Prompter	10	19.23%
Resource	23	44.23%
Assessor	21	40.38%

Organizer	25	48.07%
Participant	7	13.46%
Counselor	3	5.76%
Guide	38	73.07%

As indicated in table 3.6a, the majority of students (73.07 %) agrees that teachers are playing the role of guiders. This indicates that teachers are aware of the crucial impact of guiding students on the success of the LMD system. A very significant percentage of students (67.30 %) states that their teachers are playing the role of controllers. This implies that EFL classrooms are still depending to a certain extent on the traditional teacher-centered approach. However, teachers cannot control and guide on the same time for these two roles oppose each other. Hence, this contradiction proves the learners' ignorance of the different roles that a teacher assumes inside the classroom. 48.07 % of students claim that teachers are playing the role of organizers. This might point out that teachers pay considerable attention to class management. A significant percentage of students (44.23 %) agrees that teachers are playing the role of resource. This indicates that a large number of learners do not depend on themselves to look for information. Twenty one students (40.38%) declare that teachers are playing the role of assessors. This insinuates that teachers are aware of the significance of assessing their students' performance and supplying them with appropriate feedback. Only 19.23 % of students assume that teachers are playing the role of prompters. This might suggest that teachers do not systematically encourage their learners to be independent and autonomous. Few students (13.46 %) indicate that teachers are playing the role of participants. This might imply that the majority of teachers do not usually participate in the learning activity which would lead to negative

outcomes since the gap between teachers and learners would not decrease. Surprisingly, only three students (5.76 %) opt for counselor which suggests that teachers are unaware of the importance of advising their students in terms of learning issues.

b) What is/are the role(s) that your teachers should play? (More than one option)

Table 3.6b

Expected Teachers' Roles

Extent	Number (N)	Percentage (%)
Controller	16	30.76%
Prompter	28	53.84%
Resource	23	44.23%
Assessor	18	34.61%
Organizer	28	53.84%
Participant	14	26.92%
Counselor	22	42.30%
Guide	36	69.23%

As it is shown in table 3.6b, 69.23 % of respondents opt for guider which denotes students' need for advice and guidance in order to face and overcome learning issues and obstacles. More than half of the students (53.84 %) agree that teachers should play the role of prompters. This indicates that students need to be encouraged and motivated by teachers. The same percentage of students considers 'organizer' as one of the expected teacher roles while 44.23 % assert that teachers should act as resource. The latter might be explained by the fact that these students lack certain autonomous learning skills that enable them to look for information by themselves. A significant percentage of students (42.30 %) selects 'counselor' which proves that

learners are really in need of advice and assistance which seem to be absent based on what learners indicate in table 3.6a. Surprisingly, sixteen students (30.76 %) mention that 'controller' as one the roles they expect teachers to assume. It denotes that these learners are either passive or unaware of the significance of autonomous learning and learner-centered classrooms. A low percentage (34.61 %) chooses 'assessor' while on fourteen students prefer teachers to act as participants. Put in a nutshell, the expected teacher roles table (table 3.6b) proves that the majority of learners prefer a more learner-centered classroom where they can take charge of their learning. Nonetheless, an important number of students appreciate teacher-centered classrooms which probably indicate that these learners are passive.

Question Seven: How do you describe autonomous learners? (More than one option)

Table 3.7

Characteristics of Autonomous Learners

Characteristic	Number (N)	Percentage (%)
They are responsible learners.	38	78.07%
They are motivated learners.	34	65.38%
They self-regulate their learning.	30	57.69%
They self-assess and self-evaluate their learning outcomes.	26	50%
They direct what and how to learn.	18	34.61%
They monitor their learning.	13	25%
Other	1	1.92%

As shown in table 3.7, the majority of students (78.07 %) agree that autonomous learners are responsible. This insinuates that learners recognize the importance of responsibility and its impact on learners' ability to take charge of what they learn far

from depending on teachers. A very significant percentage of students (65.38 %) opts for motivation. This implies that autonomous learners possess a high degree of motivation which enables them to effectively engage in the learning activity. Many students (57.69 %) indicate that autonomous learners self-regulate their learning which suggests that they are aware of the importance of the selection and the manipulation of what to learn and its impact on their independence. Half of the students (50 %) assert that autonomous learners assess and evaluate their learning. This might imply that they recognize that assessment and evaluation are not exclusively made by teachers. 34.61 % of the students admit that autonomous learners self-direct their learning. It denotes that these students agree that goal-setting, content-selection and needs-assessment should be done by learners themselves. Few students (25 %) choose self-monitoring which indicates that they understand the valuable effect of keeping record of the learning activity. Only one student (1.92 %) opts for other characteristics and assumes that autonomous learners do not wait for the teacher to provide them with information and this in fact is related to self-direction and self-regulation.

Question Eight: Do you think that your autonomy is fosterable?

Table 3.8

Fostering Autonomy

Option	Number (N)	Percentage (%)
Yes	51	98.07%
No	1	1.92%
Total	52	100%

As it is displayed in table 3.8, almost all students (98.07 %) agree that autonomy is promotable. This implies that they are aware that their degree of independence can be

improved. Only one student (1.92 %) assumes that autonomy is not fosterable. This might suggest that s/he is not autonomous or neglects the concept of autonomy.

Question Nine: If yes, what are the factors that promote learners' autonomy? (More than one option)

Table 3.9

Factors Affecting Learners' Autonomy

Factor	Number (N)	Percentage (%)
Learner training	43	84.31
Metacognitive strategies	34	66.66%
Learner styles	24	47.05%
Technology-based learning	23	45.09%
Teachers' autonomy	8	15.68%
Other	1	1.96%

As shown in the above table, the absolute majority of students (84.31 %) asserts that learner training contributes to their autonomy. This implies that learners are aware of the importance of training on how to become independent and its impact on developing certain skills and strategies that may aid them to self-direct their learning. A very significant percentage of learners (66.66 %) indicates that metacognitive strategies affect learners' autonomy. This suggests that students recognize the crucial impact of these strategies on the learning activity and their significant role in fostering learners' independence. Less than half of the students (47.05 %) state that learning styles affect their autonomy. This insinuates that these students distinguish between the different learners' styles in contrast to the remaining students who did not opt for this factor. 45.09 % admit that technology-based learning affects learners' autonomy. This

indicates that they are aware of the importance of using technological tools which may enable them to reach a degree of self-dependence. Surprisingly, a very low percentage of students (15.68 %) declares that teachers' autonomy affects their autonomy. This might suggest that they probably link autonomy to more internal aspects such as metacognitive strategies, confidence, and responsibility. One student (1.96 %) opts for other; s/he assumes that developing the four skills (Reading, listening, speaking, writing) would improve learners' autonomy.

Section Three: Technology-Based Approach and Autonomous Learning

Question Ten: Do you utilize technology in the learning process?

Table 3.10

Technology Usage

Option	Number (N)	Percentage (%)
Yes	52	100%
No	0	0%
Total	52	100%

Concerning the utilization of technological tools in learning (table 3.10), all students (100 %) assert that they make use of them in learning. This indicates that all students recognize the importance and advantages of utilizing technological tools in learning.

Question Eleven: If yes, how often do you utilize technology in the learning process?

Table 3.11

Frequency of Tech-Usage

Frequency	Number (N)	Percentage (%)
Always	19	36.53%
Usually	20	38.46%
Often	6	11.53%
Sometimes	7	13.46%
Rarely	0	0%
Never	0	0%
Total	52	100%

The previous table displays the frequency of using technological tools in learning. Twenty students (38.46 %) say that they usually depend on technological tools. This suggests that they make a good use of technology in learning. 36.53 % of students state that they make use of technology all the time. This implies that they acknowledge the importance of technology for they use it intensively. Only six students (11.53 %) point out that they often utilize it while 13.46 % admit that they use it sometimes. As expected, no students opt for rarely or never which means that all students employ technology in learning.

Question Twelve: How do you describe yourself in terms of tech-literacy?

Table 3.12

Tech-literacy

Frequency	Number (N)	Percentage (%)
Illiterate	0	0%
Beginner	4	7.69%
Intermediate	32	61.53%
Advanced	13	25%
Expert	3	5.76%
Total	52	100%

According to the results displayed in table 3.12, no student (0 %) states that s/he is illiterate. This implies that all students possess a certain level of tech-literacy. A small percentage of students (7.69 %) indicates that they are beginners which means that they have a basic tech-literacy and they need to develop their knowledge. The majority of students (61.53 %) declare that they are intermediates. It conveys the fact that they know how to utilize technology in learning for they possess an average

mastery of it. A significant percentage of students (25 %) asserts that they are advanced. This suggests that they acquire a high level of tech-literacy which enables them to make a good use of educational technologies. 5.76 % of students opt for expert. This might mean that they make use of technologies most of the time which; therefore, enables them to internalize almost all aspects of tech-literacy that might help them in solving all technical and non-technical issues related to TBL.

Question Thirteen: To what extent are you familiar with technological tools outside the learning context?

Table 3.13

Familiarization with Technological Tools

Extent	Number (N)	Percentage (%)
1	0	0%
2	4	7.69%
3	5	9.61%
4	16	30.76%
5	13	25%
6	6	11.53%
7	8	15.38%
Total	52	100%

When asked about their familiarization with technological tools (table 3.14), no student (0 %) indicates that s/he is totally unfamiliar. This means that all students are familiar with technology. Only few students (7.69 %) admit that they are accustomed to a very little extent to technological tools. A low percentage of students (9.61 %) states that they have a modest familiarization with technology. It implies that these students

lack the needed skills and strategies that enable them to utilize technology in an effective way. A significant percentage of students (30.76 %) agrees that they have average habituation of technology outside the learning context. This suggests that they make use of technology on a daily basis. 25 % of students assume that they possess a good familiarization of technology while 11.53 % assert that they have a very good habituation of technology. This might indicate that they utilize technology in most of their time. The rest of the students (15.38 %) indicate that they are totally familiarized with technology which, hence, reflects their intensive use of technology.

Question Fourteen: Do you think that the English department is equipped with the necessary technological tools and materials?

Table 3.14

Tech Equipment

Option	Number (N)	Percentage (%)
Yes	4	7.69%
No	48	92.30%
Total	52	100%

According to the findings displayed in the previous table, almost all students (92.30%) assert that the department of English is not equipped with necessary technological tools and materials. This indicates that the decision makers ignore the crucial importance of educational technology and its impact on the effectiveness of the learning process. Only few students (7.69 %) agree that the department is equipped with the necessary technological tools. This might suggest that they have little knowledge of the different technological devices and materials employed in learning which makes them unable to spot this tech-shortage.

Question Fifteen: Do you agree that integrating technology in EFL classrooms is crucial for the success of the learning process?

Table 3.15

The Impact of Technology on Learning

Extent	Number (N)	Percentage (%)
Strongly agree	19	36.53%
Agree	29	55.76%
Neither agree nor disagree	3	5.76%
Disagree	1	1.92%
Strongly disagree	0	0%
Total	52	100%

Concerning the impact of integrating technology in EFL classrooms on the success of learning (table 3.15), a significant percentage of students (36.53 %) answers by strongly agree while more than half of the students (55.76 %) opt for agree. This denotes that the majority of students recognize the paramount importance of educational technologies on the success of learning. A very low percentage of students (5.76 %) chooses neither agree nor disagree. This implies that they do not have an idea about the impact of integrating technology in EFL classrooms. Only one student states that s/he disagrees. This might suggest that s/he does not know how to utilize technology in learning or s/he might be technophobic.

Question Sixteen: Have you ever received technology-based instruction?

Table 3.16

Technology-based Instruction

Option	Number (N)	Percentage (%)
Yes	31	59.61%
No	21	40.38%
Total	52	100%

As indicated in the previous table (table 3.16), more than half of the respondents (59.61 %) admit that they have received technology-based instruction. This insinuates that students have already experienced the usage of technology in learning which; in turn, indicates that they possess background knowledge in terms of educational technology. Surprisingly, a significant percentage of students (40.38 %) declares that they did not receive technology-based instruction. This result implies that certain teachers do not probably apply technology-based learning in their classrooms.

Question Seventeen: If yes, which instructional approach(es) have you been taught through? (More than one option)

Table 3.17

Technology-based Approaches

Approach	Number (N)	Percentage (%)
Computer-Assisted Language Learning (CALL)	18	34.61%
Computer Mediated Communication (CMC)	4	7.69%
E-Learning/Online Learning	14	26.92%
General Technology-based learning	15	28.84%
Other	1	1.92%

Concerning the technology-based approaches (table 3.17), 34.61 % of learners state that they were taught through CALL. This implies that the English department

does not appreciate the importance of CALL especially in oral expression sessions. Surprisingly, only four students (7.69 %) admit that they were taught through CMC. This indicates that the majority of students do not utilize educational technology to improve their communicative competence and that the English department is not equipped with the necessary tools to establish a CMC session like video-conferencing. 26.92 % of students declare that they had access to E-learning or Online learning. This suggests that the use of these modern learning mediums is starting to spread. Only 15 students (28.84 %) opt for general TBL. This insinuates that teachers are not aware of the importance of TBL which results in the absence of the basic TBL instruction.

Question Eighteen: Does technology have an impact on learners' autonomy?

Table 3.18

The Impact of Technology on Learners' Autonomy

Option	Number (N)	Percentage (%)
Yes	52	100%
No	0	0%
Total	52	100%

Concerning the impact of technology on learners' autonomy, all students (100 %) answered by yes. This implies that students agree that technology can affect autonomous learning. However, the impact might be either positive or negative.

Question Nineteen: Do you agree that integrating technology in learning improves your independence?

Table 3.19

Technology Integration and Learners' Independence

Extent	Number (N)	Percentage (%)
Strongly agree	16	30.76%
Agree	34	65.38%
Neither agree nor disagree	0	0%
Disagree	2	3.84%
Strongly disagree	0	0%
Total	52	100%

According to the findings presented in table 3.19, sixteen students (30.76 %) strongly agree that the integration of technology would improve their independence while the majority of respondents (65.38 %) opt for agree. This indicates that these students are aware of the importance of educational technology. No student (0 %) chooses neither agree nor disagree. A very low percentage of respondents (3.84 %) declares that they disagree. This might insinuate that these students do not possess an adequate tech-literacy. No student (0 %) states that s/he strongly disagrees.

Question Twenty: Does technology motivate you to become more engaged in the learning process?

Table 3.20

Technology and Motivation to Learn

Option	Number (N)	Percentage (%)
Yes	51	98.07%
No	1	1.92%
Total	52	100%

Concerning the use of technology and motivation to learn (table 3.20), almost all students (98.07 %) agree that technology-based instruction leads to more engagement in the learning process. This implies that technology-based learning contributes to learners' motivation. Only one student (1.92 %) answers by no. This might suggest that s/he is technophobic or that s/he lacks the adequate knowledge that enables him/her to effectively utilize technology.

Question Twenty One: To what extent does technology-based learning decrease dependence on teachers?

