PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF TLEMCEN
FACULTY OF ARTS AND LANGUAGES
DEPARTMENT OF FOREIGN LANGUAGES
SECTION OF ENGLISH

Assessing the Effects of Computer-Assisted Language Learning (CALL) on EFL LMD2 Students' Motivation: University of Tlemcen

Dissertation Submitted to the Department of English as a Partial Fulfillment for the Degree of "Magister" in Educational Psychology

Presented by
Mrs. Wahida YAICHE

Supervised by
Dr. Ilhem SERIR

Board of Examiners

Dr. Hafida HAMZAOUI	University of Tlemcen (Chairperson)
Dr. Ilhem SERIR	University of Tlemcen (Supervisor)
Dr. Amine BELMEKKI	University of Tlemcen (Examiner)
Pr. Fewzia BEDJAOUI	University of Sidi Bel Abbes (Examiner)
Dr. Rahmouna ZIDANE	University of Tlemcen (Examiner)

Academic Year: 2012 – 2013/1434 – 1435

Acknowledgements

The accomplishment of this work would not be possible if there was no guide; I am therefore gratefully indebted to my able supervisor Dr. Serir Ilhem, who proved to be at once a scholar, a conductor, and a human being. I would like to thank her for the illuminating insights, the empowering criticism and the patience she provided for me, without which I might not have reached this end. I thank her also for the countless hours of reflecting, reading, and most of all encouraging throughout the entire process.

I am totally indebted to the board of examiners, Pr. Fewzia BEDJAOUI, Dr. Rahmouna ZIDANE, Dr. Hafida HAMZAOUI, and Dr. Amine BELMEKKI who have devoted some of their time to read and evaluate this work.

My heartfelt appreciation and thanks go also to the teachers with whom I was interacted during the course of my post-graduate studies, particularly, Dr. Belmekki, Dr. Benyeles, Dr. Hamzaoui, Dr. Zidane, Dr. Senouci, Dr. Mouhadjer, Dr. Neddar, Mrs. Haddame, Mr. Benziane, Mrs. Halfaoui and Miss Meziane.

A very special note of thanks goes to Mr. Tonkob Yousef who, in many different ways, contributed to this work.

Finally, I would like to thank all the administrators in the department of foreign languages, especially, Malika, Souria and Noureddine; and all the ones who helped me and made the completion of this research work an enjoyable experience.

Dedication

First of all, I would like to dedicate this work to my lovely mother whose sacrifices, whole attention and passionate devotion inspired me with will and self confidence.

To my grandfather whose care, assistance and support really pushed me to set high goals and instigated me to achieve them.

A special feeling of gratitude goes to my loving husband whose words of encouragement and push for tenacity and persistence still ring in my ears. I have no words to thank him for the moral support and the company he gave me.

This work is also dedicated to my parents in law who helped me and instilled in me the encouragement to complete this work. I deeply appreciate their confidence in me.

To my sister in law: Farah, and my bother in law: Abdel Monaim.

I would like to thank all my colleagues, and my friends, especially Hanane, Asma, Souhila and Kheireddine. I greatly value their friendship.

Abstract

Being one of the cleverest inventions of the 20th century, the computer is currently used in every aspect of people's life, including the field of education. The present investigation, therefore, is an exploratory case study primarily concerned with EFL students' motivation in the environment where computer devices are used. Its purpose is to investigate whether CALL environment has potentials and effects on students' motivation and examine its claimed benefits for increased autonomy, attention and engagement. Using a number of psychological perspectives that explained motivation as construct related to a variety of psychological variables, three data gathering techniques have been employed including classroom observation, questionnaire and interview to assess interests, impressions, expectations and perceptions. In addition, factors affecting students' motivation in CALL such as the teacher's managerial skills, the environmental conditions and the students' technical knowledge are also explored within the scope of the study. The research instruments were carefully designed to result in quantitative and qualitative data which are then analysed using both statistical and verbal procedures.

The main findings obtained from this investigation demonstrate that most of the students show increased motivation when learning English using computers. Furthermore, the gathered data revealed that the effectiveness of CALL in motivating students is dependent on the classroom atmosphere, the scheduling of sessions and the students ability to use computers on their own.

Tables of Contents

Acknowledgements.....i

Dedication.....ii

Abstract.....iii

Tables of Contents.....iv

List of Tables.....ix

List of Figures.....x

List of Pie-charts.....xi

General Introduction.....1

Chapter One: Literature Review.....6

1.1. Introduction.....9
1.2. Motivation in Educational Psychology.....10
1.3. Types of Motivation.....12
1.3.1. Intrinsic Motivation.....12
1.3.2. Extrinsic Motivation.....13
1.4. Psychological Perspectives on Motivation.....15
1.4.1. The Behavioural Perspective.....15
1.4.2. The Humanistic Perspectives.....17
1.4.2.1. Maslaw's Hierarchy of Needs.....18
1.4.2.2. Roger's Motivation Theory.....19
1.4.3. The Cognitive Perspectives.....20
1.4.3.1. The Self Determination Theory.....20
1.4.3.2. Expectancy Value Theory.....21
1.4.4. The Social Learning Perspective.....23
1.4.5. The Constructivist Perspective.....25
1.5. Motivation in the EFL Classroom.....27

1.6. The Complexity of Language Learning Motivation.....29
1.7. Computer Assisted Language Learning (CALL).....30
1.8. The Pedagogical Evolution of CALL.....32
1.8.1. Behaviouristic CALL.....32
1.8.2. Communicative CALL.....33
1.8.3. Integrative CALL.....35
1.9. CALL Tutors and Tools.....36
1.9.1. CALL Tutor.....36
1.9.2. CALL Tool.....37
1.10. CALL Materials.....37
1.10.1. Hardware and Software.....37
1.10.2. Internet.....38
1.10.3. E-mail Exchanges.....39
1.11. The benefits of CALL.....39
1.11.1. Learner Autonomy.....40
1.11.2. Feedback.....41
1.11.3. Motivation.....42
1.11.4. Access to Information.....43
1.11.5. Interactivity.....43
1.12. CALL Success Factors.....44
1.12.1. Teacher Training.....44
1.12.2. Students Training.....45
1.12.3. Classroom Management.....45
1.13. Conclusion.....48

Chapter Two: Research Design and Procedure.....49

2.1. Introduction.....51
2.2. Case Study Research.....52
2.3. Research Approach.....56
2.3.1. Quantitative Approach.....57
2.3.2. Qualitative Approach.....60
2.4. Specific Procedure.....64

2.4.1. Setting.....65
2.4.2. Hardware.....66
2.4.3. Sampling.....67
2.4.3.1. Sample Design.....68
2.4.3.2. Sample Population.....70
2.5. Data Collection Methods.....71
2.5.1. Classroom Observation.....72
2.5.1.1. Aims of Classroom Observation.....75
2.5.1.2. Description of Classroom Observation.....76
2.5.2. Students Questionnaire.....77
2.5.2.1. Aims of the Questionnaire.....80
2.5.2.2. Description of the Questionnaire.....81
2.5.3. Teacher's Interview.....83
2.5.3.1. Aims of the Interview.....85
2.5.3.2. Description of the Interview.....86
2.6. Approaches to Data Analysis.....88
2.6.1. Quantitative Data Analysis.....88
2.6.2. Quantitative Data Analysis.....90
2.7. Conclusion.....91

Chapter Three: Data Analysis and Interpretations.....92

3.1. Introduction.....94
3.2. Analysis of Classroom Observation.....94
3.2.1. Field Notes.....94
3.2.1.1. The Performance of the Teacher.....95
3.2.1.2. The Performance of the Students.....97
3.2.1.3. Teacher-Students Relationships.....98
3.2.1.4. The Classroom Atmosphere.....99
3.2.2. Rating Scale.....99
3.2.3. Discussion of the Results.....111