Table 3.21

Technology and Teacher-dependence

Extent	Number (N)	Percentage (%)
A very great deal	9	17.30%
A lot	26	50%
A little	14	26.92%
Very little	3	5.76%
Not at all	0	0%
Total	52	100%

As shown in the previous table, 17.30 % of the students admit that technology-based learning reduces dependence on teachers to a very great deal while half of the respondents (50 %) agree that it decreases dependence on teachers a lot. These results imply that the provision of educational technologies within EFL classrooms would possibly substitute numerous teacher roles. A considerable percentage of students (26.92 %) opts for little which means that even if EFL classrooms are equipped with technological tools, dependence on teachers would not decrease too much. Only three

students (5.76 %) assume that the integration of technology in EFL classrooms has very little impact on reducing dependence on teachers. This might suggest that these students favor the traditional teacher-centered approach or that they lack the needed knowledge to utilize technology in learning.

Question Twenty Two: What aspects of autonomy does technology-based learning improve? (More than one option)

Table 3.22

Aspects Affected by Technology-based Learning

Aspect	Number (N)	Percentage (%)
Motivation to learn	39	75%
Responsible learning	38	73.07%
Problem-solving skills	26	50%
Detachment/independence	24	46.15%
Critical reflection	17	32.69%
Decision-making skills	15	28.84%
Other	2	3.84%

When asked about the factors affected by tech-based learning (table 3.22), the majority of students (75 %) indicate motivation. The latter implies that there is a direct relationship between the utilization of technological tools and learners' motivation to learn in the sense that TBL stimulates students to engage more in learning. A very significant percentage of the respondents (73.07 %) opts for responsible learning. This might suggest that TBL gives students the opportunity to direct their own learning far from teachers' control which; in turn, makes them more responsible. Half of the students (50 %) choose problem-solving skills. The previous result insinuates that the

complicated nature of educational tools enable learners to develop certain skills and strategies to face learning difficulties and/or obstacles. 46.15 % agree that TBL affects learners' detachment and independence. This indicates that TBL improves autonomous learning. A significant percentage of students (32.69 %) admits that TBL affects their critical reflection. The last-mentioned result denotes that TBL might have an impact on learners' metacognitive strategies. Many students (28.84 %) state that TBL affects their decision making skills. This implies that the utilization of educational technologies probably gives students more freedom to decide about the instructional materials and the ways through which they learn. Only two students (3.84 %) provide other factors and both of them agree that TBL increases their self-confidence.

Section Four: Further Suggestions

Question Twenty Three: In case you have further suggestions, comments or recommendations, you are mostly welcome to add them below.

A significant percentage of students (36.53 %) (19 out of 52) has provided further suggestions. They can be summarized as follows.

- Tech-usage in learning is useful to a certain extent. However, an intensive use of it might distance learners from their learning objectives.
- The integration of technology in Algeria is still absent, and this is the main reason behind the low learning level.
- The English department lacks both technological tools and counselor teachers.
- The integration of TBL has contributed to the effectiveness of the learning process and enabled learners to develop certain autonomous learning skills.
- It is teachers' responsibility to guide learners in how to utilize technological tools and devices.

- FLL has become very easy thanks to technological tools which made learners more self-dependent.
- Teachers should be aware of the importance of integrating technology in learning.
- TBL is more suitable outside the university.
- The use of data shows and computers helps in remembering and organizing ideas and it is much better than the traditional teacher-centered classrooms where teachers just explain from their place.
- Technology is useful but students might face technical problems or fall into tech-addiction.
- ICTs are advantageous in learning as they save time and help in running the course smoothly. Besides, videos and documentaries can broaden students' knowledge and skills and improve their motivation.
- TBL has a crucial impact on students' autonomy.

Depending on the previous suggestions, it appears that students are aware of the importance of integrating technology in EFL classrooms and its impact on their autonomy. Furthermore, they appreciate the use of various technological tools and materials in order to facilitate learning and contribute to its effectiveness. However, they admit that the English department lacks the necessary technological tools and devices and assume that an intensive use of technology might affect learners negatively.

3.1.4.2. Summary of Results and Findings from Students' Questionnaire

Concerning their general information (section one), all students received at least eleven years of English instruction which implies that they are familiar with foreign language learning. Additionally, all students' level varies from average to good which makes this sample suitable for the topic under investigation. Equally important, the

majority of students appear to study English out of personal choice, which means that they are willing to engage in the learning activity and to improve their level.

Concerning autonomous learning (section two), the majority of students assert that they are autonomous. However, they have varying levels of autonomy from teacher-dependent to highly independent as shown in table 3.5. The analysis of the actual teacher roles (table 3.6) and the expected teacher roles (table 3.7) indicate that teachers are still embracing the teacher-centered approach which contradicts with autonomous learning and leads to passive learning activity. Instead, the majority of students advocate minor teacher roles such as prompters, organizers and guiders. A considerable percentage of students agree that autonomous learners are responsible and motivated which means that they are aware of the importance of responsibility and motivation in language learning. Around half of the students declare that independent learners regulate, assess and evaluate their learning. However, only few admit that autonomous learners self-direct and monitor their learning. This might be related to the fact that teachers are still playing the role of controllers (see table 3.6). Almost all students indicate that their autonomy is promotable. Hence, they are aware that they can develop their autonomous skills and strategies and increase their level of independence. In light of their previous answer, students indicate the factors that might promote their autonomy. The majority of them affirm that learners' training and metacognitive strategies are the major aspects that improve their autonomy while a significant percentage goes with learning styles and technology-based learning. Therefore, it is important to train learners on the appropriate skills and strategies that enable them to become autonomous.

The third section covers questions in relation to educational technology and the relationship between TBL and learners' autonomy. All students admit that they utilize

technology in learning which makes this sample suitable for the present research. Concerning the frequency of tech-usage in learning, the majority of students agree that they frequently (often to always) make use of technology while only few students assume that they utilize technology in learning sometimes. These results indicate that all learners depend on TBL to a certain extent. Equally, a descent percentage states that they have an average level of tech-literacy which is something acceptable for EFL learners. Still, students should try to improve their level to be able to cope with new technologies. Similarly, most of students have an average familiarization with technology outside the learning context which means that technology contributes to their daily activities. Almost all students agree that the English department is not equipped with necessary technological tools and materials, which insinuates that decision-makers ignore one of the most important instructional instruments. Along similar lines, the majority of students pinpoint that tech-usage is crucial for the success of the learning process. Surprisingly, a significant percentage of students admit that they did not receive technology-based instruction while more than half of them point out that they were taught through numerous instructional approaches like CALL, CMC, E-learning in addition to general TBL. All students assert that TBL affects their autonomy and the majority of them agree that TBL improves their independence. Moreover, the vast majority of students declare that technology motivates learners to become more engaged in learning which implies the stimulating nature of educational technologies. Concerning the aspects of autonomous learning, the majority of students indicate that TBL improves learners' responsibility, motivation and detachment. Therefore, it is clear that TBL has a direct impact on learners' autonomy as tech-usage improves learners' willingness to take charge of their learning activity.

3.2. Teachers' Interview

3.2.1. Population of the Study

Given the fact that the use of educational technologies is not limited to a specific level, this interview targets EFL teachers at the department of English, 8 May 1945 University, Guelma. It is important to note that this sample is chosen randomly. That is to say, there are no prior considerations or standards in regard to the selection of teachers. As the department hires around forty-nine teachers, it is very difficult to interview all of them for two major reasons: It is quite time-consuming to arrange face-to-face meetings with all teachers, taking into account the fact that the MA dissertation is limited by a deadline. Besides, interviewing such a large number makes it troublesome in terms of data analysis since the nature of this interview is highly qualitative. That being the case, only twelve teachers are interviewed.

3.2.2. Description of Teachers' Interview

This interview is made up of thirteen questions. Explicitly, the questions are not categorized into sections. However, they are implicitly ordered in a thematic way since each set tackles a specific theme. Almost all questions are open-ended which makes the nature of the elicited findings mainly qualitative. Like students' questionnaire, teachers' interview is also grounded on the theoretical part of the present research. Additionally, it covers questions that exclusively relate to the Algerian EFL classrooms so as to obtain context-related insights. The arrangement of questions proceeds gradually from typical situations to concrete circumstances. Hence, this interview would enable us to trace the present situation regarding technology-based learning and learner autonomy, and the typical situation that teachers want to attain. The aim behind conducting this interview is to educe teachers' real perceptions and attitudes towards

the topic under investigation. This way, it would be possible to answer the research questions credibly.

The first question (Q1) attempts to reveal how many years the interviewed teachers have been teaching English so as to derive an overall idea about their experience. Questions two, three, four, five, and six tackle the dependent variable (Autonomy). Q2 endeavors to explore teachers' views regarding the importance of learners' autonomy. Q3 and Q4 are interrelated in the sense that the former inquires about whether autonomy is developable or not, while the latter looks into the major factors that promote learners' autonomy. The fifth question (Q5) incorporates a Likert scale where teachers are requested to rate their learners' overall level of autonomy. This question would be compared to students' perceptions about autonomy (see Appendix 1) and even to students' overall level of autonomy which is derived from the results of the experiment (see Chapter 4, table 4.3 and table 4.5). Q6 investigates whether teachers promote autonomy or not and the means that they employ to do so.

Questions seven, eight, nine, and ten are devoted to explore teachers' views towards the integration of technology in EFL classrooms, their dependence on educational technologies, technological literacy, and the degree to which the department is equipped with the needed tools and materials, respectively. Q11 and Q12 attempt to examine teachers' attitudes regarding the impact of the technology-based approach on teacher roles and learners' autonomy. The last question (Q13) provides an open space for teachers to share further comments, suggestions or recommendations vis-à-vis the present topic.

3.2.3. Administration of Teachers' Interview

As a matter of fact, there is no exact date for the administration of the interview. Since interviewing someone usually requires the interviewer and the interviewee to

engage in a synchronous, direct and live communicative event, it is hence quite intractable to arrange twelve meetings in a short period of time. Subsequently, the administration of this interview lasted for two weeks, stretching from April 23rd, 2017 to May, 7th, 2017. Due to the qualitative nature of the interview, its duration varied from one teacher to another, depending on their background knowledge and interest in the topic. With this in mind, some interviews took 10-20 minutes while other ones lasted for 25-50 minutes. The arrangement of these interviews insisted on spontaneity and physical presence in order to ensure the credibility of teachers' answers. Therefore, indirect interviews or pre-written answers were extremely disfavored as they contradict with the objectives of the interview. Only two teachers were allowed to email their answers due to some uncontrolled factors that made it impossible to interview them directly. All in all, the majority of teachers did not face any worth mentioning difficulty.

3.2.4. Data Analysis and Interpretation

3.2.4.1. Analysis of Results and Findings from Teachers' Interview

Question One: For how many years have you been teaching English?

Table 3.23

Teachers' Period of Teaching English

Category	Number (N)
Less than five years	2
Less than ten years	7
Less than twenty years	2
Less than thirty years	0
More than thirty years	1

The aforementioned question aims at exploring the subjects' experience as English teachers. Seven teachers (out of twelve) claim that they have been teaching English for less than ten years. This implies that they have an acceptable amount of experience as they, at least, taught two generations of learners (taking into account that one generation usually passes three years at the university). Two teachers have been teaching for less than five years while two other teachers have been pursuing English teaching for less than twenty years. The former implies that these teachers are newly hired which in turn means that they probably possess a descent amount of experience, while the latter suggests that they are maven. That is to say, they have lived through different generations and eventually encountered all types of learners. Only one respondent has served more than thirty years as an English teacher. It indicates his/her outstanding instructional expertise which, along with others' experience, would certainly benefit this research. In sum, the interviewees seem to belong to different categories which ameliorate the findings of the present investigation as teachers with different teaching backgrounds would probably provide different points of view.

Question Two: Do you think that autonomy is important to EFL learners? Explain.

Since autonomy is one of the pillars of the present research, it is necessary to ask teachers about its importance to EFL learners. This question is grounded on the theoretical part in chapter one. Many scholars affirm the importance of autonomy and its impact on many aspects like: the effectiveness of learning (Benson, 2006, p. 34), the improvement of learning outcomes (Dam, 1995, p. 82), learners' motivation and communication (Little, 2016), and learners' academic achievement (Knowles, 1975).

All teachers agree that autonomy is very important to EFL learners. However, they justify this significance differently. Six teachers contend that autonomy is one of the cornerstones of twenty-first century education in general and the LMD system in

particular. They further add that self-dependence is inevitable as the new educational system clearly advocates learner-centeredness. Two teachers pinpoint that self-reliance is necessary since both university and teachers are not sufficient. Besides, teachers cannot afford to teach students how to learn. Along similar lines, another teacher claims that "all learning is autonomous", a statement which conforms to Jean-Jack Rousseau's view of learning (see chapter one, introduction). One teacher affirms that autonomy is important because "it enables students to take charge and responsibility of their own learning process so that they will set their own goals for learning, pursue them and self-monitor the whole learning process". This statement implies that s/he is aware of the qualities that autonomy instills in learners since responsibility, self-direction, and self-monitoring are among the major characteristics of autonomous learners discussed earlier in this dissertation (Knowles, 1975; Zimmerman, Bonner, & Kovach, 1996; Holec, 1981). Likewise, another teacher says that the importance of learners' autonomy lies in the fact that it ameliorates students' self-evaluation skills so as to select, criticize and correct information when necessary. In brief, all teachers affirm that autonomy is important to EFL learners and all their justifications conform to the findings of the theoretical part.

Question Three: Do you think that learners' autonomy is fosterable?

Based on Benson's (2011, p. 110) claim which asserts that autonomy is fostered and developed, teachers were asked about whether autonomy is promotable or not. The aim behind this question is to elicit teachers' opinions regarding the improvability of such important skill. It is worth mentioning that questions four and five are directly linked to this question. As the interview provides space for improvisation, this question was asked in a debatable way by considering the fact that some researchers regard

autonomy as an inborn/innate capacity, while others like Benson do conceive it as a fostered skill.

All teachers believe that learners' autonomy is promotable. This implies that they conceive autonomy as any other skill which can be developed. Nonetheless, the debate over whether autonomy is merely innate, acquired, or both, received different insights. Two teachers assert that autonomy is acquired and developed yet they consider students' motivation to be one of the essential factors that affect the aforementioned skill. This claim is reinforced by Spratt, Humphrey and Chan (2002) who state that motivation precedes autonomy. One teacher, whose answer conforms to other teachers' views, assumes that "since the LMD system advocates learner centeredness, it is possible to promote foreign language learners' autonomy. Learners' autonomy is like the English language; it can be acquired and developed gradually. For this reason, there are varying levels of autonomy as some learners seem to be highly autonomous while others prove to be passive". On the other hand, three teachers regard autonomy as both innate and acquired for human beings could born with a certain degree of autonomy which, depending on different factors, might be subject to change.

Question Four: What, among these factors, is more effective to promote learners' autonomy?

Given the fact that all teachers advocate the significance of autonomous learning and hold it to be promotable, this question attempts to look into the major factor that might improve learners' autonomy. Subsequently, the interviewees were given four major factors which are chosen with regard to the theoretical part (see chapter one). The choices cover: Technology-based learning (TBL) which, according to Phil Benson (2011), is one of the major approaches that promote learners' autonomy. Teachers' autonomy, the second factor, appears to be one of the worth mentioning items since

Little (as cited in Lamb, 2008, pp. 270-271) pinpoints that learners' autonomy is dependent on teachers' autonomy. The third choice, in-class presentations, is typical to the Algerian EFL context while the forth option, meta-cognitive strategies, seems also to be of paramount value for Wenden (1987) perceives it as "one aspect of autonomy".

Although this question aims at revealing the most effective factor that might promote learners' autonomy, all the teachers were not able to choose a single option. Some of them opt for two choices, others for three or even four. Ten teachers admit that technology-based learning is the major factor underlying the promotion of learners' autonomy. This implies that they acknowledge the significance of TBL in EFL classrooms and probably favor a technology-based approach. One of these teachers assumes that "technology is very important since all the means that technology offers to learners nowadays can help them to become independent, autonomous, and self-reliant". Many teachers (eight out of twelve) opt for metacognitive strategies. This result suggests that they recognize the notable influence of these strategies on learners' self-reliance. One of these teachers sheds light on learners' critical thinking and self evaluation while another respondent pinpoints that "metacognitive knowledge is essential in promoting learners' autonomy. This is achieved through planning, monitoring and evaluating". These arguments, as inferred from the findings of the first chapter, are considered to be among the characteristics of autonomous learners.

Six teachers choose in-class presentations which might indicate that they have experienced this type of learning in their classrooms. In this respect, one of the subjects affirms that "before presenting, students have to read and make their own research about certain topics so that gives them the willingness to learn more". This hints that in-class presentations make learners more active and engaged through playing the role of researchers which used to be played by the teachers. Less than half of the teachers (five

out of twelve) agree that teachers' autonomy is one of the major factors. It probably means that they consider themselves as a significant source of influence to learners which, accordingly, pushes them to be autonomous. Nonetheless, two teachers tackle this factor differently as one of them believes that teachers should act as role models, while the other one asserts that "students are not obliged to view the teacher as a model. I believe that students are highly aware so they should not necessarily follow the teacher's example".

Question Five: Do you promote autonomous learning inside the classroom? If yes, what are the means that you employ to do so?

The aforesaid question breaks from teachers' opinions and views to a more context-related situation. Due to the fact that all teachers acknowledge learners' self-dependence and believe that it can be fostered; this question goes further to check whether teachers pay attention to learners' autonomy or not. It also attempts to inspect the means that teachers employ to do so.

All the interviewed respondents assert that they promote learners' autonomy which implies their interest in developing students' self-reliance, and their awareness of its undoubted significance. That said, they follow different methods and make use of various means in doing so. In brief, the means that teachers employ to promote autonomy encompass the following:

- In-class presentations and in-class performance
- Individualized feedback and advice on how to become a better learner
- Writing assignments and homework
- Collaborative activities

- Technology-based learning, blogs, projections, videos, and computer software
- Dependence on the task-based approach
- Discussions and debates that push students to think critically

As noticed from the above mentioned means and methods, teachers adapt a wide range of ways to develop learners' autonomy. The use of collaborative activities implies the total absence of teachers which, in turn, helps learners to proceed from reactive to proactive autonomy (Littlewood, 1999, 2002). Writing assignments, homework along with discussions and debates suggest that teachers do not ignore the importance of training learners on how to be self-reliant. Many teachers depend on TBL to enhance autonomous learning. In doing so, they depend on projections, videos, computer software, and blogs. The latter proves to ameliorate learners' autonomy as examined by Ankan and Bakla (2011). All in all, the utilization of such tools and methods indicates the amount of effort that teachers put into developing autonomy, respecting learners' styles, and revolutionizing the old teacher-centered approach. Notwithstanding, many teachers mention certain constraints that make this process more difficult. For instance, one of them confesses that "there is always disappointment because of lack of motivation, readiness, determination, self-reliance and self-confidence".

Question Six: On a scale of 1 to 5, how could you appreciate your learners' level of autonomy? Explain.

The importance of the sixth question lies in its direct relationship to the results of the quasi-experiment. Although the latter is more concerned with Master One students, the question still shares the same aim of the quasi-experiment which is about exploring learners' overall level of autonomy. Depending on the results of this

question, we will probably be able to check whether learners need to be more independent or not.

Seven teachers rate their students' overall level of autonomy three out of five. This implies that they consider their learners to possess an average level of self-reliance. In the same vein, these results conform to findings obtained from the experiment (chapter four) which show that learners belong to the third category in table 4.2 which is average autonomy. Some of the teachers who opt for this scale justify their answers by mentioning the fact that students show a kind of self-dependence since they prepare and make presentations. Two teachers rate their students' level two on the scale of five. This probably suggests that their learners have low level of autonomous learning. One of these two teachers claims that learners' are still highly teacher-dependent in terms of information and resources despite the spread of technology along with the availability of authentic materials. One teacher finds it difficult to provide a single scale for all learners as, according to him/her, some students seem to be highly autonomous while others appear to be dependent or passive. Subsequently, s/he stresses that their level ranges from two to five. This clear gap between learners makes the teaching/learning activity somehow difficult for it makes the teacher unable to set foot on specific and appropriate teaching methods and techniques. Surprisingly, two teachers rate their students' level zero and one respectively. These answers suggest that learners are extremely passive. One of these teachers doubts the presence of autonomy in the Algerian context. According to him/her, "there are no real/effective autonomy conditions or environments. Teachers and students are far from understanding and thus implementing such a complex learning process".

Question Seven: What is/are your view(s) and perception(s) towards the integration of technology in EFL classrooms?

Since one of the major twenty-first century's educational prerequisites is technology (Koehler et al., 2014), this question endeavors to elicit teacher's perceptions regarding the implementation of technology in EFL classrooms. As the form of the question indicates, it tackles the integration of technologies in a typical context.

All the teachers seem to be in favor of the implementation of technology in EFL classrooms and affirm that it has various positive impacts. As far as their arguments and justifications, many teachers perceive technology to be very essential and advantageous for it facilitates teaching and learning and makes it more successful. Other teachers link the use of technological tools to learners' increasing dependence on technology. In other words, they are, as one of the teachers describes them, "technology natives". Subsequently, s/he urges policy makers to integrate such equipment in EFL classrooms because "if learners feel that they are in control of their learning, they can become more motivated". The respondents also agree that technology enables teachers to overcome the traditional teaching process, to save time, and to facilitate communication and interaction. All these perceptions imply teachers' huge interest in technology and their awareness of its different advantages; they (the perceptions) also show their willingness to adopt or implement a kind of technology-based framework.

Question Eight: Do you depend on technological tools as instructional materials?

In contrast to the previous teaching requirements which urge teachers to possess both pedagogical knowledge and content knowledge (Shulman, 1986, p. 8), the new teaching framework, which is advocated by Mishra and Koehler (2006), adds another type of knowledge. The latter is referred to by technological knowledge. Subsequently, the *Technological Pedagogical Content Knowledge* or TPACK framework constitutes a new mandatory need by which teachers would accomplish their tasks effectively. This question, along with question nine, is grounded on the aforementioned facts.

As far as one can see, all teachers make use of technological tools. However, the intensity of such use, in addition to the tools used vary from one respondent to the other. One of the interviewees affirms that s/he utilizes ET intensively; s/he further adds "we don't need to draw a picture. The use of technological tools in such a circumstance of learning is vital. Don't we label those who don't apply them as 'digitally ignorant'? In the 21st century, teachers and learners cannot avoid such tools". Other teachers seem to depend on technology occasionally and they justify this modest dependence by referring to the lack of technological tools and materials in the department. One of the teachers thinks that the use of technology depends on the nature of the module. S/he further illustrates by saying "in the grammar sessions I thought of making slides, presentations and videos and then I was like what for. Grammar is exact, one plus one equals two". This opinion might be explained in two different ways: First, it might indicate that the use of technology in certain modules is not beneficial. Second, it might imply that this teacher does not master the needed technological literacy that enables him/her to integrate technology in such courses. The latter seems to be more accurate since one of the respondents claims that s/he depends on videos and computer software to teach grammar. In a nutshell, all these answers imply that teachers appreciate tech-usage despite the shortage of certain tools along with the lack of a systematic way to implement an accurate TBA.

Question Nine: To what extent are you familiar with educational technology?

In light of the ceaseless development that Educational Technology is witnessing, teachers should at least possess an average mastery of technology. Likewise, the tech-literacy gap between countries, societies, and even between teachers and their learners is widening gradually (see chapter two, Digital Divide). This

question, therefore, strives to inquire into teachers' actual level of technological literacy.

As observed from teachers' answers, only one respondent admits that s/he is not quite familiar with educational technology. This implies that s/he needs a kind of training to get descent literacy as technological illiteracy is pushing him/her to avoid depending on such beneficial tools. Taking this claim into serious account, one might link teachers' technophobia to lack of training. Almost all teachers agree that they acquire average to good familiarity which indicates their ability to cope with the typical twenty-first century EFL classrooms. In the same vein, the previous result denotes that teachers' literacy is similar to that of learners since the majority of the interrogated students opted for average literacy (table 3.12). Only one teacher appears to possess an advanced literacy level. S/he affirms this by saying "I am so familiar with it that I cannot spend a moment without being part of it. I am simply a *digital teacher*". It suggests that s/he intensively depends on educational technologies, which enriches his/her tech-literacy.

Question Ten: Is the English department equipped with the needed technological tools that allow for the establishment of technology-based classrooms?

Based on the findings of the second chapter which undoubtedly prove the pivotal significance of ET, this question then seeks to explore to what extent the English department is equipped with the needed technological tools and materials.

All the teachers without exception agree that the English department is not equipped at all with the needed technological tools. As expressed by one of the teachers, "frankly speaking, a big NO goes without saying. No data projectors, no Internet, the semi-digital language labs out of order, if not completely damaged by students. The result is easy to guess". Another respondent asserts "definitely, absolutely

not, the department is really unequipped with the needed high advanced technological tools and devices. We have never done a teleconference or Skype conference or asked a professor from another university to explain his theory like Chomsky for instance". These views, in addition to other ones imply that policy makers ignore one of the pillars of modern education, in addition to being unaware of the educational outcomes that TBL can provide. As the teachers seem to tackle this massive shortage in different ways, the following reasons might summarize their views and opinions:

- Lack of budget
- Lack of technical support
- The absence of administrative staff responsible for the provision of the data show which makes this basic tool out of reach
- Lack of internet, CALL, well-equipped and functional language labs
- Students' carelessness which leads to the destruction of the basic tools found in classrooms

It is significant to note that all these factors are to be tackled in the fourth chapter (Implications, Limitations and Recommendations).

Question Eleven: Do you think that technology-based teaching affects teacher roles and gives more control to learners?

This question is partially grounded on the main hypothesis of the present research. It aims at scouting teacher's views concerning the impact of technology-based teaching on the roles they play and whether this impact gives more access, direction, and regulation to learners or not.

All respondents contend that TBL affects teacher roles positively while ten of them agree that this change gives more control to learners. Teachers justify their

answers differently as some of them assert that TBL gives more freedom to learners and, therefore, turns the teacher into a guide. This implies that TBL contributes to the establishment of a learner-centered classroom which is among the pillars of the LMD system. Other teachers believe that TBL "reduces the effort put into explanation" and turns learning into a more "shared, easy, and interactive process" far from the old teaching ways which, according to one of the respondents, makes students unable to follow their teachers for more than twenty minutes. Accordingly, these views insinuate that TBL is highly appreciated and advocated by teachers for it firstly lessens the burden put onto their shoulders, and secondly makes learning more entertaining and interactive which, in turn, leads to more interest, motivation, and engagement. One of the teachers affirms that TBL would provide freedom not only to students but also to teachers who are undoubtedly in need of free time to play the role of researchers. This opinion suggests that the current old-fashioned ways of teaching and learning are hindering teachers' progress as researchers. The latter certainly affects the Algerian academia negatively. Only two interviewees seem to have some reservations regarding the impact of TBL. One of them agrees that it lessens teachers' control but not necessarily transmits this control to learners. The other respondent pinpoints that TBL reshapes teacher roles yet the latter remains a "sin qua non" since the Algerian learners are not mature enough to take full charge of their learning.

Question Twelve: Do you think that an adequate implementation of a technology-based approach in EFL classrooms would promote learners' autonomy? Please explain.

The core of this interview lies in this question as it directly tackles the issue under examination. In light of the theoretical findings, along with the results of the students' questionnaire which appear to confirm this hypothesis, it is necessary to

pursue the same investigation with teachers so as to derive complete and reliable findings.

All respondents agree that an adequate implementation of a TBA would promote learners' autonomy. The latter result conforms to the findings which are previously derived from students' questionnaire. This in turn proves the presence of a relationship between technology-based learning and learners' self-reliance. One of the teachers justifies his/her answer in an empirical way as s/he says "I really noticed the development of my learners' autonomy as I relied on purpose on technology to develop my teaching process. Since learners enjoy learning through technologies so why not to use the Smartphone and the PC and sometimes we use internet connection if available. This way they enjoy learning and feel excited". This implies that TBA increases learners' interest and engagement, and makes learning more interactive. These factors subsequently affect learners' motivation and willingness to work by themselves. All in all, teachers seem to believe that their students are technology natives. Consequently, making learners learn via something that belongs to them would certainly enhance their self-dependence. That said, the interviewees insist on highlighting numerous aspects which they see mandatory, such as training teachers, providing appropriate technological tools and materials, providing maintenance and technical support, not to mention but few. This might suggest that the topic under investigation is affected by several other factors that should be taken into serious account through further research.

Question Thirteen: Do you have further comments, suggestions or recommendations?

The majority of teachers have provided further comments and suggestions, they are summarized as follows:

- This investigation should be taken into serious account especially in the Algerian context which suffers from both teacher-dependency and technological-shortage.
- Hopefully, we will reach a high level of autonomy. However, absolute autonomy is very hard if not impossible to achieve because we would always rely on something or someone to accomplish our tasks.
- Students should be more aware of the importance of autonomy; they should also strive to know more about educational technology. Hence, technological literacy courses should be integrated so as to train learners on how to use them.
- Teachers should start adopting the TBA for globalization obliges us to do so.

All these suggestions prove that teachers are open to change since they have a clear willingness to reshape their ways of teaching through the integration of educational technologies in EFL classrooms. Their comments also confirm that they are aware of the present situation of the Algerian EFL classrooms and the LMD system.

3.2.4.2. Summary of Results and Findings from Teachers' Interview

In view of the results derived from teachers' interview, one might understand that the majority of the interviewees appear to possess a descent amount of experience which makes them able to tackle the topic under investigation. As noticed from their opinions and views, all the interrogated respondents believe that autonomy is very important to EFL learners and they provide various reasons that reinforce this view. Besides, they admit that this ability is promotable via different means and tools. These results imply teachers' awareness of the importance of self-reliance which constitutes one of the major objectives underlying the adoption of the LMD system. The most important factors that promote learners' autonomy were suggested in the form of

options to choose from. The majority of teachers claim that TBL is the major factor, followed by in-class presentations. This result might firstly suggest that TBL can play a crucial role in developing learners' independence. Secondly, it pushes one to think about an adequate framework which blends TBL and in-class presentations in a systematic, purposeful, and effective way. The interview proceeds to a more contextual inquiry as it interrogates teachers on whether they try to develop students' autonomy or not and, if it is the case, what are the means they employ to do so. Again, teachers' awareness of the significance of autonomy is reinforced as all of them affirm that they try to promote this capacity. Given the fact that teachers belong to different educational backgrounds and have varying teaching experiences, the means that they make use of differ from one to the other. The last question that tackles the dependent variable attempts to examine how teachers perceive learners' actual level of autonomy. In brief, the majority of teachers seem to agree that EFL students have an average level of autonomy while few teachers consider them to possess a low level. Depending on teachers' views and the results of the experiment, it is important to note that learners' level of independence should be improved.