3.3. Analysis of Students Questionnaires.....115
3.3.1. The Findings.....115
3.3.2. Discussion of the Findings.....125
3.4. Analysis of the Teacher's Interview.....126
3.4.1. The Results.....126
3.4.1. Summary of the results.....129
3.5. Interpretation of the Main Findings.....129
3.6. Limitations.....132
3.7. Conclusion.....132
Chapter Four: Suggestions and Recommendations.....133
4.1. Introduction.....135
4.2. Providing Good Conditions for the Use of CALL.....136
4.2.1. Supplying the Basic CALL Equipments.....136
4.2.2. Developing the Teachers' Technology Knowledge.....138
4.2.3. The Role of the Technician.....141
4.2.4. The Scheduling of Sessions.....142
4.3. Fostering Students' Technology Skills in the Classroom.....143
4.4. Evaluating the Potential of CALL in the Classroom.....145
4.5. Effective EFL Teaching with CALL.....147
4.6. Promoting EFL Students' Motivation through CALL.....149
4.6.1. Intrinsic Motivational Strategies.....150
4.6.1.1. Developing Students Natural Willingness to Learn.....150
4.6.1.2. Supporting Students' Need to Feel Accepted.....153
4.6.1.3. Supporting Students' Need to Feel Competent.....156
4.6.1.4. Supporting Students' Need to Feel Autonomous.....157
4.6.1.5. Fostering Students' Attributions about Causes of Success.....159

4.6.2. Extrinsic Motivational Strategies.....162
4.6.2.1. Grades.....162
4.6.2.2. Incentives.....163
4.6.2.3. Positive Reinforcement.....164
4.7. Conclusion 166
General Conclusion.....167
Bibliography.....171
Appendices.....181

List of Tables

Table: 2.1. The Characteristics of Case Study Research.....55

Table: 2.2. The Sub Approaches of Quantitative Research.....58

Table: 2.3. The Main Differences between the Quantitative and Qualitative Approaches.....63

Table: 2.4. Observation Categories.....74

Table: 2.5. A Five-Point Scale Rating for Students' Level of Interest.....77

Table: 3.1. EFL Students' Interests while Learning through CALL 101

Table: 3.2. EFL Students' Curiosity in CALL environment.....102

Table: 3.3. EFL Students' Attention when Using CALL Materials.....103

Table: 3.4. EFL Students Engagement in CALL Environment.....104

Table: 3.5. Students' Autonomy while Using CALL Tools.....105

Table: 3.6. EFL Students' Enjoyment of CALL Activities.....106

Table: 3.7. EFL Students' Level of Stress while Learning through Computers.....107

Table: 3.8. EFL Students' Self-confidence in CALL Environment.....108

Table: 3.9. EFL Students' Willingness when Learning through Computers...109

Table: 3.10. EFL Students' Level of Persistence in CALL Activities.....110

Table: 3.11. EFL Students' Enthusiasm while learning through Computers....111

List of Figures

Figure: 2.1. Basic Sample Designs.....69

Figure: 2.2. Data Collection Procedures.....87

Figure: 3.1. The Levels of Students' Enthusiasm, Enjoyment and Persistence over Fifteen Observations.....112

Figure: 3.2. EFL Students' Interests, Curiosity, Attention and Willingness all through the Fifteen Observations.....113

Figure: 3.3. EFL Students' Autonomy, Engagement and Stress during all the Fifteen Observations.....114

Figure: 3.4. EFL Students Self-Confidence throughout Fifteen Observations.....115

Figure: 4.1. CALL Physical Success Conditions.....138

Figure: 4.2. The Main Points that must be Addressed when Designing EFL Teachers' Training Programs to Incorporate CALL.....140

Figure: 4.3. The steps Involved in the Process of CALL Evaluation.....147

Figure: 4.4. Strategies for Effective Use of CALL.....149

Figure: 4.5. Intrinsic Motivational Strategies.....161

Figure: Extrinsic Motivational Strategies.....166

List of Pie-charts

Pie-chart: 3.1. Student's Ages.....116

Pie-chart: 3.2. Students' Gender.....116

Pie-chart: 3.3. EFL Students' perceptions regarding the use of technology in class.....117

Pie-chart: 3.4. EFL Students' Technical Knowledge.....117

Pie-chart: 3.5. The Effectiveness of Technology in Language Learning.....118

Pie-chart: 3.6. EFL Students' Interests in Learning English through Technology.....118

Pie-chart: 3.7. EFL Students' Task Enjoyment while Learning through Technology.....119

Pie-chart: 3.8. EFL Students' Expectation from Learning through CALL.....120

Pie-chart: 3.9. EFL Students' Engagement in CALL Activities.....120

Pie-chart: 3.10. EFL Students' Autonomy while Learning through Computers.....121

Pie-chart: 3.11. The Role of Feedback Provided by CALL Programs in Stimulating EFL Students.....122

Pie-chart: 3.12. The Frequency of Calling for Help.....123

General Introduction

General Introduction

Learning in educational psychology can be defined as a relatively permanent change in mental processing, emotional functioning, and/or behaviour as a result of experience. It is the lifelong, dynamic process by which individuals acquire new knowledge or skills and alter their thoughts, feelings, attitudes and actions. Despite the significance of learning to each individual's development, functioning and well being, willingness or desire to learn varies from one individual to another. This individual difference is commonly referred to as motivation.

In fact, motivation involves the factors that energize, stimulate, direct and sustain, or inhibit the behaviour towards learning a particular task. In the EFL classroom, motivation is an observable and measurable psychological variable that not only do students bring to the classroom but also teachers can implement, enhance and promote through the use of a number of strategies. Indeed, motivating students to learn is said to be a complex problem that has been investigated in innumerable studies. Recently, it is specifically proposed that computer technology can be used to enhance students' motivation in the area of language education to promote learning and reinforce students to perform in a particular way.

The fact of using computers to solve the problem of motivation in EFL classrooms stimulated the researcher to investigate the usefulness of CALL in higher education as a means to promote motivation of second year undergraduate students at the University of Tlemcen.

Based on the analysis of the significant role of motivation in learning English as a foreign language and the benefits of CALL resources in foreign language labs, the main objective sets out to this research work is to assess the impact of CALL on students' motivation in EFL learning labs focusing on the question of how may CALL integration in EFL classrooms contribute to students' motivation?

The aforementioned problematic leads the researcher to ask some research questions which are listed as follows:

1. What are the potential advantages of using technology in EFL classrooms?
2. What is the role of CALL to improving EFL students' motivation?
3. Does CALL require a particular classroom management to increase students' motivation?

These research questions yield to the following hypotheses:

1. Technology can be used to make language learning more effective, enjoyable and motivating as it is the medium that nowadays' students understand and like to use.
2. As a supporter of individualized learning, CALL plays a vital role in providing students with energy, self direction (autonomy) and engagement which motivate them to learn.
3. Effective CALL requires from teachers to create a particular learning atmosphere where techniques, resources and tools are set out to meet the needs of students and to be reflective about the conditions that stimulates their desires for learning.

In order to probe the potential advantages of CALL on motivation, the researcher has opted for a certain methodology to discover answers to the research questions and test the raised hypotheses. An exploratory type of case study was chosen to investigate systematically a randomly selected sample of forty (40) LMD2 EFL students and one (1) teacher using a mixed-methods approach which includes the joint use of both quantitative and qualitative approaches for the sake of collecting complementary data. In fact, three research instruments have been utilised in order to triangulate the results including classroom observation conducted by the researcher in the studied setting, a questionnaire administered to students attentively designed to address motivation related constructs and an interview prepared for the teacher to find out about her opinions, evaluations and expectations from

CALL use in the EFL context. The obtained information were treated using both quantitative and qualitative techniques.

Aiming at assessing the motivational value of CALL in the EFL context, this research work is an attempt to, hopefully, provide valuable data in four main chapters. Chapter one deals with the literature related both to the notions of motivation as a complex psychological trait and CALL as a modern pedagogical approach. Definitions and theories of the two concepts have been provided and the links joining them have been established as well.

Chapter two sheds light on the data collection procedures undertaken to answer the research questions and test the hypotheses. This will include the research design, i.e., case study, the research approach (a combination of qualitative and quantitative methods), instruments of data collection (classroom observation, students' questionnaire and teacher's interview), sampling, and data analysis techniques.

The third chapter is devoted to the presentation of the collected data. This includes the analysis, discussion and interpretation of the results obtained from every data collection method. In addition, the whole results are discussed under one section where some conclusions are drawn.

In the final chapter, some advices about how to motivate students in CALL environment were proposed and recommendations about how to establish a successful CALL classroom have been suggested to higher education administrators and teachers.

Because this research work explores motivation and its related psychological issues in a learning environment where computer devices are used to deliver instructed materials, it is expected to provide the readers with valuable and evident data based on classroom observation, questionnaire and interview. A better understanding of these psychological issues, facing EFL teachers, is thought to offer a better procedure to cope with these obstacles during sessions. Moreover, some suggestions and recommendations have been

provided for teachers to create a successful CALL classroom. Consequently, EFL teachers who opt to teach English through CALL to motivate students can benefit from this study to introduce language items using different CALL materials and create a supportable learning atmosphere to overcome students' psychological problems.

Chapter One.

Literature Review

Chapter One: Literature Review

1.1. Introduction
1.2. Motivation in Educational Psychology
1.3. Types of Motivation
    1.3.1. Intrinsic Motivation
    1.3.2. Extrinsic Motivation
1.4. Psychological Perspectives on Motivation
    1.4.1. The Behavioural Perspective
    1.4.2. The Humanistic Perspectives
        1.4.2.1. Maslaw's Hierarchy of Needs
        1.4.2.2. Roger's Motivation Theory
    1.4.3. The Cognitive Perspectives
        1.4.3.1. The Self Determination Theory
        1.4.3.2. Expectancy Value Theory
    1.4.4. The Social Learning Perspective
    1.4.5. The Constructivist Perspective
1.5. Motivation in the EFL Classroom
1.6. The Complexity of Language Learning Motivation
1.7. Computer Assisted Language Learning (CALL)
1.8. The Pedagogical Evolution of CALL
    1.8.1. Behaviouristic CALL
    1.8.2. Communicative CALL
    1.8.3. Integrative CALL
1.9. CALL Tutors and Tools
    1.9.1. CALL Tutor
    1.9.2. CALL Tool
1.10. CALL Materials
    1.10.1. Hardware and Software
    1.10.2. Internet
    1.10.3. E-mail Exchanges
1.11. The benefits of CALL

1.11.1. Learner Autonomy
1.11.2. Feedback
1.11.3. Motivation
1.11.4. Access to Information
1.11.5. Interactivity
1.12. CALL Success Factors
1.12.1. Teacher Training
1.12.2. Students Training
1.12.3. Classroom Management
1.13. Conclusion

1. Introduction

Within the tremendous development of technology, foreign language teaching professionals find it necessary to introduce new improved ways for the sake of creating innovative foreign language environments that are supported by information and communication technologies as integral mainstream pedagogical tools.

Therefore, it has been widely recognized that incorporating technological devices such as computers in foreign language instruction has become increasingly very popular, and has had a remarkable impact on the language learning process where students are expected to be more motivated in computer assisted language learning programs. The computer is said to be an excellent resource for giving EFL students the opportunity to practice English skills without worrying about the reaction of their teacher or classmates. More to the point, an interactive PowerPoint presentation, complete with sounds, graphics and animation will energize the students and capture their interests which will necessarily result in increased motivation. Thus, CALL environment has been emphasized to play a significant role in enhancing students' motivation.

Chapter one will be an attempt to review the relationship between motivation as a major psychological variable and CALL as a modern pedagogical tool in foreign language classrooms. It will include two sections: the first one sheds some light on motivation from the different psychological perspectives while the second one gives insights into the use of CALL in foreign language teaching, including, the pedagogical evolution of CALL, CALL materials, CALL success factors and how can CALL contributes to EFL students' motivation.

1.2. Motivation in Educational Psychology

As a dynamic field in psychology, educational psychology has emerged to become a defining force for the scientific study of the human learning, the development across the individuals' life span, teaching processes and assessment. It has an enormous relevance to approach the fast growing challenges that education has faced in the 21st century through the use of psychological theories, procedures and research (Eloff and Eberöhn, 2004). In this vein, Reynolds and Miller say: "Educational psychology is focused largely on the application of psychological principles to the study of human learning and development in educational settings" (2003: ix). Educational psychology is, then, an applied discipline that attempts to deal with the complexity of human learning and account for students' characteristics in classroom settings.

Moreover, this area of scientific inquiry gives considerable attention to individual differences in the learning environment such as motivation, which is currently said to be one of the major areas of study in the field of educational psychology (Larson, 2009). Murray et al. consider motivation as an individual difference (ID) or a dependent variable that is vital to learning success, in conjunction with other variables such as aptitude, personality, anxiety, or cognitive style (2003).

Historically, cognition and learning were the main topics that attracted attention, whereas, the importance of motivation to learning was completely neglected. However, throughout the last five decades the notion of motivation began to receive a significant amount of interest for the purpose of understanding individual differences in educational settings. These differences are apparent when some students learn the same subject matter more efficiently than others; some see it as more attractive than others; and some find it more enjoyable than others. Hence, students' willingness or desire towards the achievement of a particular goal varies because of the difference in motivation.

Motivation is, therefore, regarded as the "heart" of the learning process that empowers and accelerates the behaviour of the student. Accordingly,

observable changes in students' behaviours are only possible if the students are appropriately motivated. Consequently, learning in general or more precisely changes in behaviour cannot take place without motivation (Aggarwal, 2005). In the same line of thought, Kelly contended that, "Motivation is the central factor in the effective management of the process of learning". (qtd. in Aggarwal, 2005: 202)

In fact, the English word "motivation" comes from the Latin verb "movere", which means to move. In the context of educational psychology, motivation to learn reflects the students' levels of persistence and interest in the subject matter or the force that energizes and directs behaviour towards a particular goal. According to Salkind

> Motivation is defined as the energization and direction of behavior. Motivation is important in educational psychology because it explains and predicts the behaviour of students, teachers, and administrators in school settings (2009: 687)

In this sense, motivation involves the processes that encourage individuals to engage in a particular task, energize them to keep on working and help them to achieve the task, as it is illustrated by Seifert and Sutton, "Motivation –the energy or drive that gives behaviour direction and focus" (2009: 133).

As a psychological trait, motivation is related to a variety of constructs of the human mind or cognition, including; attention, desire, needs, goals and interests. These constructs are all involved in the processes of how students perceive a learning situation, engage in learning and respond to tasks (Dörnyei, 2001). In the same line of thought, Murray et al. view motivation as, "a dynamic force involving social, affective and cognitive factors manifested in desire, attitudes, expectations, interests, needs, values, pleasure and efforts" (2011: 63).

In other terms, motivation is an affective dependent variable made up of students' needs to achieve a particular goal which sustains their interests in learning a subject matter. These interests give rise to actions which result in

satisfaction. Gardner and Maclntyre perceive motivation as, “a complex construct, defined by three main components: 'desire to achieve a goal, effort extended in this direction, and satisfaction with the task” (qtd. in Mitchell and Myles, 2004: 26). Thus, most researchers and educators agree that it has a crucial role in determining academic achievement or failure in any learning situation.

1.3. Types of Motivation

Within the field of educational psychology, various studies have been carried out for the purpose of investigating the construct of motivation as being an intricate psychological behaviour. Among these studies, the self determination theory of motivation put forwards by Deci and Ryan who identified two different kinds of motivation, namely; intrinsic motivation and extrinsic motivation.

According to Deci’s and Ryan’s theory, students’ motivation to learn any particular task involves a number of diverse sources and conditions. Some of the motivational sources are rooted in the students’ internal cognitive processes, whereas, others appear to be related to the external environment where the student is placed.

1.3.1. Intrinsic Motivation:

This type of motivation indicates a desire or a tendency to energize attention and interest in a particular manner that originates from the student himself or herself. In this way, intrinsic motivation is concerned with the students’ behaviours that are performed as a result of the student’s (1) natural feeling of curiosity, that is, a need to know about or discover something; (2) desire to engage in an activity for the sake of participating in and completing the task; (3) satisfaction of an inner drive, and (4) interest in a subject matter (Dörnyei, 2001). Similarly, Salkind says,

> intrinsic motivation is defined as the enjoyment of school learning characterized by a mastery orientation, curiosity, persistence, task endogeny (i.e., pleasure in and orientation toward learning and task

> involvement), and the learning of challenging, difficult, and novel tasks (2009: 485)

Therefore, the intrinsically motivated student is not driven by obvious external rewards, such as good grades, acknowledgement or recognition but is determined by internal drives as interests, goals, challenge and enthusiasm.

Students with intrinsic motivation would develop goals such as mastery goals which are commonly viewed as the desire to gain understanding of the learning material. Such goals tend to be associated with enjoyment to learn and master the material. Thus, mastery goals as their definition implies are said to be either a form or an enhancement of intrinsic motivation (Seifert and Sutton, 2009). In the same line of thought, Babad states,

> Mastery goals promote intrinsic motivation, foster perceptions of challenge, encourage learning- and task-involvement, generate excitement and task-enjoyment, and increase self-determination and persistence in the face of failure (2009: 19)

Moreover, intrinsic motivation has a significant role in promoting students' responsibility and independence in learning. Furthermore, learning will be enjoyable and effective if students are intrinsically motivated, thus, most motivational researchers stressed its importance in learning (Reid: 2007).