All the respondents show positive attitudes towards the integration of TBL in EFL classrooms and justify their views by mentioning a plethora of advantages that ET provides. They also assert that they depend on such tools and devices while teaching. Nonetheless, the degree of dependence varies from one teacher to another. Along similar lines, the majority of teachers affirms their familiarity with ET and describes it as average/moderate. This acceptable acquaintance allows them to cope with the requirements of the twenty-first century education. Despite teachers' familiarity with technology and willingness to adopt a TBA, the lack of appropriate technological equipment in the English department (Question ten) makes the implementation of such

approach quite difficult if not impossible. The interviewees then shared their views regarding the impact of TBA on teacher roles and learners' control over learning. It appears that all of them appreciate the integration of TBA for it decreases the amount of effort invested in teaching and makes classrooms more interactive, fun-filled, and learner-centered. Moving to the relationship between TBA and learners' autonomy, all teachers agree that an adequate implementation of TBA would certainly promote learners autonomy and lead to a more learner-directed activity. This result conforms to the findings of students' questionnaire and therefore confirms the hypothesis of the present research.

Conclusion

Students' questionnaire reveals a direct and strong relationship between the integration of technology in learning and learners' autonomy. It also proves that some teachers are still depending on the traditional teacher-centered classrooms, which prevents students from developing autonomous skills and strategies. As a result, teacher roles should be reconsidered so that learners could gain more freedom and control over learning. The questionnaire also shows the suitability of this sample to undertake a quasi-experimental research that aims to reveal more practical results in relation to this topic. Teachers' interview unveils positive insights regarding TBL and learners' autonomy. The interrogated subjects seem to advocate learners' self-reliance and TBL as they endeavor to promote the former and integrate the latter into their classrooms. The interview also detects an extreme shortage of technological tools and materials, in addition to the presence of several constraints that hinder the implementation of an adequate TBA. Despite this massive lack and the numerous obstacles encountered, teachers still believe that TBA would certainly promote learners' autonomy.

CHAPTER FOUR: Quasi-Experimental Design

Introduction

The inculcation of certain intangible skills and capacities in EFL learners appears to be one of the most intractable if not unachievable tasks, especially with the impossibility of arranging a kind of naturalistic observation which allows for tracking the personal development of learners. As the present research tackles the possibility of raising learners' autonomy via the integration of a technology-based approach, the abstract nature of the dependent variable makes it quite difficult to be traced and measured. However, tackling a variable does not necessarily mean dealing with it as one entity for one might rather look into its constituents. Subsequently, this chapter summarizes the results and findings derived from a quasi-experiment that aims at raising learners' self-reliance through adequately implementing a technology-based approach.

4.1. Quasi-experimental design

4.1.1. Population of the Study

The quasi-experiment targets Master One students (Academic year 2016-2017) from group two and group three, at the department of English, 8 May 1945 University, Guelma. This selection is linked to the fact that this population has already been subject to an introductory questionnaire that attempts to explore their attitudes and views in relation to the impact of TBA on their autonomy. Hence, the aim of this quasi-experimental design is twofold: First, it seeks to find out the sample's actual level of autonomy, and to compare it with findings from the introductory questionnaire. Second, it endeavors to intervene through implementing a technology-based approach in group two, while keeping group three as a control group. Accordingly, it enables us to see

whether an adequate implementation of TBA can affect learners' level of autonomy or not.

4.1.2. Students' Pre-test

4.1.2.1. Description of the Pretest

The pretest of this research is a Likert scale questionnaire that covers eight major dimensions and forty statements. Each dimension encompasses a set of statements that tackle a specific issue in relation to autonomous learning (table 4.1). The first dimension (D1) is composed of 6 items that attempt to inquire into students' responsibility and willingness to self-direct their language learning activity. The second dimension (D2) includes seven questions that aim at exploring learners' perceptions concerning independent language learning. The third dimension (D3) is made up of eight statements that endeavor to explore students' views on the importance of classrooms and teachers in their learning process. The fourth dimension (D4) consists of five items that serve to scout the significance of teachers' guidance, explanation, and supervision. The fifth dimension (D5) is composed of four questions that look into the language learning activities that students perform, mainly outside the classroom. The sixth (D6) dimension incorporates three questions that target students' ability to select appropriate content for their learning process. The seventh dimension (D7) involves three questions that go through students' confidence, motivation, and their ability to set objectives with a fine-tooth comb. The last dimension (D8) is made up of four questions that seek to scrutinize students' interest in other cultures. It is important to note that this questionnaire also serves as a posttest. All these dimensions are demonstrated in the following table which summarizes the different themes tackled in the quasi-experiment. Further details are displayed in Appendix B. It is important to mention that this questionnaire is adapted from a recent research by Gholami (2016).

Table 4.1

Dimensions of Learners' Autonomy Questionnaire

Dimensions	Number of Questions	Subject
D1	6 Questions	Self-direction
D2	7 Questions	Independent language learning
D3	8 Questions	Importance of class and teacher
D4	5 Questions	Importance of teacher guidance and explanation
D5	4 Questions	Off-class activities
D6	3 Questions	Content-selection
D7	3 Questions	Confidence, motivation and goal-setting
D8	4 Questions	Interest in other cultures

This pretest covers forty statements along with a Likert scale that comprises five options: *Never True*, *Rarely True*, *Sometimes True*, *Mostly True*, and *Always True*. The Likert scale nature of the pretest allows for transforming students' choices into scores where statements that imply independence are scored as follow: *Never True* = 1 point, *Rarely True* = 2 pts, *Sometimes True* = 3 pts, *Mostly True* = 4 pts, *Always True* = 5 pts, whereas statements that imply dependence are scored as follow: *Never True* = 5 pts, *Rarely True* = 4 pts, *Sometimes True* = 3 pts, *Mostly True* = 2 pts, *Always True* = 1 pt. To clarify, the first statement of the pretest *'I set my own goals for each semester'* implies independence. Therefore, if a student opts for *Always True*, s/he would automatically get 5 points. However, the fourteenth statement of the pretest *'I am afraid that I will not learn a topic if the teacher does not explain it in the English class'* implies dependence. Hence, if a student chooses *Always True*, s/he will automatically get 1 point. This method enables us to calculate students' overall score that corresponds to a specific level of autonomy.

Since students have the possibility to choose from five main options, there are five main levels of autonomy. If the overall score of students stretches from 40 to 79

points, it implies that all students are passive. If the score is between 80 points and 119 points, it means that they have low level of autonomy. If the score is between 120-159 points, it suggests that they have an average level of autonomy. If the score ranges from 160 points to 199 points, it insinuates that learners are autonomous. Finally, if the score is 200 points, it indicates that students are highly autonomous (table 4.2).

Table 4.2

Levels of Autonomous Learning

Overall Score	**40-79 pts**	**80-119 pts**	**120-159 pts**	**160-199 pts**	**200 pts**
Overall level	Passive	Low Autonomy	Average Autonomy	Autonomous	Highly Autonomous

4.1.2.2. Administration of the Pretest

The administration of students' pretest took place on February 23rd, 2017 at the department of English, 8 May 1945 University, Guelma. The pretest, which is in the form of a Likert scale questionnaire, has been distributed in groups two and three (Master One students). The process went smoothly and both teachers and learners cooperated willingly. Despite the fact that the pretest consists of forty items, the whole process took no more than twenty minutes for both the nature of the questions and form of the questionnaire facilitated the answering activity. It is worth of mention that all students did not face any difficult or ambiguous expressions.

4.1.3. Data Analysis and Interpretation

4.1.3.1. Results from Students' Pre-test and Method of Calculation

Table 4.3

Results of Learners' Autonomy Questionnaire (Pretest)

Dimensions	Group	n	Mean ($\bar{X}$)	Std. Deviation (S)
D1	Control	19	22.36	2.21
	Experiment	19	21.73	3.32
D2	Control	19	25.42	4.50
	Experiment	19	25.21	4.06
D3	Control	19	25.52	3.93
	Experiment	19	26.84	2.60
D4	Control	19	12	2.92
	Experiment	19	12.94	3.82
D5	Control	19	16.10	2.62
	Experiment	19	15.15	2.19
D6	Control	19	10.63	1.79
	Experiment	19	10.05	2.09
D7	Control	19	12.78	2.06
	Experiment	19	12.47	2.41
D8	Control	19	15.36	3.87
	Experiment	19	15.94	3.09
Total (Mean)	Control	19	140.17	
	Experiment	19	140.33	

The results in table 4.3 are derived from the sample using the sample standard deviation formula which is as follows:

$$s = \sqrt{\frac{\sum(X - \bar{X})^2}{n - 1}}$$

S = sample standard deviation

Σ = sum of

X = each respondent's score

$\bar{X}$ = the mean of the sample

n = the number of the sample

As explained by Gravetter and Wallnau (2010, p. 91), "the standard deviation provides a measure of the standard, or average, distance from the mean, and describes whether the scores are clustered closely around the mean or are widely scattered". To put it another way, it accounts for the gap between data and the mean. The difference, in turn, indicates whether data are close to the mean or widely dispersed. Therefore, a low standard deviation implies that all samples' scores are close to the mean, whereas a high standard deviation suggests that the samples' scores are scattered. The mean ($\bar{\mathbf{X}}$) refers to the estimated general average of a set of data, it is determined through collecting all respondents' scores and dividing them by the number of respondents ($\boldsymbol{n}$). Finally, the sign **X** stands for each respondent's score. To illustrate, the fifth dimension's (control group) Mean ($\bar{\mathbf{X}}$) and standard deviation (**S**) are calculated as follows:

Table 4.4.

Scores of the Fifth Dimension (Control Group)

Students	Q27	Q28	Q29	Q30	Score (pts)
S1	5	5	5	3	18
S2	3	4	3	2	12
S3	3	5	5	5	18
S4	5	5	5	4	19
S5	5	4	5	5	19
S6	3	4	4	3	14
S7	4	5	3	5	17
S8	5	5	4	5	19
S9	3	5	5	4	17
S10	5	4	4	5	18
S11	2	5	5	3	15
S12	5	3	3	2	13
S13	1	3	5	2	11
S14	1	5	5	2	13
S15	3	5	5	1	14
S16	4	3	5	3	15

S17	3	5	5	5	18
S18	4	5	5	3	17
S19	5	4	5	5	19

Therefore, the mean is:

$\bar{X}$ = (18+12+18+19+19+14+17+19+17+18+15+13+11+13+14+15+18+17+19) / 19

$\bar{X}$ = 306 / 19

$\bar{X}$ = 16.10 pts

Then, for each respondent's score, we subtract the mean and square the result. For instance, the first student (S1) score is 18 points (table 4.4). Thus,

$(X - \bar{X})^2 = (18 - 16.10)^2 = (1.9)^2 = 3.61$

After applying the same equation to all students' scores, we derive a set of numbers which are to be collected and divided by **(n – 1)**, with n standing for the number of the respondents. Hence,

$\Sigma(X - \bar{X})^2$ / (19 – 1) = (3.61+16.81+3.61+ 8.41 + 8.41 + 4.41 + 0.81 + 8.41 + 0.81 + 3.61 + 1.21 + 9.61 + 26.01 + 9.61 + 4.41 + 1.21+ 3.61 + 0.81 + 8.41) / 18 = 123.9 / 18 = 6.87

6.87 is the variance. The standard deviation is the square root of the variance. Consequently,

$S = \sqrt{6.87} = 2.62$

The standard deviation of the fifth dimension (control group) is **2.62** as shown in table 4.3. It is important to note that this formula has been applied to all dimensions in both groups.

4.1.3.2. Analysis of Results and Findings from Students' Pretest

Although there are slight differences between the results of the control group and the experiment group in each dimension, the overall score which is indicated at the end of table 4.3 shows that both groups have almost the same level of autonomy. This result implies two important points. First, it means that both groups are homogeneous and equivalent which; therefore, contributes to the credibility of the research due to the fact that homogeneity is one of the cornerstones of any experiment. Second, since the overall score of both groups is around 140 points, they both possess an average level of autonomy (table 4.2). Table 4.3 also displays the standard deviation of each group in each dimension. Almost all standard deviations are low which denotes that the majority of students have the same level of autonomy. In other words, students' scores are not dispersed which presupposes that most respondents belong to the same level.

4.1.4. Students' Post-test

4.1.4.1. Administration of the Posttest

The administration of students' posttest took place on April 27th, 2017 at the department of English, 8 May 1945 University, Guelma. As it is already noted, the same Likert scale questionnaire has been used as a pretest and posttest. Again, the answering activity did not witness any worth mentioning difficulty. Both teachers and learners showed interest and support. It took students no more than twenty minutes to accomplish the task due to the fact that the simple nature of the questions made it easy for them to understand and answer rapidly. Fortunately, all respondents did not face any difficult or ambiguous expressions.

4.1.4.2. Data Analysis and Interpretation

Table 4.5

Results of Learners' Autonomy Questionnaire (Posttest)

Dimensions	Group	n	Mean ($\bar{X}$)	Std. Deviation (S)
D1	Control	19	21.57	1.60
	Experiment	19	23.42	3.07
D2	Control	19	25.21	4.13
	Experiment	19	26	3.78
D3	Control	19	25.78	3.64
	Experiment	19	29.84	4.46
D4	Control	19	12	2.92
	Experiment	19	14.47	3.86
D5	Control	19	16	2.53
	Experiment	19	15.26	2.44
D6	Control	19	10.52	1.64
	Experiment	19	11.10	2.76
D7	Control	19	12.78	2.06
	Experiment	19	13.63	1.21
D8	Control	19	15.47	3.65
	Experiment	19	17.57	1.83
Total (Mean)	Control	19	139.33	
	Experiment	19	151.29	

4.1.4.3. Analysis of Results and Findings from Students' Post-test

As far as one can see, the results displayed in table 4.5 show students' overall average of autonomy in both groups, in addition to their score in each dimension. Regarding the control group, the overall level of autonomy in the posttest (139.33 pts) approximately matches their overall level of autonomy in the pretest (140.17 pts) which is indicated in table 4.3. This implies that learners' degree of independence neither decreased nor increased. The latter, in turn, probably suggests that the absence of an adequate intervention, such as the one implemented in the experimental group, led to

the stability of students' level of autonomy. Given the fact that the experimental group has been subject to a more than two months of technology-based learning, the overall level of autonomy (151.29 pts), which is showed in table 4.5, signals a slight change for it marks a kind of improvement when compared with their overall level in the pretest (140.33 pts). This change might be linked to the intervention that occurred in this group through trying to integrate an adequate technology-based approach in their classrooms. Despite the fact that there is a descent change in the experimental group, it is still inadequate as the new score (151.29 pts) infers that the sample still possesses an average autonomy (see table 4.2). As it is noticed in table 4.5, the standard deviation in both groups is low which signifies two major remarks: First, it proves that the sample is not dispersed. In other words, almost all respondents possess the same level of autonomy. Second, it suggests that the improvement in the experimental group is inclusive. That is to say, almost all learners developed their level of autonomy.