To put in a nutshell, intrinsic motivation reflects the natural human tendency to learn and succeed characterized by interest in the activity itself without any apparent reinforcement, that is to say, a student may want to complete a particular assignment mainly because it interests or excites him or her, rather than in order to achieve a high grade or to please the teacher or his/her parents.

1.3.2. Extrinsic Motivation

Generally contrasted with the intrinsic type of motivation, extrinsic motivation is concerned with the external factors that stimulate or sustain the students' desires to engage in learning. In other terms, extrinsic motivation involves the performance of behaviour as a means to an end, that is, such

behaviour is not done for its own sake, and the student feels obliged and pressured to pursue a course of action for the purpose of receiving external rewards, such as good grades, or to avoid punishment (Dörnyei, 2001). To quote, "extrinsically motivated behaviours are those in which an external controlling factor can be readily identified". (Salkind, 2009: 555)

Being the type of motivation that needs to be created in the student through the use of external stimuli, extrinsic motivation is associated with performance goals. Students with performance goals do actually learn the material focusing on gaining their teachers' recognition and looking for high grades. Hence, these external goals are said to imply the students' extrinsic motivation (Seifert and Sutton, 2009).

In this sense, extrinsic motivation, a predisposition to direct attention reinforced by external circumstances and conditions where the student acts for possible outcomes, is utilized by teachers to encourage students to perform in a particular manner (Babad, 2009). In their self determination theory, Ryan and Deci recognized the important role of extrinsic motivation in learning emphasizing the fact that not all the students' behaviours are intrinsically motivated. Thus, Skinner contended that students' motivation to learn can be appropriately created and encouraged through the inclusion of 'donated' rewards that represent the external stimuli by which teachers reinforce the students' behaviours (Moore, 2003).

Nonetheless, the efficacy of external rewards was widely criticized by educational psychologists. Jerome Bruner is among those who claimed that one of the most useful strategies to help students think and learn is to free them from the control of rewards and punishments, and then he added that such rewards are of 'addictive nature'. Others such as Maslow are of the view that intrinsic motivation is more important to learning than extrinsic motivation; therefore, if all the students are intrinsically motivated to accomplish all learning tasks, they may not even need the teacher (Brown, 2000). In this vein, Brown as a researcher in the field of teaching English to foreign students says,

> The most powerful rewards are those that are intrinsically motivated within the learner. Because the behaviour stems from needs, wants, or desires within oneself, the behaviour itself is self-rewarding; therefore, no externally administered reward is necessary (Brown, 2007: 59)

Also, a combination of intrinsic and extrinsic types of motivation is necessary for successful learning (Seifert and Sutton, 2009). For example, students may enjoy learning (intrinsic motivation), but they learn to get a diploma and look for a job (extrinsic motivation).

1.4. Psychological Perspectives on Motivation

Most research on human learning has focused on the question of how people learn and develop new knowledge, skills, attitudes and behaviours. Rather than offering a single theory of learning, educational psychology has provided alternative theories and perspectives on how learning occurs in educational settings. Although these perspectives hold contrasting ideas about learning and vary in how they treat critical issues such as; the role of memory, the role of motivation, how transfer occurs and the implications for instruction, but they all aim at improving the learning process.

Since motivation is embedded within every aspect of learning, many psychological perspectives on learning have attempted to explain motivation for being the construct that affects all the stages of learning and performance.

1.4.1. The Behavioural Perspective

Emphasizing mainly what is directly observable and measurable, the behavioural perspective views learning as a change in behaviour which occurs as a result of environmental conditions. The behaviourists assert that learning is a process of forming associations between stimuli and responses. It is defined by Bentham as, “Learning theory deals with the relationship between stimuli (events in the environment) and subsequent responses made by an individual” (2002: 21). In fact, behavioural theories consider motivation and learning as behaviours; thus, there is no real distinction that can be drawn

between the two, rather the behaviourists use the same principles to explain both (Schunk, 2012).

Accordingly, most behaviourist learning is based on conditioning which is identified by the behaviourists as a universal learning process. In fact, there are two different types of conditioning; classical and operant, each possessing a different behavioural pattern.

Classical conditioning, a form of learning, introduced by Ivan Pavlov during the early half of the twentieth century in which a neutral stimulus (the stimulus that does not elicit a particular response) acquires the capacity to elicit a response after the stimulus is repeatedly associated with another stimulus that ordinarily elicits the intended response. Pavlov experimentally demonstrated how a stimulus being paired with another stimulus could be conditioned to elicit responses. This classical type of conditioning explains motivation as the change in behaviour that is reinforced by an external stimulus (Ellof and Ebersöhn, 2004)

As a behaviourist model, Skinner's operant conditioning theory is based on the assumption that learning takes place when a response continues to be made because it has been reinforced positively by a reward or stops being made because it has been punished. In this manner, Skinner states, "actions that are followed by reinforcing consequences are more likely to re-occur, and that actions that are followed by unpleasant or punishing consequences are less likely to re-occur" (qtd. in Bentham, 2002: 32). As a behaviourist, B.F Skinner believes that motivation in school learning involves a variety of actions undertaken by the instructor including, arousing, persisting, sustaining and directing desirable behaviour (Aggarwal, 2005).

Consequently, operant conditioning can be considered as a feedback system assumes that motivated behaviours are strengthened and increased through reinforcement by rewards and the creation of a supportable learning environment or punishment (Schunk, 2012).

To sum up, the behavioural perspective to learning did not account for the internal processes while explaining motivation. In this vein, Seifert and Sutton comment

> Sometimes it is useful to think of motivation not as something "inside" a student driving the student's behavior, but as *equivalent* to the student's outward behaviors. This is the perspective of behaviourism. (2009: 110)

It simply views motivation as an increase in the quantity of observable behaviour due to external factors. The behaviourists regard reinforcement through rewards as an effective tool to achieve higher rates of motivation. They emphasized the use of extrinsic reinforcement to stimulate students' task enjoyment. For that reason, Moreno says,

> According to behaviorism, student motivation is the result of seeking rewards and avoiding punishments. Students will be motivated to do things that are reinforced and unmotivated to do things for which they are likely to be punished (2010: 331)

As a result, behaviourism as school of thought is interested in extrinsic motivation rather than what goes on inside the individual student. It also asks for the creation of a supportable learning environment where every student can be motivated to engage in tasks.

As a learning theory, behaviourism was applied to language learning during 1940 and 1950. Its application is apparent in the idea that language is a set of habits that can be learned through the mechanism of stimulus-response. Its pedagogical implications resulted in the audio-lingual approach to teaching and learning which is based on habit formation through conditioning analogy and drilling.

1.4.2. The Humanistic perspectives

As a reaction against behaviourism and its narrowing focus on what is directly observable, the humanistic theory of learning emphasizes the affective and emotional processes of an individual. In educational settings, humanism stresses the analysis of students' behaviours, thoughts and feelings in order to

understand their nature and how they learn. The humanists focus on students' self awareness and investigate their capabilities and potentials when making choices. They perceive human choices, creativity and self actualization as the major areas to be studied in the learning environment (Schunk, 2012).

The most famous humanistic theories on motivation are those of Abraham Maslow and Carl Rogers. The former stresses the role of motivation in developing students potentials, whereas, the latter attempts to address both learning and instruction.

1.4.2.1. Maslow's Hierarchy of Needs

As humanist, Maslow perceived motivation in terms of a number of basic needs that can be considered as motives. He has proposed a hierarchical set of needs that must be satisfied to achieve the top of motivation (Aggarwal, 2005). Hence, Bentham reports, "once our basic needs are met, we are driven by progressively higher levels of motivation" (2002: 123). Maslow's theory postulates, "all human beings, regardless of culture, have basic needs that can be arranged on a hierarchy according to prepotency or pressing drive for gratification" (Salkind, 2009: 633).

The needs are classified in five basic classes. In the first rank there are the physiological needs such as hunger and thirst. In the second level, Maslow puts the safety needs like need for security, order and protection from pain and fear. Then, love and belongingness needs occupy the third level. The needs to gain competence, approval and recognition are associated with Esteem needs in the fourth rank. Finally, Maslow places self-actualization needs (need to realize one's potential and capabilities, and gain understanding and insight) in the highest level. Once the basic needs are satisfied students efforts will be directed towards achieving the other types of needs; however, the student cannot realize the fifth level without fulfilling the physiological needs (Dörnyei, 2001). In this manner, Aggarwal says, "the highest needs can be satisfied only after the lower needs are satisfied" (2005: 204).

According to Schunk, Maslow's hierarchy of needs is beneficial for teachers to understand students' behaviours and set a suitable environment to

enhance learning and motivation (2012). Moreover, this theory strives to argue that students cannot show interest and enjoy learning tasks if they have problems with physiological or safety needs.

1.4.2.2. Rogers Motivation Theory

Rogers's theory perceives learning in general as the continuous active participation in the classroom accompanied by the students' belief that learning is important. The major motivational principle advocated by Rogers's theory is that students have to use their innate capacity and listen to their internal voices to decide what is useful for them to learn rather than relying on feedback from external sources. In this sense, Rogers is of the view that students often have an innate potential to learn and are naturally eager to explore,

> I become very irritated with the notion that students must be "motivated." The young human being is intrinsically motivated to a high degree. Many elements of his environment constitute challenges for him. He is curious, eager to discover, eager to know, eager to solve problems (Schunk, 2012: 355)

Carl Rogers contended that students' behaviours are basically controlled by their perception of both personal and environmental factors. Therefore, what is required according to Rogers is the creation of a proper learning context where teachers are facilitators of the learning process through the establishment of interpersonal relationships with students, and the provision of resources and encouragement. If these conditions are appropriately created students will in fact learn anything they conceive as useful or meaningful (Brown, 2000).

Certainly, maximizing students potentials in the appropriate classroom environment will often enhance their engagement in academic tasks and increase their motivation (Bentham, 2002 and Schunk, 2012). On the whole, Rogers's assumptions on motivation focus largely on empowering students to strive for challenges in order to achieve satisfaction in learning.

1.4.3. The Cognitive Perspectives

As a response to the behaviourist's ignorance of the internal dynamics of learning, the cognitive perspective stresses the importance of what goes on inside the individual student. For the cognitivists, learning is a highly internal process which includes the students' cognition, that is, perception, taught, memory and ways of processing and structuring information. In this view, Faigan offers the following definition, "learning is a sequence of mental events or conditions leading to changes in the learner" (qtd. in Aggarwal, 2005: 183). As a cognitivist, Ausubel contended that learning involves the transformation of information in the environment into knowledge that is stored in the mind. He further suggested that leaning takes place after a new knowledge is acquired or an already existing knowledge is modified by experience (Brown, 2000).

On motivation, the cognitive perspective proposes that students' thought processes guide their motivation. It assumes that learning relies much on students' intrinsic motivation to occur. In this vein, Bentham says that according to the cognitivist perspective, "an individual's drive to understand and make sense of the world provides the motivating force behinds learning" (2002: 14). Therefore, the cognitivists strongly acknowledged the effective role of students' intrinsic rather than extrinsic motivation on learning.

As a result, the cognitive theories of motivation place a considerable emphasis on students' purely mental processes such as thoughts, beliefs, expectations, and attitudes, and how they promote or hinder motivation to learn. Therefore, two important cognitive theories of motivation will be reviewed in this section: self-determination and expectancy-value theory.

1.4.3.1. The Self Determination Theory

As a cognitive perspective on motivation, the self determination theory advocated by Edward Deci and Richard Ryan emphasizes the role of the internal conditions in enhancing students' motivation to learn. It proposes that increased motivation requires the satisfaction of three psychological needs, including: autonomy which incorporates the student's need to feel free from

the external control that may hinder his/her behaviours; competence or the need to feel capable or skillful, and relatedness, that is, the need for the feeling of affiliated and engaged with others. As long as these basic internal needs are achieved together, they will lead to increased intrinsic motivation, however, if one need is not satisfied well, students will in fact feel constrained by external pressures. In this concern, Seifert and Sutton declare,

> The key idea of self-determination theory is that when persons (such as you or one of your students) feel that these basic needs are reasonably well met, they tend to perceive their actions and choices to be intrinsically motivated or "self-determined". In that case they can turn their attention to a variety of activities that they find attractive or important (2009: 126)

Focusing on enhancing students' intrinsic motivation without the interference of external rewards, the self determination theory underlined the role of the teacher in creating the appropriate social conditions by helping students met these personal needs without allowing the classroom control and orders interfere to hamper their satisfaction. For instance, motivation is enhanced when students reach a level of autonomy, responsibility and affiliation while undertaking learning tasks, thus, teachers can work on to strengthen these three variables in order to have students with high level of intrinsic motivation which is considered by Ryan and Deci as the most important type of motivation without which learning cannot occur.

1.4.3.2. Expectancy-Value Theory

As it is mentioned in this chapter, motivation as psychological variable maybe affected by several factors, among which is external reinforcement in the appropriate classroom environment, however, it is also influenced by other internal factors, including students 'internal needs, interests, goals and self determination. These internal factors are used by David Atkinson to create two main sources of motivation: students' expectations to achieve a goal and the value they place on it. Considering motivation by this way is referred to as expectancy-value model of motivation.

In fact, expectancy-value theory is of achievement motivation developed by Atkinson who proposes three motivational components for learning. The first component is expectancy includes the students' feelings about their abilities and expectations for success. The second one is the value that incorporates students' reasons, goals and interests in achieving a particular outcome. The last one is an affective component that implies the students' feelings towards academic tasks. The degree to which the student is motivated will depend on the force of a variety of both expectancy related and value related components (Reynolds and Miller, 2003).

In this sense, Atkinson postulates that a motivated behaviour will depend on the students' expectancy of achieving a particular outcome or a goal being paired with their efforts which will also be dependent on how much they value the outcome. About this view Seifert and Sutton say,

> The relationship between expectation and value is "multiplicative" rather than additive because in order to be motivated, it is necessary for a person to have at least a modest expectation of success and to assign a task at least some positive value. If you have high expectations of success but do not value a task at all (mentally assign it a "0" value), then you will not feel motivated at all (2009: 130)

He further suggested that achievement behaviours are controlled by the students' hope for success or fear of failure. Thus, the best way of promoting achievement motivation, according to Atkinson, is to join a strong internal drive for success with a low fear of failure (Schunk, 2012).

Students' expectancies towards reaching a particular outcome are resulted from their inner goals, for example, students with mastery goals, which are said to be a form of intrinsic motivation, are likely to hold high expectations for success. Values, in turn, are considered as the outcome of students' interests and feeling of self determination. The student, who has a personal interest in a task and really want to master it, will certainly be intrinsically motivated (Seifert and Sutton, 2009).

As demonstrated by Schunk (2012), the expectancy-value model of motivation has offered useful implications for classroom teaching and learning, in that, teachers may work on reducing the students' feel of failure towards learning tasks, and raising their hope for success to enhance achievement motivation. In this sense, motivation is said to be the result of students' internal expectations to achieve a goal along with how much importance they give it. This importance may be developed by teachers through a variety of techniques.

1.4.4. The Social Learning Perspective

In hope to provide some insight into areas where new connections between behaviourism and cognitivism can be made, the social cognitive theory is considered as an interpretive tool for understanding the dynamics of internal mental processes, behavioural factors and social influences in learning. Closely associated with the prominent theorist Albert Bandura, the social cognitive theory, also known as the social learning theory, emphasizes the links between cognitive processes, social environment and behaviour in learning. Therefore, motivation is regarded as a product resulting from both students' internal mental processes (e.g., thoughts, beliefs, attitudes, expectations and memory processes) and the external conditions (e.g., the expected consequences like rewards or good grades, the difficulty of a task).

Bandura's research centered on imitation or what he called modeling in which learning results from a careful observation of what others do (Salkind, 2009). In this concern, Seifert and Sutton state, "modeling refers to performing or demonstrating a desired new behavior or skill, as when a teacher or classmate demonstrates polite behaviors or the correct solution to a problem" (2009: 230).

Bandura (2000), in investigating students' social learning, stressed that modeling or imitating desired behaviours is a significant effective way to learn new behaviours, especially when students perceive the model or the desired behaviour as important. Modeling behaviours in this case is referred to as observational learning (Moreno, 2010 and Seiffert and Sutton, 2009).