Concerning the experimental group, a noteworthy improvement in the overall level of autonomy is mainly witnessed in four dimensions which are D1, D3, D4 and D8. The first dimension (D1) covers self-direction which, in turn, incorporates numerous aspects such as responsibility, awareness and goal-setting (see Appendix B). The improvement seen in this dimension implies that learners have become more responsible and more in charge of their learning activity. D3 tackles the significance of class and teacher. Since this dimension indicates a kind of development, it thereby proves that learners' reliance on classroom and teachers as the major source of learning has, at least, slightly decreased which makes them more self-dependent. D4 deals with the degree to which learners depend on teachers' guidance, explanation and correction. As displayed in table 4.5, the mean of this dimension has increased in comparison with the mean of the pretest (see table 4.3). This result might denote that learners'

dependence on teachers has decreased which also proves an improvement in their degree of self-regulation far from solely depending on teachers' presence, assistance and correction. Besides these results, the last dimension (D8) which consists of statements regarding learners' interest in the foreign language culture also appears to witness a modest increase. The latter infers that learners' interest in the English culture, idiomatic expressions, lifestyle, and riddles along with other items that are usually not given much attention inside the classroom has increased. It implies that students begun to look for the target language culture themselves, which indicates a kind of autonomous learning.

4.1.5. Summary of Results and Findings from the Quasi-Experiment

Table 4.6

Results of Learners' Autonomy Questionnaire (Pretest and Posttest)

Dimensions	Group	n	Mean (Pretest)	Mean (Posttest)
D1	Control	19	22.36	21.57
	Experiment	19	21.73	23.42
D2	Control	19	25.42	25.21
	Experiment	19	25.21	26
D3	Control	19	25.52	25.78
	Experiment	19	26.84	29.84
D4	Control	19	12	12
	Experiment	19	12.94	14.47
D5	Control	19	16.10	16
	Experiment	19	15.15	15.26
D6	Control	19	10.63	10.52
	Experiment	19	10.05	11.10
D7	Control	19	12.78	12.78
	Experiment	19	12.47	13.63
D8	Control	19	15.36	15.47
	Experiment	19	15.94	17.57
Total (Mean)	Control	19	140.17	139.33
	Experiment	19	140.33	151.29

In brief, table 4.6 summarizes learners' overall level of autonomy in the pretest and posttest, along with their level in each dimension. The findings obtained from the quasi-experiment indicate several important points. The nature of the pretest allows for both assessing the overall level of autonomy and testing the homogeneity of this sample. As shown in tables 4.3 and 4.6, both groups roughly possess the same level of autonomy which, in turn, belongs to the third category displayed in table 4.2 (Average autonomy). Along similar lines, they prove that this homogeneousness is also apparent at the level of each dimension with slight differences. Table 4.3 displays the standard deviations of each group in each dimension. As it is observed, all standard deviations range from 1-4 which, hence, affirms the convergence between learners as far as the level of autonomy is concerned.

The results of the posttest, which are presented in tables 4.5 and 4.6, were preceded by a kind of intervention in the form of a technology-based approach. The latter, as hypothesized, aims at both acclimatizing EFL students to technology and eventually instilling a kind of self-dependence in them. Although TBA exposure was not as intensive as it was planned before, learners' overall level of autonomy has decently increased. However, like the pretest score, the posttest score also belongs to the third category displayed in table 4.2 (Average autonomy). Despite the fact that some standard deviations slightly increased in comparison with the pretest, they still can be considered low. This result pinpoints that convergence between learners is preserved. It also notes that the development noticed in the experimental group encompasses most of the learners.

Conclusion

In view of the obtained findings and results, the integration of TBA into EFL classrooms appears to be promising. The latter is explained by the fact that learners'

overall level of autonomy seems to increase though the exposure to TBA was really modest due to some uncontrollable constraints that will be tackled later in this chapter. Subsequently, further initiatives to scrutinize the link between the two variables are recommended. Notably, almost all students who participated in this experiment possess an average level of autonomy which, therefore, makes the provision of technological tools and digital materials, and dependence on TBA a prerequisite for policy makers and teachers respectively. It is worth mentioning that the results derived from the quasi-experiment conform to learners' views and opinions which were expressed in the introductory questionnaire (Chapter 3, students' questionnaire).

RESEARCH IMPLICATIONS

This study confirms the main hypothesis which implies that an adequate implementation of a Technology-Based Approach in EFL classrooms would promote learners' autonomy. The research thereby proceeds to the last phase where it articulates the theoretical, methodological and pedagogical contributions. It further highlights certain recommendations for further research, along with the major limitations encountered by the researcher and which, in a way or another, affect negatively the appropriate realization of the research.

1- Theoretical Contributions

The theoretical dimension of the current study reinforces the findings of the practical part and enriches one's background for it exhaustively inquires into the foundational norms of the two main variables. As far as autonomous learning is concerned, the first chapter intends to attain a complete understanding of this ability. It also strives to assay the major characteristics of autonomous learners, the factors that affect autonomy, along with the approaches that might foster it. Frankly speaking, this research vets autonomy in its technical and psychological dimension (see table 1.1) in the sense that it sheds more light on the internal and external manifestations of such endowment. The choice of the word endowment might raise a lot of questions for it implies that autonomy is innate. However, this selection takes into account Rousseau's vision (see chapter one, introduction) and Albert Einstein's view of learning: "I never teach my pupils, I only provide the conditions in which they can learn" (cited in Holland, 2014, p. 63). Despite the fact that the researcher is adopting a clear understanding of autonomy as something innate yet still promotable, one might easily notice the objectivity of the whole chapter. Otherwise stated, the latter (i.e. the chapter) attempts to provide an overall account of autonomy far from any kind of subjectivity.

Amidst a plethora of theoretical contributions, the Algerian LMD system seems to lack and/or neglect a considerable amount of such noteworthy input. Subsequently, this implies that findings of the first chapter would certainly benefit the Algerian educational scheme if considered seriously.

In view of the underpinnings of the second chapter which strive to strengthen the feasibility of the empirical part, one might derive a set of implications that would work the Algerian educational system. Given the fact that the second chapter tackles ET and TBL, it provides a detailed description of the main forms of TBL. It also introduces some tools which seem to be absent in Algerian EFL classrooms. Additionally, it tracks the probable factors that might affect the implementation of an adequate TBL. On account of the fact that Algerian EFL classrooms witness a massive technological shortage, the researcher intends to at least shed light on this issue through directing sights on such important tools and methods. It is important to note that further implications regarding the relationship between autonomy and TBL are to be discussed in the pedagogical contributions part.

2- Methodological Contributions

The present research yield tangible results with regards to the impact of technology-based approach on EFL learners' autonomy. The combination of quantitative, qualitative, and experimental data reinforces the research credibility. For the time being, the majority of field investigations which tackle the issue of learners' autonomy seem to embrace a rather descriptive approach. This is mainly due to the abstract nature of autonomy which makes the adoption of certain quantitative and statistical methods quite inapplicable. Having said that, it is crystal clear that this detailed examination endeavors to challenge these established claims through approaching autonomy in a more quantitative manner. The latter is primarily feasible

through deconstructing autonomy into several constituents and tracing the development of each constituent by means of self-report Likert scale questionnaires. All in all, one might infer two major points with regards to the methodological dimension of this research: First, the validity is ensured as the present investigation opts for triangulation in terms of research tools. Second, it introduces a quite unusual way for measuring qualitative variables quantitatively.

2- Pedagogical Contributions

3-1. Teachers' Implications

First, teachers should do their utmost to improve their familiarization with educational technologies. In this regard, they need to receive an adequate training on how to implement technology in learning. This way, they would probably overcome technophobia and become ready to adapt a kind of technology-based approach in their classrooms. What makes this shift compulsory is the requirements of the 21st century which are discussed earlier in the second chapter under the TPACK framework. The latter urges teachers to combine between the pedagogical knowledge, the technological knowledge and the content knowledge so as to reinforce the teaching/learning activity. Although the findings extracted from teachers' interview suggest that they are quite acquainted with ET, the dynamic nature of technology makes it obligatory to keep being up-to-date.

Based on students' views and perceptions with respect to teachers' actual and expected roles (tables 3.6a and 3.6b), teachers should drop certain traditional roles in favor of more flexible ones. Since the LMD system holds the learner-centered approach to be one of its major cornerstones, authoritative teachers should try to minimize their control over the teaching/learning activity so as to acclimatize learners to self-directed learning. This way, teachers would certainly gain much time to play the role of

researchers and students would develop certain skills and capacities that enable them to turn into a more active and responsible knowledge-seekers.

The third suggestion inferred from this research sets one's sight on teachers' autonomy. On this point, both theoretical accounts and field investigations support the idea which contends that learners' autonomy is dependent on teachers' autonomy (Appendix C; Little, cited in Lamb, 2008; Thavenius, 1999). Since all teachers affirm that they try to promote learners' autonomy (chapter three, teachers' interview, question five), it is important to urge them (i.e. teachers) to work on their degree of self-dependence. The reason behind this suggestion is the fact that teachers would never be able to promote something in learners that they lack in the first place. With this in mind, teachers should act as role-models as far as autonomy is concerned.

The last implication for teachers calls the attention to the implementation of an adequate technology-based approach into EFL classrooms. Given the fact that the present study proves that technology increases learners' autonomy, teachers should thoroughly depend on technological tools and materials. The mediation of technology between teachers and learners would certainly influence their predetermined roles. On top of that, the complex nature of such tools would enhance learners' problem-solving skills. Technology also substitutes teachers in many roles which, in turn, grants more control to learners and turns learning into a rather personal activity in terms of self-direction and content-selection.

3-2. Learners' Implications

With no holds barred, learners' autonomy is their foremost responsibility. For this reason, they should leave no stone unturned so as to reach a convenient level of self-reliance. Learners have to be au fait with the prerequisites of the LMD system. Since the latter advocates learner-centeredness, they need to be more responsible,

independent, active, enthusiastic, determined, and critical. When asked about the roles expected from their teachers (table 3.6b), almost one third of the whole sample indicates *controller*. This surprising result coerces this category of students to reconsider their roles as university students. In view of the fact that the majority of respondents regard themselves as autonomous learners (table 3.4) and believe that autonomy is promotable (table 3.8), they should acclimatize themselves to the requirements of higher education in order to bring dependence to a standstill.

As far as technology is concerned, teachers' interview reveals a direct relationship between educational technologies and EFL learners. The latter are described by teachers as *e-generations* and *technology-natives*. However, one might easily detect a sort of technological-abuse with regards to students' usage for they seem to neglect the educational dimension of such innovation. In this respect, EFL learners should redefine the set of goals and objectives expected from technology. Since the latter is double edged, they have to be aware of the appropriate ways to utilize it effectively. The intensive, yet adequate, dependence on technology in learning would certainly turn students into more active participants in terms of content-selection, self-direction, problem-solving, critical thinking and so on and so forth. It is thereby possible to urge the concerned learners to adopt an accurate way to make the best use of technology which, in turn, would promote their self-reliance.

3-3. Policy-Makers Implications

The provision of high-end technologies appears to be one of the prime necessities that policy-makers should lay emphasis on. As noticed from the analysis of students' questionnaire (table 3.14) and teachers' interview (question 10), the university seems to turn a blind eye on such an issue. Both students and teachers affirm that the English department lacks the necessary technological tools and devices that allow for

the implementation of an adequate technology-based approach. The concerned body must recognize the fact that technology lies at the heart of 21st century education. Given this circumstance, the absence of such crucial educational component would certainly affect the quality of teaching/learning for it fortifies the enduring presence of the teacher-centered approach. The aforementioned issues would in turn lead to digital divide and passivity.

Although the integration of technology constitutes one of the main research implications, one should put the accent on the offshoots of such procedure: teacher training and technical support. The ministry of higher education must strive to set up a sort of tech-literacy programs which aim to strengthen teachers' knowledge with regards to the use of technology in education. Likewise, it should bear the expenses of periodic maintenance along with the provision of a well-versed technical support. Once realized, these factors would definitely ameliorate the quality of education and facilitate teachers' task for they will no longer suffer from issues such as frozen software or broken hardware.

As far as one can notice, the idea of learner-centeredness comes into plain view at the university level. However, it is, in all probability, almost absent at the primary, middle, and secondary schools. The forgoing levels probably endorse a teacher-centered approach which, unfortunately, burdens teachers and makes learners inefficient in terms of content-selection, detachment, responsibility, and decision-making. This process usually compels pupils to turn into passive input-consumers. Once at the university, these pupils would likely find it extremely difficult to cope with the requirements of their studies. On account of the aforementioned controversy, policy makers should promote autonomous learning at all levels.

Finally yet importantly, the concerned entity should revise the foundational standards upon which the Algerian LMD system is built. Since the latter is subject to persistent deterioration, it is important to alter certain aspects which scarcely benefit its appropriate execution. Straight from the shoulder, the system should opt for a more pliant approach with regards to teacher and learner roles. It thereby needs to give more control to learners so as to add to their autonomy. This is mainly achieved by means of a convenient technology-based approach for it empirically proves to enhance EFL learners' self-reliance.

LIMITATIONS OF THE STUDY

The present investigation faced a number of ethical, contextual, and methodological constraints which prevented its appropriate realization. These obstacles are listed as follows:

- The unavailability of authentic resources (books, articles, etc.) emerges as one of the major barriers that many Algerian students are currently facing. This massive materials' shortage prevents the researcher from enriching his background knowledge and sometimes obliges him to unwillingly infringe copyrights. The latter contradicts with the universal academic norms and standards.
- The process of interviewing teachers unveils certain ethical drawbacks which negatively affect the transparency and credibility of the research. Despite the fact that interviews entail spontaneity, improvisation, and naturalness, some teachers proposed to answer the questions at home so as to provide "accurate" answers. This category of teachers seems to define accuracy in terms of what should be said rather than what really is the case.

- A descent number of teachers refused to take part in the interview which affects the representativeness of the sample. There appears to be no convincing reason which could explain why some teachers turn a deaf ear to such an important issue.
- In the same manner, many students provided incomplete answers which led to their exclusion and substitution by other respondents. When administering the questionnaire, the researcher kept an eye on the whole process. It appeared that some students do not answer seriously for they just tick some options randomly or imitate their colleagues' choices.
- The nature of the introductory questionnaire, the Likert scale questionnaire, and the interview might probably impact the research validity. Self-report tools are usually disfavored due to the fact that human beings are naturally subjective.
- The implementation of a technology-based approach in EFL classrooms has been subject to countless impediments. The absence of technological tools and materials such as data projectors, computers, digital resources, the internet…etc., aroused as a chief barrier. The latter affected the intensity of exposure in the experimental group.
- The independent variable (i.e. technology-based approach) stands as an umbrella term that might cover a wide range of teaching methods and technological forms. This thematic broadness is primarily due to the lack of an adequate technological form such as CALL, CMC, CSCL, CBT, to mention but a few. The researcher then was obliged to tackle technology from a general perspective in order to be able to conduct an experiment.
- Time constraints constitute a considerable portion as far as limitations are concerned. In point of fact, two months are not sufficient to track learners' degree of self-reliance. Consequently, this empirical study should have adopted a longitudinal approach.

- Methodologically speaking, the Likert scale questionnaire (i.e. pretest and posttest) does not cover all the dimensions that characterize autonomy. Due to time limitations, the researcher was compelled to adapt 90% of the items from a previous study. Therefore, a more accurate Likert scale questionnaire should be designed with regards to the specificities of the Algerian context.