Subsequently, observational learning refers to the learning that occurs as a result of observing the surroundings' desired behaviours and hopefully imitating it (Schunk, 2012). According to Bandura students' observational learning depends on four interrelated sub-processes including: attention, retention, production and motivation. The first sub-process, attention, demonstrates that students will not be able to learn through observation if they do not pay enough attention to the behaviour they wish to acquire. By attention, Bandura means that students specify a particular behaviour of certain models based on their own interests, needs and goals related to that behaviour. The second sub-process is retention, which recognizes the importance of memory processes in observational learning. In this sub-process observational learning requires cognitive organisation of the modeled behaviour for storage in memory, because the observer has to remember the actions of the model for performance. The third sub process of organizational learning is referred to as production; it involves the students' transformation of observable behaviours into overt behaviours. The performance of the observed actions indicates that learning has successfully taken place. The final sub-process is motivation, which strongly influences observational learning because students are more likely to engage in the first three sub-processes if they value the observed action and feel that it is important either to fulfill an internal drive or to achieve an external reward (Schunk, 2012). About motivation in this type of learning, Salkind says, "motivation in observational learning is governed by the extent to which the individual values the task, and it is also influenced by principles of reinforcement" (2009: 744).

Since motivation is considered as an integral part of observational learning, Moreno (2010) asserts that teachers can promote it by showing their students the advantages of the modeled behaviours, relating materials to students' interests, providing feedback, stressing the value of learning and creating supportive learning environments where students are encouraged to try modeling actions without feel of failure or ridicule. As a result, motivation

is raised when students feel that their interests are satisfied and their efforts are valued by teachers.

1.4.5. The Constructivist Perspective

Unlike the previous perspectives, constructivism emphasizes "the whole person" as a physical, cognitive and social, but primarily emotional, being. A key assumption of constructivism maintains that human beings are active learners construct and form their own understanding of knowledge and skills from their personal experiences with others and the environment (Schunk, 2012). It is defined by Seiffert and Sutton as, "a perspective on learning focused on how students actively create (or "construct") knowledge out of experiences" (2009: 33).

Constructivist theories have had a significant impact on the present understanding of learning and have become the basis for the principles of teaching put forwards by education groups like the National Council of Teachers of Mathematics (NCTM), the National Council of Teachers of English (NCTE), the American Association for the Advancement of Science (AAAS), and the National Research Council (NRC) (Moreno, 2010).

The constructivist perspectives vary as to how much influence cognitive and social factors have on students' constructions. In this sense, there are two constructivist perspectives: cognitive constructivism and social constructivism. The former, is basically inspired by the work of Jean Piaget, focuses on how students use their mental abilities to construct knowledge in their minds. Whereas the latter, based on the work of Lev Vygotsky, posits that knowledge is constructed when students engage socially in talk (social interaction) and actively about shared problems or tasks, thus, it suggested cooperative learning as a teaching method to promote collaboration and social learning (Moreno, 2010).

One of the major ideas proposed by Vygotsky is called the Zone of Proximal Development (ZPD). ZPD incorporates the variety of tasks that are difficult for a student to master alone, but that can be learnt with the guidance and help of teachers or more skilled members. This offered help is referred to

by Jerome Bruner as scaffolding. In this way, scaffolding points out the temporary support teachers give to students to perform a particular task until they can do it alone (Salkind, 2009).

According to Schunk (2012), constructivism as a psychological and philosophical perspective that has been applied to education in recent years focuses on learning rather than motivation. Consequently, few researchers have written about the role of motivation in learning since the majority of them believe that students form motivational constructs in the same way as they form or construct beliefs about learning. Nonetheless, as a learning theory, constructivism has valuable implications to motivation, and some motivational principles proposed by educational researchers in other theoretical traditions fit well with constructivism. For instance, the constructivists strongly acknowledged the importance of the organization and structure of the learning environment to promote both motivation and learning, that is, grouping students for instruction, utilizing the mechanism of rewards, the timing of lectures, providing updated materials for learning and other aspects of classroom management as it is illustrated in the following quotation,

> Classrooms include other factors that can affect learners' perceptions, motivation, and learning. Some of these can be summarized by the acronym TARGET: Task design, distribution of Authority, Recognition of students, Grouping arrangements, Evaluation practices, and Time allocation (Schunk, 2012: 255)

By task design, the constructivists urge educators to include learning activities and experiences that fit students' interests, needs and goals. Distribution of authority refers to the degree to which students demonstrate autonomy and control over learning experiences. Teachers may promote students' distribution of authority by offering choices and giving them the opportunity to make decisions. In fact, offering choices can enhance students' intrinsic motivation. Recognition, which implies the use of rewards and incentives, has an immediate influence on students' motivation to learn. Ames suggested that teachers can foster students' mastery goals, which have direct

link to intrinsic motivation, by recognizing students' efforts and progress through the mechanism of reinforcement (Schunk, 2012). Whilst addressing students' ability to work with others, teachers can arrange students in groups to encourage cooperation and interaction, and consequently raise their motivation. Evaluation of students' learning includes the techniques used by the educator to assess students' progress and mastery such as providing them with opportunities to evaluate their work and improve it, or using different forms of evaluation as grading. Finally, time allocation is an important part of classroom management that can hinder or foster students' motivation. Providing students with choices over their time management is an effective strategy for enhancing motivation since it can help them to reduce their high levels of anxiety (ibid).

As with learning, it is declared by Moreno (2010) that both constructivist perspectives value the role of technology in enhancing students' motivation. Largely influenced by the work of Piaget, individual constructivism strongly recognizes the vital role of technology in providing learning materials and environments in which students can make their own intellectual choices as they construct knowledge in their minds. Moreover, social constructivism postulates that the technology of computer based environments can aid students construct meaningful understandings about their own learning.

1.5. Motivation in the EFL classroom

Most educational researchers and teachers are of the view that motivation as a basic aspect of the human mind, related to what a student wants or desires, has a vital role in demonstrating success or failure in any learning situation. Certainly, learning English as a foreign language is, without question, like any other learning situation requires student's motivation for successful acquisition. Basically, educational psychological research on motivation strongly acknowledged its fundamental role in foreign language learning. In this manner, Oxford and Shearin assume that motivation maintains the degree of students' active, personal engagement in foreign language learning. Therefore, motivational researchers agree that motivation

as an affective dependent variable can have a significant influence on foreign language learning achievement (Dörnyei, 2008).

For some educational researchers, motivation comes from external sources as a result of reinforcement or attainment of recognition. For others, however, motivation is something internal to the students derives from their own needs, goals and interests. Nonetheless, they all agree that wherever motivation comes from, it is critical to learning success.

Indeed, motivation in foreign language learning includes social, affective and cognitive factors which are apparent in the students' desires, attitudes, expectations, effort, needs and pleasure. It is something that is neither permanent, nor restricted to the educational context. For Murray et al.

> It is not something fixed, and as Winke (2005: 1) claims, it 'varies widely, ebbs and flows over the course of the year (or even during a classroom activity) and stems from various sources, internal to the learner, external, or both'. I would add that motivation varies over a period of time or over stages along the acquisition process (2011: 63)

Furthermore, both intrinsic and extrinsic forms of motivation are applicable to foreign language classrooms where teachers can implement various strategies and establish a particular environment to fall into both sides of motivation. Dörnyei and Csizér as an example have proposed a taxonomy of factors to motivate students, including: developing a relationship with students, building students self confidence and autonomy and increasing student goal orientation (Brown, 2000). In addition, Pritchard and Woollard stated that the students' intrinsic motivation, self regulation and well being can be enhanced through the social structures in the classroom promoted by the teacher (2010).

More to the point, Dörnyei (2007) contends that mastering a foreign language cannot be achieved without the provision of sufficient inspiration and enjoyment to enhance continuing motivation in the students. As a result, learning English as foreign language entails students' motivation as a fundamental element in order for acquisition to take place.

1.6. The Complexity of Language Learning Motivation

The term motivation is generally used to describe a psychological state that is not only important to human learning but immensely complex as well. In this concern, Scheidecker and Freeman posit, "motivation is, without question, the most complex and challenging issue facing teachers today" (qtd. in Dörnyei, 2001: 1). In learning a new foreign language, motivation is, with no doubt, one of the crucial issues facing language teachers. Therefore, skills and strategies for motivating students are of significant importance in a foreign language classroom.

Furthermore, students' motivation to learn English as a foreign language can be influenced by many variables, among which are the role of the teacher and the teaching methods. First, the teacher is strongly considered as the major responsible for the maintenance of students' motivation through the appropriate presentation of the learning materials and the creation of a positive learning atmosphere. Second, the method of teaching is, in turn, important in sustaining students' motivation when both teachers and students are comfortable with the method being used (Harmer, 2001).

In EFL teaching and learning, there has been in recent years a trend for the provision of motivation-enhancing learning environments through the adoption of information and communication technologies (ICT) to move students out of passive learning modes into highly motivated and engaged learning. Recently, Beatty and Chapelle argued that using ICT in the classroom enhances language acquisition and elicits higher levels of students' motivation and involvement (Branden, 2009). Similarly, Lytras et al. believe,

> ICT utilization in this educational environment enables students to be more active, enhances their motivation, and improves their understanding, as well as cultivating their ability to retain information longer and enjoy classes more (2010: 510)

In the same line of thought, Blumenfeld et al. suggested that learning materials can be delivered through innovative ways. Some of these entail the creation of a supportable learning environment where emerging technology,

such as computer-based materials, is available. The purpose behind is to heighten students' level of motivation by giving them the opportunity to use computer technology (Brophy, 2004). In fact, the adoption of computer-based materials in language teaching, is commonly referred to as CALL. According to Tomlinson, this immense move towards CALL is due to a variety of factors including, "the pre-supposition that interest and motivation can be derived from CALL materials and the ease of delivery - all that is needed is a computer terminal rather than an array of different types of equipment" (2008: 112).

Collins considers the increase of motivation in foreign language learning as one of the major results that new technologies cause. In this concern, Christie identifies the reasons behind the increase in motivation,

> … more engaged students see technology as supporting their learning and [they] increase personal investment in their work. Educational research undoubtedly confirms what teachers know intuitively: time on task leads to more learning. Technology can therefore help to motivate some of our students and become more successful language learners (qtd. in Donaldson and Haggstorm, 2006: 33)

To put in a nutshell, it is largely assumed that the issue of motivation in EFL classrooms can be solved through the provision of technology-enhanced learning environments where CALL resources are used as essential tools in presenting the instructed materials.

1.7. Computer Assisted Language Learning (CALL)

Technology has never been in the forefront of language teaching as it is today. Traditionally, language learning and teaching methods were mainly centered on the use of textbooks, copybooks, pens and blackboards in a limited classroom environment, however, the ongoing development of technology and the derivation of ICT devices have gradually changed the form of education. Consequently, the EFL setting has expanded to involve e-learning i.e., learning from electronic materials, which includes the use of various technological devises such as computers.

The use of computers for educational purposes in general and in English language education in particular remains a new field of study, mainly because of the quickly changing nature of the technological advances that everyday provide new instructional possibilities. Its early foundation in schools has witnessed computer assisted approaches moving from a group of students in front of one machine trying to complete a gapped text, to communication between students via computers to network multimedia software in which students can hear authentic language situations (Murray, 2007).

In fact, the rapid spread of the computer in schools and at home has dramatically changed the way teachers teach, students learn and administrators work. As it is illustrated by McClintock, "the advent of computers and computer-literate children produced many changes in the teaching and learning strategies used by educators." (qtd. in Moreno, 2010: 538). As outcomes, multimedia computing (as its name indicates, it integrates a variety of media such as text graphics, animation, video, sounds and photos in one presentation), the Internet, and the World Wide Web have become new pedagogical tools in foreign language teaching(Brett and Gonzàlez Lloret, 2009). In fact, the use of computers as part of the language course is referred to as CALL which is an acronym stands for Computer Assisted Language Learning. CALL is defined by Brown as, "computer programs designed especially to teach language." (qtd. in Murray, 2007: 748).

Currently, the advanced technologies have made CALL a broad teaching approach that incorporates the employment of the internet in learning like the access to multimedia resources and online dictionaries; communication tools such as email, chat rooms, and audio/videoconferencing; specific software and applications designed for language learning, digital audio and video materials, all of these aim at promoting and enhancing language learning (Brett and Gonzàlez Lloret, 2009).

Warschauer argued that CALL is an effective method for delivering learning materials by stating that it can energize students to learn, introduce new learning possibilities and provide a space for collaborative identity

creation (Murray, 2007). According to Moreno (2010), computer-based materials can be used in classrooms in variety of ways. For instance, the internet might be integrated for the purpose of engaging students to search their own interests. Another aspect of computer assisted applications is the use of word processors software such as Microsoft Word in order to motivate students who encounter difficulties in writing on papers. Moreover, promoting individualized learning can be achieved through the employment of computer tutors and specific instructional programs that offer the students with the opportunity to learn with varied scaffolding levels and choices.

1.8. The Pedagogical Evolution of CALL

Historically, the field of foreign language learning has undergone a gradual evolution from behavioural to cognitive and constructivist theories of how languages are learnt. CALL as an area of scientific inquiry has progressed following the paradigm shifts in foreign language learning (Brett and Gonzàlez Lloret, 2009).

Indeed, technology in language teaching and learning is not new, and it has been used for decades. Computer-based materials of CALL emerged in the early 1960s, and the development of its applications is divided by Warschauer into three main phases. Each phase corresponds to a particular pedagogical approach.

1.8.1. Behaviouristic CALL

The earliest applications of computer technology in foreign language education date back to the 1960s with behaviouristic principles, especially those stem from operant conditioning, in which language learning was regarded as the acquisition of a set of habits that include frequent vocabulary items, grammar rules, and phrases established by repetition. Therefore, language is best taught by the use of drilling, repetition and conditioning, i.e., drilling students to produce responses as reactions to stimuli (Blake, 2008).

Skinner believed that operant conditioning principles to learning such as the use of reinforcement to stimulate students responses can be applied to a computer based approach called programmed instruction. The purpose behind

such a programme is to help each student to learn on his/her own by receiving immediate feedback after each answer (Moreno, 2010)

During this phase, CALL programs such as programmed instruction required from students to react or in more behavioural terms to respond to stimuli on the computer screen and to carry out activities such as filling in gapped texts, matching sentences and doing other types of activities like answering multiple choice questions. One of the well known behaviouristic CALL activities is text reconstruction where students are asked to recreate a blanked text by typing the missing words. In all these activities, the computer provides the students with immediate feedback ranging from pointing out whether the answer is true or false. Moreover, the computer may offer more sophisticated feedback by demonstrating the reason why the student is mistaken (Dudency and Hockly, 2007).

As a result, the 1960s to the 1970s period of CALL was commonly known as the text phase due to the nature of its activities. According to Delcloque, "much of the pioneering work . . . involved the manipulation of text on screen". (qtd. in Blake, 2008: 50). These learning experiences or activities have provided students with both corrective and diagnostic feedback as a kind of positive reinforcement to stimulate their motivation to complete the task.

Besides, drill-and-practice programs are one of the current existing educational software based on behaviourist principles. These programs introduce a set of questions or problems and expect from the students to solve them on their own while receiving immediate feedback (Moreno, 2010).

Nonetheless, CALL has moved away from the limited behaviouristic principles and activities where the relationship between the student and the computer is limited to individual student-machine interaction towards more learning activities and the school of thought that holds the change is constructivism.

1.8.2. Communicative CALL

In a shift away from the behaviouristic principles, language learning methodology moved to a communicative approach that became prominent in

the late 1970s and 1980s. The communicative approach is largely influenced by the constructivist principles especially those related to Vygotsky's social constructivism. Vygotsky maintained that learning occurs as a result of social interactions. In this manner, Brown says,

> Social constructivist perspectives drew our attention to language as communication across individuals … foreign language learning started to be viewed not just as a potentially predictable developmental process but also as the creation of meaning through interactive negotiation among learners (2000: 245)

Therefore, the central emphasis of communicative language teaching was placed on meaning and the student, rather than on the language itself. Developed by Firth, Halliday, Wilkins and Sinclair, this approach focuses on communicative competence as the central goal that has to be addressed through the practice of natural language situations where the importance is on fluency rather than accuracy; however, grammar should be dealt with implicitly as some theorists stressed the importance of accuracy in language teaching. In addition, communicative language teaching has redirected language teaching from teachers' control to learner-centered. Reflecting these communicative principles, and with the advent of CD-ROM technology and specific software designed to sustain students' interest in a highly stimulated environment with animation, sound, graphics and texts, CALL activities has consequently changed in a sense that computer use has been developed from being a means for individual learning to a facilitative medium of language skill practice in non drill format (Brett and Gonzàlez Lloret, 2009).

In contrast with the previous era, computers are not only a tool for individual language learning but a skill for autonomous language use as well. CALL provided students with the authentic context to use the target language in which grammar was dealt with implicitly. However, this period of CALL was criticized for using the computer in a disconnected manner for more marginal aims rather than the central aims of language teaching.