RECOMMENDATIONS FOR FURTHER RESEARCH

Since this investigation attempts to examine the impact of technology-based approach on EFL learners' autonomy, it is important to highlight a collection of research topics and variables that in a way or another might replicate, reinforce, disconfirm, or build upon the present findings. The following research suggestions and advice do not follow a specific order.

- Since this investigation embraces a quasi-experimental approach, a replication of the same study might probably fortify the current results if the researcher opts for a naturalistic observation to track learners' autonomy.
- Ethically speaking, one cannot turn a blind eye on the fact that some teachers and learners appear to be uninterested in answering researchers' questionnaires or taking part in their interviews. On account of this phenomenon, an exploratory research on the reasons behind teachers' and learners' indifference with regards to self-reporting their views and perceptions is strongly recommended.
- It is equally suggested that future investigations conduct a correlational study with respect to the impact of teachers' autonomy on EFL learners' autonomy.
- More than that, one might possibly track the impact of in-service teachers' training on their technological pedagogical content knowledge (TPACK).

- As far as the Algerian educational system is concerned, an evaluation of the pedagogical aftermaths of the LMD system is highly recommended.

GENERAL CONCLUSION

The present investigation endeavors to vet the impact of technology-based approach on EFL learners' autonomy. To this end, the research undergoes three main phases: The theoretical phase which attempts to provide a solid conceptual and notional background. The latter is a mandatory step towards the realization of a well-versed field inquiry. The semi-practical phase which aims to explore both teachers' and learners' views, perceptions, and attitudes with reference to the topic in question. The aforementioned phases serve as raw materials that fortify the accomplishment of the practical phase. The latter aspires to obtain more empirical findings that would reinforce/contradict the results of the second phase and, thereby, dis/confirm the research hypothesis.

Theoretically speaking, chapters one and two cover autonomous learning and educational technology respectively. The former comprises eight big titles that tackle the definition and development of autonomy as a concept, its importance, levels, domains, characteristics, approaches, along with the factors that might pose a sort of influence on learners' self-dependence. The latter (i.e. educational technology) is made up of seven big titles which highlight the conceptual meaning of ET, its forms, tools, models, together with the factors that affect its appropriate implementation. Practically speaking, chapters three and four incorporate field investigation and quasi-experimental design. The third chapter deals with the analysis of students' questionnaire and teachers' interview. It thereby enriches the empirical dimension of this research. The fourth chapter reports the results of the quasi-experiment which strives to inculcate certain autonomous traits in EFL learners.

The obtained results affirm that technology-based approach increases EFL learners' autonomy. The three research approaches thereby confirm the main

hypothesis which proves the sturdiness and interrelatedness between teachers' and learners' views along with the empirical data of the quasi-experiment. The latter witnesses a descent improvement in the sample's overall level of autonomy in spite of the limitations that affected its adequate implementation. It is now appropriate to call for the integration of educational technologies in EFL classrooms for they improve the quality of education and enhance learners' self-dependence.

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Appendix A

Students' Questionnaire

Dear Students,

You are kindly requested to answer this questionnaire which attempts to obtain information needed for the accomplishment of a Master dissertation. The questionnaire aims to investigate learners' attitudes and beliefs concerning the impact of integrating a Technology-Based Approach in EFL classrooms on students' autonomy. The questionnaire is anonymous and your answers remain confidential. Therefore, you are politely invited to answer the following questions either by ticking/circling the appropriate option(s), or by making a full statement. Bear in mind that your answers will be crucial for the success of this research.

Thank you for your cooperation

Mr. Merabet Ramzi

Department of Letters and English Language

University of 8 May 1945-Guelma

Section One: General Information

Q_1: How long have you been studying English?

……years.

Q_2: Why are you studying English?

Personal choice	
Administrative choice	
Other(s)	

- If other specify.

……
……

Q_3: How do you describe your level in English?

Very good	
Good	
Average	
Bad	
Very bad	

Section Two: Autonomous Learning

Q_4: Do you consider yourself as an autonomous learner?

Yes	
No	

Q_5: To what extent do you depend on teachers?

Dependent 1 2 3 4 5 6 7 Highly independent

Q_{6a}: What is/are the actual role(s) that your teachers are playing? (More than one option)

Controller	
Prompter	
Resource	
Assessor	
Organizer	
Participant	
Counselor	
Guide	

Q_{6b}: What is/are the role(s) that your teachers should play? (More than one option)

Controller	
Prompter	
Resource	
Assessor	
Organizer	
Participant	
Counselor	
Guide	

Q_7: How do you describe autonomous learners? (More than one option)

They self-regulate their learning	
They are motivated learners	
They self-assess and self-evaluate their learning outcomes	
They monitor their learning	
They are responsible learners	
They direct what and how to learn	
Other	

- If other specify.

……
……

Q_8: Do you think that your autonomy is fosterable?

Yes	
No	

Q_9: If yes, what are the factors that promote learners' autonomy? (More than one option)

Metacognitive strategies	
Learning styles	
Technology-based learning	
Teachers' autonomy	
Learners' training	
Other	

- If other specify.

……
……

Section Three: Technology-Based Approach and Autonomous Learning

Q_{10}: Do you utilize technology in the learning process?

Yes	
No	

Q_{11}: If yes, how often do you utilize technology in the learning process?

Always	
Usually	
Often	
Sometimes	
Rarely	
Never	

Q_{12}: How do you describe yourself in terms of tech-literacy?

Illiterate	
Beginner	
Intermediate	
Advanced	
Expert	

Q_{13}: To what extent are you familiar with technological tools outside the learning context?

Unfamiliar 1 2 3 4 5 6 7 Familiar

Q_{14}: Do you think that the English department is equipped with the necessary technological tools and materials?

Yes	
No	

Q_{15}: Do you agree that integrating technology in EFL classrooms is crucial for the success of the learning process?

Strongly agree	
Agree	
Neither agree nor disagree	
Disagree	
Strongly disagree	

Q_{16}: Have you ever received technology-based instruction?

Yes	
No	

Q_{17}: If yes, which instructional approach(es) have you been taught through? (More than one option)

Computer Assisted Language Learning (CALL)	
Computer Mediated Communication (CMC)	
E-Learning / Online Learning	
General technology-based learning	
Other	

- If other specify.

……
…….....

Q_{18}: Does technology have an impact on learners' autonomy?

Yes	
No	

Q_{19}: Do you agree that integrating technology in learning improves your independence?

Strongly agree	
Agree	
Neither agree nor disagree	
Disagree	
Strongly disagree	

Q_{20}: Does technology motivate you to become more engaged in the learning process?

Yes	
No	

Q_{21}: To what extent does technology-based learning decrease dependence on teachers?

A very great deal	

A lot	
A little	
Very little	
Not at all	

Q_{22}: What aspects of autonomy does technology-based learning improve? (More than one option)

Responsible learning	
Critical reflection	
Problem-solving skills	
Decision-making skills	
Detachment / independence	
Motivation to learn	
Other	

- If other specify.

……
……

Section Four: Further Suggestions

Q_{23}: In case you have further suggestions, comments or recommendations, you are mostly welcome to add them below.

……

……

…….....

.....

Thank you for your cooperation

Appendix B

Learner Autonomy Questionnaire (Adapted from Gholami, 2016)

Direction: Please check the one closest answer to the following questions according to your true cases. Thank you for your cooperation.

1= Never True 2= Rarely True 3= Sometimes True 4= Mostly True 5= Always True

		1	2	3	4	5
1	I set my own goals for each semester.					
2	When I hear someone talking in English, I listen very carefully.					
3	I want to talk in English with my family or friends.					
4	In the future, I would like to continue learning English on my own/without a teacher.					
5	If I have not learnt something in my English lesson, I am responsible for it.					
6	I know my weaknesses and go for them (overcome them).					
7	I use other English books and resources on my own will.					
8	I enjoy learning a grammatical point on my own.					
9	While learning English, I like activities in which I can learn on my own.					
10	I like trying new things while I am learning English.					
11	I use my own methods to learn vocabulary in English.					
12	I like learning English words by looking them up in a dictionary.					
13	I think that I learn English better when I work on my own.					
14	I am afraid that I will not learn a topic if the teacher does not explain it in class.					
15	I feel confident when the teacher is beside me while I am learning English.					
16	I can learn English only with the help of my teacher.					
17	My teacher should always guide me in learning English.					
18	I can learn the English grammar on my own/ without needing a teacher.					
19	If I cannot learn English in the classroom, I can learn working on my own.					
20	I know how I can learn English.					
21	My language learning success depends on what I do in classroom.					
22	I learn better when the teacher explains something on the board.					
23	While learning English I would like my teacher to repeat grammatical rules.					
24	I feel happy when my teacher explains every detail of English.					
25	I like my teacher to correct my errors when I make a mistake.					
26	I want the teacher to give us the words that we are to learn.					
27	In the English lesson I like projects where I can work with other students.					
28	I would like to use cassettes/ video/ CD's in the foreign language, outside of the classroom					
29	In fact, I like to listen and read in English outside of the classroom.					
30	I find it more useful to work with my friends than working on my own.					
31	I would like to select the materials for my foreign language lessons.					
32	I would like to share the responsibility of deciding what to do in the English lesson.					
33	I would like to choose the content of what is to be taught in the English lesson.					
34	I like English because I like to speak it.					
35	I believe that I will reach a good level in the English language.					
36	I can be a fluent English speaker in future.					
37	I try to understand the jokes and riddles of the foreign language.					
38	I also investigate the culture of the foreign language I am learning.					
39	I also investigate the idioms and sayings of the foreign language I am learning.					
40	I ask people who have lived abroad about the lifestyles of the people living there.					

Appendix C

Teachers' Interview

Dear teacher,

Our research is about the integration of the Technology-Based Approach (TBA) into EFL classrooms and its impact on learners' autonomy. This interview will be of pivotal importance to our investigation as it will provide us with some answers about the topic in question. You are kindly invited to take part in this short interview which will be recorded based on your permission.

Questions:

1. For how many years have you been teaching English?
2. Do you think that autonomy is important to EFL learners? Explain.
3. Do you think that learners' autonomy is fosterable?
4. What, among these factors, is more effective to promote learners' autonomy?
    a. Technology-based learning
    b. Teachers' autonomy
    c. In-class presentations
    d. Metacognitive strategies
5. Do you promote autonomous learning inside the classroom? If yes, what are the means that you employ to do so?
6. On a scale of 1 to 5, how could you appreciate your learners' level of autonomy? Explain.

7. What is/are your view(s) and perception(s) towards the integration of technology in EFL classrooms?
8. Do you depend on technological tools as instructional materials? Please explain.
9. To what extent are you familiar with educational technology?
10. Is the English department equipped with the needed technological tools that allow for the establishment of technology-based classrooms?
11. Do you think that technology-based teaching affects teacher roles and gives more control to learners?
12. Do you think that an adequate implementation of a technology-based approach in EFL classrooms would promote learners' autonomy? Please explain.
13. Do you have further comments, suggestions or recommendations?

Thank you for your cooperation

Appendix D

Teachers' Interview Transcriptions

Respondent 1

Q1: Good morning. Well, I have taught English for ten years if we count the years that I taught at secondary school.

Q2: It is very very important, it is one of the paramount factors that can lead to learners' success, knowing that the implementation of the LMD system makes it compulsory for learners to become autonomous. Teachers are supposed to develop learners' autonomy and to limit their attribution inside the classroom.

Q3: I think I rather agree with the second point of view. I think that autonomy is fosterable, it is not innate, and we are not born whether autonomous or dependent. It is something that can be developed and acquired. It necessitates or requires motivation. The learners need to be or must be motivated in order to develop their independence, and they should be aware and should have the means that help them to realize that they can learn on their own. In view of my experience as English teacher, I can say that there are learners who study on their own, who are dependent, and who move from dependence to independence.

Q4: I think that all these factors are important to promote learners' autonomy. We cannot choose or mainly focus on one of them. We rather have to combine all of them to promote learners' autonomy. Technology is very important since all the means that technology offers to learners nowadays can help them to become independent, autonomous, and self-reliant. Teachers' autonomy, in-class presentations, and even meta-cognitive strategies are equally important. Concerning meta-cognitive strategies, I think that critical thinking is of paramount significance because the learner who does

not think critically, who does not criticize himself, and make self-evaluation cannot know where did he fail and where did he succeed precisely in order to overcome his problems and to find solutions to ameliorate his learning process. So, I think that all these factors are important.

Q5: Honestly, I do not make huge effort in order to promote autonomy because I think that our learners are not really motivated. I am talking about the majority; of course there are always exceptions. In Master classes, I try to promote autonomy, I try to push my learners to work alone through in-class presentations, through giving them a kind of feedback in order to make them realize where they failed or succeeded.

Q6: Two out of Five. I think that our learners are teacher-dependent, especially in terms of sources and information because nowadays you know, learners do not need a teacher, information is really available, especially with the spread of technology, the internet, and all those tools that make, you know, the search for information easy. However, if we observe our learners in 2017, they are still relying on teachers to bring them simple information. That's why I opt for two.

Q7: Look I think that it is something very very difficult, it is positive because it enhances learning; it facilitates things both for teachers and learners.

Q8: Honestly no. The sole technological tool that I use from time to time, and not always, is the data show. This is the only tool. Still, I try to communicate with my learners via social media networks; I am a bit responsive whenever they need me.

Q9: My tech-literacy in educational technology is not that much and that's why I think that it is important to propose training for teachers, especially in this field. We cannot master the use of educational technologies alone at home, maybe we do not have the means, the time…etc., that's why it is preferable to train teachers on how to utilize

these tools. In reality sometimes we avoid them, I find them interesting, I want to make use of them, but I avoid them because I do not know how to use them.

Q10: No, I do not think so. Additionally, if there are materials, there are always some administrative constraints which will hinder the implementation of such materials in learning.

Q11: Yes, but in the positive way I think. It will give more freedom to the learner to control his learning, and the teacher will be a guider as he will no longer act as a source of information. He will become a guide, a team member. Consequently, it will no longer be a teacher-centered process but rather a learner-centered one.

Q12: Sure, but only with an adequate implementation. That is to say we need to know what are the advantages and disadvantages of technology, and the teacher must master them, master these tools before using them, in order to take advantage of their positive side because you know technology has certain negative effects. I think with an adequate implementation and appropriate integration of TBA in EFL classrooms, learners' autonomy would systematically improve.

Q13: I think that it is a very interesting topic that should be taken into account especially in the Algerian context where learners are highly teacher-dependent. We should then give it due attention.

Respondent 2

Q1: Four years.

Q2: Well of course to some extent I do agree that autonomy is important to EFL learners, based on the fact that teachers cannot provide the learners with everything, hence independence in learning is essential.

Q3: I do believe that autonomy is fosterable mainly through motivation, the environment of education in general, the teachers, how willing they are to push their students.

Q4: Well I'll go for in-class presentations and metacognitive strategies. For in-class presentations you know before presenting students have to read, make their own research about certain topics so that gives them the willingness to learn more about certain topics. Concerning metacognitive strategies, to me as a teacher this is a sensitive topic because for the Algerian students they do not really have these strategies just for very tiny number of people.

Q5: Of course any teacher should promote autonomous learning. As for the means let's take for example my case: I teach written expression and I always try to make my students learn, make their own efforts within the classroom through writing certain things and paragraphs and then making peer correction instead of depending on me. I think that might be one good mean to promote autonomy.

Q6: Can I say zero (laughing), of course my experience in teaching is not that long, but through these years I discovered that learners are teacher-dependent hence we see this horrible level that's why I strongly insist on zero.

Q7: Sticking to the Algerian kind of education, tech in EFL is really important and essential but this is something for us as teachers we suffer from because of lack of technology and the simple example is the inability of providing the data show this is the most simple tool that we can talk about. Here in the English department we suffer from having data shows, for example if my lesson requires a data show if I go to the administration I do not find it. So we had to provide our own technological means.

Q8: At times to be honest with you. I use it with Master One students before starting their presentations but then at certain point I had to stop.

Q9: Just to some extent, I have an average tech-literacy.

Q10: It is a no, a huge no. As we said, we have that massive lack of technological tools and the other problem is that the university provides money to get these technological tools but we still have that massive lack, this leads us to wonder why! Is it about teachers? The English department itself? Or other things! Although I am sure that all teachers want to use tech tools.

Q11: Yes I believe so. I wouldn't say it replaces teacher roles but it leads to a dual learning activity. On one hand, it helps the teacher and reduces the effort put into explanation. On the other hand, it helps students through changing the educational environment. So instead of having a teacher talking for one hour and a half, you have these tools that make learning more shared, easy and interactive.

Q12: If I answer this question, it would be more theoretical than practical. Of course, definitely, you know the west is not better than us, they depend massively on technological means and that proved to be fruitful as it improved the level of their students and helped them to become autonomous. It definitely affects learners' autonomy. Now to what extent I cannot really say because for us in Algeria we don't depend on this approach too much and sometimes it doesn't even exist.

Q13: I would provide one suggestion. Since our university works hard on this, I mean providing technological tools to help teachers and learners I believe the English department specifically has to take this into account since when we say technology it means a lot of money spent on that so I believe that it would be beneficial if it takes this into serious account. I wish you all the best.

Respondent 3

Q1: For five years.

Q2: I think yes. Autonomy is important, it can ameliorate the levels of learners and through being autonomous they can know more about their learning styles and strategies and apply them to have a more effective performance.

Q3: I think yes but it needs work.

Q4: I was about to say the three other remaining answers but when you have explained to me the fourth one, I say all of them. Yet, metacognitive strategies are more important, followed by TBL and in-class presentations.

Q5: Yes I try to promote it, I ask students to present in front of their colleagues and I ask their colleagues to raise questions and discuss important points so that they can think in a critical way. I divide my session into two parts which allows me to follow two ways of teaching: a teacher-centered approach to a certain extent and a learner-centered approach. For the latter, I provide them with a topic and they collect information, analyze and organize them and then present the topic and engage in discussions with their colleagues. In this kind of sessions I try to play the role of a guide. In the other session, however, it is me who presents the lesson yet I always keep them involved. Preparation is also important so I ask them to prepare before coming to the classroom.

Q6: Here I taught two levels (Third year & Master One). I think that Master One students are more autonomous in contrast to Third year level because in Master One they do presentations and they work on their own. I will evaluate it on the basis of Master One students, I give Three.

Q7: I have positive perceptions, I highly advocate the implementation and dependence on technological tools in education in general and FLL in particular as these tools prove to be crucial for the success of the teaching and learning activity.

Q8: Not that much, I just make use of the data show but not intensively, just for sometimes. I am a huge fan of TBL and I encourage it, my modest usage is related to the lack of educational technologies that's why our administration should facilitate the use of technological tools, we can give the example of oral sessions, they teach students in labs yet the instruments do not work so the lab is just like the classroom.

Q9: You can say that I have a moderate level, I can just do those activities that ordinary people can do but I am not so skilled.

Q10: I think there's not enough equipment.

Q11: I think there is a positive correlation and effect; it can help teachers and learner.

Q12: Yes, and I am really curious and I have a strong will that our university will adapt the TBA because technology is in our lives today, students and teachers use tech tools heavily, so why not to save time and use these technological tools not just for entertainment of chatting on Facebook. Why not to use them in an effective way in order to reshape the traditional way of teaching and to help students benefit from their advantages.

Q13: I like the topic and I want to know about the results of the experiment so tell me about them once you finish your work. I really hope that our university will follow this and adopt this approach by taking this topic into consideration because it would be helpful for all.

Respondent 4

Q1: For 9 years.

Q2: Yes it is important, because the approach that the teacher should use is no longer the teacher-centered approach; it is learner-centered approach.

Q3: Yes it can be strengthened, it depends on the learners' efforts and teachers' efforts, Technology can help or train learners to be more autonomous and this of course

requires equipment, it can be strengthened via the use of internet and social networking since this kind of tools is more accessible to learners. In the class, the teacher can use computer software, data shows and PowerPoint.

Q4: If we talk about reality what we have at hand are in-class presentation because if u give a particular student a topic and ask him to present it, he is going to rely on his own, he will depend on himself. Now if we talk about what should be done, technology-based learning it means like it depends on the type of the module, if the teacher teaches grammar for instance, he can make use of some computer software that helps the students to master vocabulary or tenses ...etc. If we talk about phonetics, software that helps students to learn about vowels, consonants...etc. So in my case I do have this kind of software but it is difficult to apply them because of the large group size, not all students can have the opportunities to practice on the software. Also, this kind of software makes it obligatory for students to have computers. It is more applicable in language laboratories, but in our labs students only listen to audio recordings, without being exposed to visual input. The best way to benefit from TBL in second language classroom context is in a language lab or in a class where students themselves have access to computers and software. Outside the class, the teacher can create a group for instance of grammar and try to foster learners' knowledge about a lesson that has already been taught, and provide them with extra practice, observe their interaction and try to solve their problems.

Q5: Besides class presentations, I try to expose students (in phonetics course) to a video where they listen to a speech, if you are studying stress for instance, they try to find particular stress patterns that are in association with a particular word category. For instance words that end with a French suffix they usually receive the stress at the

French suffix like *dictionnaire* like *refugees* like *Vietnamese*. This is a way to develop their learning in-dependency so the learners control their own learning.

Q6: I think I have to rate it as average “Two or Three” because learners till now do not understand that the LMD system insists on the integration of learners in the classroom. It means that the learners have to play a part like doing their homework about the course that is going to be presented by the teacher, but learners of course they expect the teacher to do this task for them. If you are talking about learning websites or social networking I don't think that learners are involved in such kind of activities since these ways of learning are of high cost and expensive. At social networking learners they usually don't practice English. They usually use the Arabic language, that Arabic in which we use the Latin letters so they try to avoid using English as much as possible. Again I rate it on the scale of Two or Three for practice outside the classroom.

Q7: Well, you can see that students they are what they call technology natives, they are born to deal with technology and know more about it than teachers. So I encourage the faculty to provide classes and language labs with such kind of equipment because if learners feel that they are in control of their learning, they can become more motivated. I also encourage students to download apps for pronunciation, for learning grammar and mastering the four skills.

Q8: I teach phonetics and I teach grammar. In grammar I use videos and software. In phonetics, I use only audio recordings but in second semester when I taught intonation I m supposed to but because of the limited time I couldn't test this, but in the previous semester I used to have software for teaching intonation and it was really important for my class. It was more effective than the traditional classroom. The software is called Better Accent Tutor, try to Google my name and you will find an article that I wrote about the use of this article so it is part of the instructional materials because it involves

statements, questions...etc, all those grammatical categories and their intonation patterns and of course the students are exposed to North American English in that software so it was very helpful in that semester.

Q9: I have not been taught with technology whatsoever before but I tend to use it in my class as much as possible but always the large group size does not allow me to do it effectively because it limits the opportunities for every student.

Q10: The only available tool is the data show, okay, but I do have mine of course, I bought one just to avoid wasting time and also to help students. This is the only thing available, no CDs no CALL.

Q11: Yes it does, you know you are a learner and whenever the teacher explains the course, it is a little bit boring or dull, so the students cannot connect with the teacher for more than 20 minutes then they are lost, but with technology the students are always enthusiastic to learn more. It does affect my role as a teacher, so I am going to participate a little bit in the course and the students themselves. Like in the grammar for instance I have the software, the students pick the correct answer, they discuss between each other which answer is correct. Once all the answers are given, they click the check button and then the software would tell them whether the answer is wrong or correct, if it is wrong they start collaborating to correct it. So the students themselves run the show. Technology substitutes the old teacher role as a controller as he turns into a guide. This will keep them involved in the learning process rather than being marginalized.

Q12: Yes, of course. Again if we have the language lab equipped with internet in which the students for instance if they are studying civilization or literature. They are studying literature and analyzing a novel of someone who's still alive, they can make a video-

conference with the author himself to ask him questions and this way they will have a reason to read the book.

Q13: Well I insist that the faculty will take your research, I mean you should tell the reader that at university level the teachers nor the students are making use of this kind of technological devices or the internet or e-library.

Respondent 5

Q1: For 8 years.

Q2: Yes I do, I think that it has like a high degree of importance because knowing that we are now using the LMD system which really boosts learner-centeredness. So yes it is important.

Q3: This is actually a very interesting question which has like deep roots in psychology, the mindset, the brain...etc. It could be innate as it also could be acquired and mastered if wanted, so it is not something that if you are not born with you will never acquire it, I do believe that it can be learned, acquired and practiced until becoming independent learner. Now the thing is or the problem lies in the way the educational system in Algeria is implementing the LMD system which in theory is for increasing and pushing learners' independence but then when it comes to the practice it is totally the opposite and even students whenever I tell them like this is your job it is not ours, we are not here to give you the information and tell you what to do and how to do it, they seem surprised, and what is increasing this wrong mindset is the teacher himself.

Q4: The four of them are effective to a certain extent depending on the students and the teachers' mindsets and beliefs about the teaching and learning processes. TBL yes it does promote, it is important and it could be helpful if it is integrated adequately taking into account the different aspects that might affect its appropriate implementation. Teachers' autonomy is for sure important, in class presentations as well can promote

under certain circumstances, in addition to metacognitive strategies which are obvious promoters of learners' autonomy.

Q5: Yes I do, I do whenever I find the occasion I do foster it or promote it, one of the ways is through encouraging them to come to the stage and perform, maybe about the lecture or something else. In written expression module, since I am using a combination of theories and workshops so whenever we do the workshops you find me around them, talking to them, and providing individualized feedback and advice. Sometimes I even tell them if you really want to know who you are as a learner, how to become a better learner, or if you want we can provide extra time and they do come, they still do not believe that teachers are not scary eventually.

Q6: Here we have two categories, those learners who are by nature autonomous, like they are knowledge-seekers and we do have like the majority of students are the other type, teacher-dependents. So for the first category it is Five, for teacher-dependents who constitute the majority it is Two out of Five.

Q7: I am a technology-believer, I believe that these generations which are now called the e-generations, really need to be aware that smartphones, Ipads are not here just to Facebook, Twitter, Instagram or to do like socializing, they can be here for developing themselves, for studying for themselves because nowadays I believe that the teacher is no longer needed, the LMD system is fostering learner-centered approach plus technology, I should not be here, teaching in this prison, fixed tables and chairs is not interactive at all, limited time and then we have different learners, each with his pace, the place, the atmosphere...etc. I really believe in the positive impact of technology but this impact cannot occur unless many constraints and problems are solved and among them is teachers' mindset.

Q8: I used to because here you see in certain modules we can depend on technological tools to convey the message better. For other modules, it can add nothing. For instance, in the grammar sessions I thought of making slides, presentations and videos and then I was like what for. Grammar is exact, one plus one equals two. It is the teacher's role to decide whether the module he is teaching will benefit from the use of technology or not. If it will, the worry of the teacher should be how to make it beneficial to the maximum. If it is not, it is better to put it away.

Q9: I think that I am quite familiar to a far extent, if you compare me to other teachers in our department, I am more familiar.

Q10: I have been teaching in this department for many years and then I had the chance to take part of its administrative staff where I could have a real awareness of what is going on in the education at our university. When it comes to technology-based teaching, it does not exist simply.

Q11: Yes it does, because for instance in terms of classroom management, if you use technology in teaching this will give you enough time to manage your time appropriately because you will not be doing everything the same time which is a bit different for the majority of teachers to maintain their focus on what they are saying, the explanation, whether students are listening or not, and to shut those who are talking and give permission to those who want to live...etc. However, help is here again if implemented appropriately. For me for instance this year as I am teaching written expression module and as I have said using a lot of workshops with them, on the same time I have created a group on Facebook because I found that the majority are always online so I said let’s not deviate them into different websites which might not be compatible with the smartphone and lets create a group and talk in it which helped me in breaking the ice with them, making them more relaxed when they come to my class,

and pushing them to prepare implicitly. So engaging them in their own learning helps a lot and what helped me do this is not the face-to-face interaction, it is rather the interaction behind the screen which reduces anxiety and shyness. Another important role played by technology is e-feedback which saves time in class.

Q12: Yes of course, as long as it is appropriate and purposeful, but we should first acquaint the teacher with the needed knowledge, provide the needed devices and appropriate training, and make students aware of the right way to utilize technology and its positive outcomes on the success of their learning.

Respondent 6

Q1: For three years.

Q2: Yes, because it improves students' ability to evaluate the information they receive therefore criticize, correct and improve when improvement is necessary.

Q3: Yes.

Q4: Especially A and D.

Q5: Yes, using websites, Data show, TBLT, open discussion…etc.

Q6: Three, our students are used to teaching methods where the teacher provides the information and they simply process and accept it. That is to say they receive apply and seldom assess or criticize.

Q7: I strongly agree with the use of technology in teaching languages.

Q8: Yes, I find using high technology important, the more developed the better. Ex; for me, using an Ipad is better than carrying a heavy laptop around. This way I save energy which I spend later in my classroom.

Q9: Familiar enough.

Q10: not even 10% equipped.

Q11: Yes.

Q12: Yes. Just for an example, a student with a laptop connects to internet in front for him/her, would be able to check for updates on the info s/he is recieveing and this is a one step towards an autonomous learning.

Q13: I appreciate the researcher’s efforts in conducting the research.

Respondent 7

Q1: For eleven years.

Q2: Yes definitely, autonomy is super important. Students should be independent sometimes and rely on themselves, I won't come to your house and teach you how to learn that and that.

Q3: This question needs research but as far as I am concerned it could be both, it is something that you have in you and on the same time it is fostered, let’s say it matures by time.

Q4: In fact it ranges from Zero to Five, yet the overall average is about Three.

Q5: Honestly, if I am allowed I would tick all of them with some reservations to teachers' autonomy and metacognitive strategies. The former is not that necessary since students are not obliged to view the teacher as a model. I believe that students are highly aware so they should not necessarily follow the teacher's example. Metacognitive strategies are highly difficult to be tracked and developed.

Q6: Honestly yes, I do promote autonomous learning through making them realize that they need to be independent sometimes. I ask them questions and sometimes they are collective questions and listen to their answers with their real justifications far from copying their colleague's answers. The use of discussions and debates, homework...etc.

Q7: I am with that of course, there need to be a kind of obligation to use educational technologies especially nowadays for they are available and fun-filled. I am then one of the proponents of integrating and using technology everywhere.

Q8: Yes I depend on educational technologies.

Q9: Average or moderate user.

Q10: Definitely definitely absolutely not, the department is really unequipped with the needed high advanced technological tools and devices. We have never done a teleconference or Skype conference or asked a professor from another university to explain his theory like Chomsky for instance. It might be related to the lack of budget, and even if they buy these devices, everything is Chinese. We also have some constraints, if you go at midday we won't be able to get them and if you go at 16:00 you won't find the department open. Even if we have them, there are many constraints that affect their integration. Also, some teachers are techno-phobic and eventually cannot deal with such devices.

Q11: I think they really lessen teachers' control but not necessarily give more control to learners. Still, it makes learning more learner-centered.

Q12: This also needs research, with some reservations I say yes. Depending on TBA, learners could log into certain websites, look for researchers themselves and keep being updated.

Q13: Hopefully we will reach that level of autonomy. However, absolute autonomy is very hard to be achieved since we are always going to depend on something.

Respondent 8

Q1: For seven years.

Q2: Yes, very important because learning a language requires the learner to work by himself, independently, the teacher and the university are not enough to learn any language and English is an example.

Q3: Here I can say that one can born with a certain degree of autonomy. As an example I can illustrate with my experience in learning English. I was autonomous to a certain degree. In high school, I did not totally rely on the teacher. I always try to find something more from what the teacher provides. But when I started to learn English, I realized that I must be more autonomous because relying on the teacher and university program is not really enough, at least the university and the teacher together do not develop my pronunciation for instance.

Q4: I can say TBL because technology helps learners to become autonomous. Teachers' autonomy is also an effective factor that might promote learners' autonomy. I opt for TBL, metacognitive strategies and then teachers' autonomy.

Q5: Yes I promote autonomous learning through giving different tasks to my students to accomplish. For instance if they ask for the meaning of a specific word, I ask them to look for the meaning by themselves through checking dictionaries or e-dictionaries. By time, they directly check their dictionaries without asking me. Again I can say that I use group or pair work in which students work together without my intervention. Then by the end we try to give some feedback together, I intervene through commenting and implicitly try to develop their autonomy.

Q6: Two. However, there are some learners whom I feel that they are highly autonomous.

Q7: Actually this is very important, I try as much as possible to integrate technology in my classroom because I find that it is very helpful for me as a teacher, the teaching task

becomes easier and I noticed that even learners enjoy learning when we make use of educational technologies. Usually they enjoy learning using their smartphones.

Q8: Yes to be honest this is my second year relying on technology. This year I am using technological tools and this again depends on the nature of the course that I am teaching, sometimes the course is theoretical like Discourse Analysis and Theoretical Linguistics. There is a specific syllabus to follow and I have to stick to the content. I try to break the ice and overcome boredom through using technological tools. Technology also gives more freedom to learners. Students enjoy using their smartphones to learn; when I noticed this I tried to give them more opportunities to use these devices. By Smartphone, I refer to online dictionaries, websites like Google and applications. In a course of collocations I gave them an online dictionary of collocations and explained how this works, it is www.ozdickdictionary.com and they really enjoyed using this dictionary. Those who have internet inside the classroom, they used it the same time I was explaining. Then I gave them a task to be done at home, and I noticed that it was a good way of interaction.

Q9: I can say that I am familiar with ET since I use it even if sometimes I face some constraints and limitations. Sometimes, I cannot find the data show but here I can rely on smartphones or my PC. I always come to the university with my personal computer.

Q10: I don't know what to say exactly to answer this question but unfortunately it is not well-equipped because other universities include multimedia rooms in which you find everything that comes to your mind regarding ET. The data show is not really sufficient. Actually, I like to show my students many things and show them many things and I noticed that the majority of my students are illiterate when it comes to computers, I was surprised few days ago when one of my students wanted to present about Facebook, she asked me to bring the data show and surprisingly she did not know

how to connect it to the computer. If you do not know how to use Microsoft Word, it is as if you do not know how to form a sentence in your native language.

Q11: Yes it affects teacher roles in a positive sense. Some teachers may say that if I rely on technology-based teaching this affects my role as a teacher. I can say that these are authoritative teachers. For me I prefer to be just a guide for the students, it is a pleasure for me if the student relies on himself; it softens the burden and gives more freedom to teachers to dedicate more time to research. I have many things to do but I do not have time to do them since my whole time is devoted to teaching. The LMD system depends on learner autonomy and self-reliance. However, the learner is still depending on teachers and their already structured content.

Q12: An adequate implementation of a TBA would certainly promote autonomy. Based on a one year experience, I really notice the development of my learners' autonomy as I relied on purpose on technology to develop my teaching process. Since learners enjoy learning through technologies so why not to use the smartphone and the PC and sometimes we use internet connection if available. This way they enjoy learning and feel excited. I asked them last week about the method of teaching and materials used; the whole group said that this is the only course where they feel the joy and fun. I was really happy because my hypothesis was confirmed actually. So I think that TBA in teaching English is very important to promote learners' autonomy.

Q13: I can say that it is very important to integrate some courses related to technology, just to make students more aware of information literacy because it has become a must. We recommend students to be more aware, though they are addicted to social media networks; they do not have a personal email and do not even know how to write a formal email. Also we recommend teachers to support technology-based teaching

because globalization obliges us to do so. If we do not do so, we cannot reach the development witnessed in other countries.

Respondent 9

Q1: For six years.

Q2: Yes it is very important since it constitutes one of the cornerstones of the 21st century learning in general and the LMD system in particular since both advocate learner contentedness.

Q3: Since the LMD system advocates learner-centeredness, it is possible to promote foreign language learners' autonomy. Learners' autonomy is like the English language; it can be acquired and developed gradually. For this reason, there are varying levels of autonomy as some learners seem to be highly autonomous while others prove to be passive.

Q4: In fact all these factors promote learners' autonomy in different ways. However, if I am obliged to opt for the major ones I will choose both technology-based learning and teachers' autonomy. Teachers should act as role models when it comes to teaching and learning for they pose a great influence on learners' attitudes. On the other hand, technology-based learning gives more freedom to both learners and teachers and therefore reconstructs the teaching/learning experience. It enables learners to engage in problem solving and critical thinking process, it also allows them to look for content by themselves.

Q5: I do promote autonomous learning inside the classroom yet not that much as I do not really master a systematic way to foster it. I try my best to lessen my control over the classroom in order to provide more control to learners. I try to arrange some collaborative activities and every time I choose a different group leader so that all students become aware of the importance of responsibility.

Q6: It is really difficult to answer this question since I teach two levels and apparently as much as learners grow, they become more autonomous. Generally speaking, I give Three because some students in my classroom do not even need my help. However, they constitute a minority. The majority seem to possess an average autonomy with some exceptions as some students seem very teacher-dependent.

Q7: I advocate the use of technology in learning, I think that the implementation of technological tools and applications would certainly enhance both teaching and learning for they facilitate and improve communication and interaction, save time and make learning outcome more fruitful.

Q8: I do depend on technological tools and materials in teaching; I make use of computers, data shows, tablets and the Smartphone. I depend on emails and social media to interact with my students and always push students to make use of such tools and databases.

Q9: In fact, I have an average level of technology, I know how to use educational technologies smoothly and I usually overcome some simple issues and technical problems.

Q10: Unfortunately it is not equipped at all. Both teachers and students are suffering from this massive shortage of technological tools. I rarely find data shows available despite the fact that they are very basic tools. We do not even have the possibility to publish content online. Policy makers should pay attention to these problems along with other ones.

Q11: Absolutely, TBL reshapes teacher and learner roles. Since the LMD system broke away from the old teacher centered classrooms, TBL came to reinforce this reconstruction because it allows learners to direct their learning to a great extent.

Q12: As I have mentioned before, technology is one of the major factors that promote learners' independence. An adequate implementation of such approach in our classrooms would certainly enhance and reinforce learners' control over learning. Technology-based learning makes the process more student-directed and pushes dependent students to work by themselves as teachers no longer serve as resources, tutors or instructors.

Respondent 10

Q1: For 7 years.

Q2: Yes, as it enables students to take charge and responsibility of their own learning process so that they will set their own goals for learning, pursuit them and self monitor the whole learning process.

Q3: Yes.

Q4: Metacognitive strategies and technology-based learning.

Q5: Yes, I try to promote it through classroom presentations and technology-based learning.

Q6: Well, for my second year students, they still completely dependent on the teacher as the major source of instruction and information. Form Master One students, they are at an (average to good) level of autonomy as they depend on themselves on so many things and just check the teacher for more support and control.

Q7: It is really helpful for both teachers and students; as for teachers, it enables them to get rid of the old fashioned and traditional tools of teaching and provides them with more up to date tools for information communication. For the students, it enables them get more control of their learning process and it also enhances their intrinsic motivation.

Q8: Yes, as the students are asked to make use of the data shows for example as the major source of instruction and information communication in the classroom. In other occasions, they are also allowed to make use of their lap tops and smart phones as sources of instructions.

Q9: I would say I am familiar with it to a good extent as I sought information and practice opportunities via attending to workshops and via actual classroom implementation of technological devices.

Q10: NO.

Q11: Yes, to a great extent.

Q12: Yes, because if we apply the appropriate technological tools in our classrooms consistently and raise our students' awareness towards their importance in fostering their self independence, this will have a great impact on enhancing their autonomy.

Respondent 11

Q1: For five years.

Q2: Autonomy is important to EFL learners because all learning is autonomous (therefore, learners should always depend on their own efforts as well as taking charge of their own learning).

Q3: Yes, learners' autonomy can be fostered.

Q4: I think all these factors are crucial to enhance learners' autonomy. However, metacognitive knowledge is essential in promoting learners' autonomy. This is achieved through planning, monitoring and evaluating (metacognitive strategies).

Q5: Yes, I try to raise autonomous learning inside the classroom through encouraging learners' choices (involving them in a certain level of decision-making). In-class presentations, helping them to identify their preferred strategies and applying a task-based approach are also employed.

Q6: I would say 2 or 3. In fact, the majority of my dear students are not autonomous. They have not reached an autonomous way of thinking.

Q7: Integrating technology in EFL classrooms may greatly develop learners' critical thinking skills necessary to solve the problems they encounter.

Q8: I rarely depend on technological tools as instructional materials, mainly in the department of English at Guelma University. Students' number and lack of materials are among the factors that do not allow for technology use.

Q9: Average user.

Q10: It is not equipped with, at least, the simple basic technological tools.

Q11: In a technology-based classroom, traditional roles of both teachers and learners may change. Learners will be more responsible for their own learning and will be taking charge of their own learning.

Q12: Implementing a technology-based approach greatly enhances learners' autonomy. The use of blogs, for example, promotes self-reflection and self-management. Once these abilities are developed, learners' responsibility in learning will be increased.

Respondent 12

Q1: For thirty-two years.

Q2: Yes, absolutely. Autonomy can be perceived as an ability to learn. Autonomy is both an end and a means of learning. However, to make students autonomous is not to leave them alone; it is to enable them to solve problem situations, to choose, to try and to take initiatives. Constructing autonomy as an EFL student is, among other things, to be able to give meaning to his or her learning, to perceive at a minimum the aims and stakes.

Q3: Yes.

Q4: All of them because they complete each other even though the first item is very recent if its practical expansion is taken into account (classical learning has always been prevalent to a very high degree).

Q5: I extensively promote it by inculcating my students how to use their critical thinking in whatever learning situation, for example in the presentation context. Unfortunately, there is always disappointment because of lack of motivation, readiness, determination, self-reliance and self-confidence.

Q6: One is the scale. Several factors can directly or indirectly contribute to a stagnant or dynamic scale. For the time being, there are no real/effective autonomy conditions or environments. Teachers and students are far from understanding and thus implementing such a complex learning process.

Q7: I wish it could be the motto for every EFL teacher to incite his students to be autonomous learners with a clear understanding of learner autonomy – not to be confused.

Q8: Yes, I do and tremendously. We don't need to draw a picture. The use of technological tools in such a circumstance of learning is vital. Don't we label those who don't apply them as "digitally ignorant"? In the 21st century, teachers and learners cannot avoid such tools. They are even a must.

Q9: I am so familiar with it that I cannot spend a moment without being part of it. I am simply a "digital teacher".

Q10: Frankly speaking, a big „No" goes without saying. No data projectors, no Internet, the semi-digital language labs out of order, if not completely damaged by student. The result is easy to guess.

Q11: Yes, but not a hundred percent because the teacher is sine qua non. He remains the booster of learning especially in the Algerian context. The majority of our EFL students are not academically mature.

Q12: Yes, but it totally depends on the human being and imagination (teacher and student's involvement and conviction).

Q13: As an experienced teacher, I personally believe that we should not put the cart before the horse. There is still a long and arduous way to take in order to implement this learning process. Several factors including the mind of both the teacher and the student are the cause. Is it then a waste of time? No. It is the right moment to ring the bell and find out the appropriate strategies to learn and teach how to be autonomous.

Résumé

Cette recherche a pour but l'étude de l'influence de l'approche technologique sur l'autonomie des étudiants d'Anglais. Par la meme occasion, on va se pencher sur l'attitudes des étudiants et des enseignants vis-à-vis du sujet en question, et on va tenter d'évaluer les résultats d'une application appropriée d'une approche technologique dans les classe d'Anglais. L'étude adopte une approche descriptive à travers un questionnaire et une interview. Une conception quasi-expérimentale a été employée par l'intermédiaire d'une echelle de Likert. L'échantillon de l'enquete se compose de cinquante deux (52) étudiants en Master I LMD, et douze (12) enseignants au department d'Anglais, Université du 8 Mai 1945 Guelma. Les résultats obtenus confirment l'hypothése principale qui implique qu'une application d'une approche basée sur la technologie favoriserait l'autonomie des étudiants. Ces résultats attirent l'attention sur l'importance de l'integration des technologies éducatives au sein des classes d'Anglais langue étrangére en Algérie.

***Mots Clés*:** Autonomy, l'Approche Technologique, Etudiants d'Anglais.

ملخّص

تسعى الدراسة الحالية الى تقصّي تأثير المنهج التكنولوجي على استقلالية متعلمي الانجليزية كلغة أجنبية، وتهدف في البداية إلى استكشاف آراء ومواقف الطلبة والمعلمين فيما يتعلق بالموضوع المعني. زيادة على ذلك، فإنها تسعى إلى تقييم نتائج التطبيق الملائم للمنهاج القائم على التكنولوجيا في فصول اللغة الانجليزية كلغة اجنبية. ولتحقيق هذه الغاية، تعتمد الدراسة على مجموعة من المقاربات والأدوات البحثية، حيث أنها توظف المنهج الوصفي من خلال استبيان ومقابلة. تسمح الأدوات المذكورة آنفا بالحصول على بيانات كمية ونوعية. كما أن الدراسة تعتمد على تصميم شبه تجريبي عن طريق أداة استبيان مزودة بمقياس ليكرت. تتكون عينة البحث من اثنين وخمسين (52) طالب ماستر و 12 مدرسا من قسم اللغة الإنجليزية، جامعة 8 ماي 1945، قالمة. تؤكد النتائج الناشئة الفرضية الرئيسية والتي تعني بدورها أن التطبيق الملائم للمنهاج القائم على التكنولوجيا يعزز استقلالية طلبة اللغة الإنجليزية كلغة أجنبية. توجه هذه النتائج الانتباه إلى أهمية دمج التقنيات التعليمية في الفصول الجزائرية لتعليم ودراسة اللغة الإنجليزية كلغة أجنبية.

الكلمات المفتاحية **: استقلالية متعلمي الانجليزية كلغة أجنبية ، المنهج التكنولوجي.**