1.8.3. Integrative CALL

As technology develops, its implications in the area of language learning increase. Starting from the 1990s, the third phase of CALL, described as integrative, made specific attempts to address the criticism of the communicative CALL through the integration of the four skills (listening, speaking, reading and writing) into tasks or experiences. In fact, CALL throughout this era has become a broad field of study with various sub areas.

Zhao is among those who proposed the study of a unified field that would allow the assessment of the impact of technology on language learning. Similarly, Chapelle suggested that instead of seeing CALL as a separate sub field in applied linguistics, a full integration of technology in all areas of language learning would be of crucial importance to evaluate its effectiveness. As Warschauer claimed, "the truly powerful technologies are so integrated … computers will have taken their place as a natural and powerful part of the language learning process." (qtd. in Brett and Gonzàlez, 2009: 354). In this vein, Brett and Gonzàlez Lloret (2009) strongly acknowledged Chapelle's idea of full integration of technology in all fields of language learning.

As a consequence, Stephan Bax assumes that the 21st century is the stage of integrated CALL in which digital tools for learning have become integrated elements of foreign language curriculum (Thomas, 2009). As explained by Warschauer and Healey,

> …integrative CALL …seeks both to integrate various skills (e.g., listening, speaking, reading, writing) and also integrate technology more fully into the language learning process. In integrative approaches, students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a once a week basis for isolated exercises… (qtd. in Donaldson and Haggstorm, 2006: 258)

This stage witnessed the development of multimedia computing that includes a combination of sound, graphics, text, and video presented in one computerized program designed to move CALL from its highly individualistic

use to an assistive medium of student-to-student communication for which the term computer mediated communication (CMC) was coined. Hence, this era has been marked by a shift in computers' use, "computers evolved from containers of individualized input to tools for engagement in authentic discourse with other users of the language." (Brett and Gonzàlez Lloret, 2009: 352)

However, Murray (2007) claims that even while characterized as integrative, CALL implications in the 21st century do not reflect this characteristic. As it is illustrated by Levy, "once new hardware and software have been introduced, language teachers are often left to learn to use new computer software on their own. Consequently, patterns of use are highly individualistic" (qtd. in Murray, 2007: 751). Thus, those patterns of use in today's applications of CALL reflect the characteristics of its behaviouristic and communicative stages.

1.9. CALL Tutors and Tools

As it is marked by Levy and Hubbard, the computer may be used as a tutor or a tool. As a tutor, the computer takes the role of the teacher in a language learning environment (Blake, 2008). In general, the teacher as a tutor evaluates the students work, provides help and gives directions (Harmer, 2001). As a tool, CALL software may be used by the teacher to introduce instructed materials, for instance, teachers may use Microsoft Word to facilitate the process of writing essays. Therefore, while evaluating the usefulness of CALL in learning a foreign language or assessing its effects on students' motivation, autonomy or outcomes, it is important to note whether it is used as a tool to enhance a learning situation or as a tutor to offer guidance to the students. Since they do not have similar goals, they should be judged from different criteria.

1.9.1. CALL Tutor

CALL as a tutor guides the learning situation, evaluates the students' responses, and then automatically provides either corrective or diagnostic feedback (Blake, 2008). In this sense, tutoring refers to the amount of support

or guidance that helps the student to complete a task. This idea has already been proposed by Bruner under the term Scaffolding. Thus, Erben et al. say, "the tutor in effect performs the critical function of 'scaffolding' the learning task" (2009: 52).

Tutorial CALL is, thus, said to be a characteristic of programmed instruction, where the computer guides the student and, immediately, offers feedback along the way after each response.

1.9.2. CALL Tool

A CALL tool is used by educators to assist learning as part of a larger process in which CALL plays a specified role. In this vein, Thomas states, "In earlier stages of CALL, computers were seen as a tool to support the language learning process" (2009: 275). Examples of CALL tools include; word processor, electronic dictionaries, and computer mediated communication (CMC). Basically, teachers' help and guidance is needed with the use of CALL as a tool since there are no tutorial characteristics in the software programs offered to the students.

1.10. CALL Materials

Basically, CALL materials refer to a variety of electronic tools or resources that can be utilized as a source for language use by teachers who are interested in employing technology to promote English language learning. Although these tools have been created for use in other domains but they all adapted for the classroom teaching and learning (Blake, 2008). Generally, Education e-tools include software or applications of software, hardware, the internet and e-mail.

1.10.1. Hardware and Software

The computer system has two essential elements: hardware and software. Hardware is a term used to refer to the physical computer devices and equipments such as system unite, keyboard, mouse, audio speakers, microphone, webcam, and printer, whereas software reflects the processed programs. As computer programs, examples of software include PowerPoint which is designed for creating presentations. As it is defined by Blake, "PowerPoint is a software application that can be used to create content-rich

teaching aids or to produce interactive games" (2008: 100). English language students as well, can use PowerPoint for content presentation which will help them to explain concepts to their peers or teachers. The use of written form gives them the opportunity to reflect on the language they are using, and therefore be more grammatically exact in their explanations (Moreno, 2010).

In addition to software for representing and organizing information, there are other software programs and applications such as internet explorer, Firefox, Windows Media Player, Adobe Reader and Flash Player can be used to help students acquire knowledge and skills in nontraditional features.

1.10.2. Internet

The internet is another medium that can be used in EFL classrooms to facilitate rapid access to information and promote dialogues between students. In this view Chapelle says that, "The Internet connects learners to a wide range of discussions and information" (2003: 14).

The so-called 'inventor' of the internet Tim Berners defines his invention as, "wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents" (qtd. in Pritchard, 2007: 14). Wide-area means the World Wide Web and hypermedia refers to a range of media involving text, pictures, sound and video.

As a universal wed, the internet offers a vehicle if not a context for learning that many students enjoy. It is also a source of authenticity through the provision of real places and events; and much more important real people to communicate with (Pritchard, 2007). Consequently, Warschauer, Shetzer, and Meloni state, "In our view, there are five main reasons to use the Internet for English teaching … authenticity, literacy, interaction, vitality, and empowerment" (qtd. in Chapelle, 2003: 75). Therefore, when using the internet, students are expected to experience a sense of immediacy in gaining universal information and control over information which can often act as a motivator.

1.10.3. E-mail Exchanges

As one of the internet offered possibilities, e-mail has opened up many opportunities for distance fast communication, also referred to as asynchronous communication, which can be used to good educational advantage. In education, e-mail is commonly viewed as a tool used for communication between teacher and students and for long-distance exchanges between students in different locations.

Murray reports that many studies have demonstrated that students using e-mails to communicate in the target language are more excited to exchange messages and consequently write more texts than on papers. In the same view, Wang states that while using e-mails students ask more questions and make use of more language functions than do when writing on papers (Murray, 2007).

Another study conducted by Kern reported that e-mail exchanges between students from different geographical divisions can bring about valuable benefits of cultural historical knowledge in addition to enhanced motivation. Moreover, the motivational benefits of e-mail communication were also investigated by Warschauer who has found three reasons behind students increased motivation in e-mail communication. The first reason is their enjoyment of international communication. The second lies in their feeling of empowerment due to the development of technological skills. The final reason is in their strong belief that communication via e-mails assists their language learning (Warschauer, 2009). The use of this medium of communication in education is, then, an advantage that can be exploited for better learning.

1.11. The Benefits of CALL

CALL has been recommended as being one of the plausible ways that may improve language teaching and learning. It is expected that its integration in EFL classrooms offers a number of advantages that facilitate the students' learning. Indeed, some of these advantages derive from the general field of CALL such as access to information, while others are specific to language learning but enhanced through its integration like motivation and autonomy.

1.11.1. Learner Autonomy

Autonomy is an area of interest in educational psychology, refers to the students' degree of independence and capacity to take charge of both the strategy and content of learning. It is defined by Rivers and Golonka as, "the active, independent management of learning by the learner" (2009: 255). It can be also discussed under the labels of self-regulation, learning-how-to-learn, learner independence, self directed learning or self access learning.

Students' autonomy is a crucial part of successful language acquisition, its significance in foreign language learning has been widely investigated in several books and articles. Moreover, its relevance to motivation in particular has been best highlighted by the influential self determination theory. In this concern, Johnson K. and Johnson H. assumes that students' autonomy is based on the environmental conditions that are responsible for the individualization of instruction and the enhancement of patterns of self directed learning (1999).

Consequently, Thomas (2009) contended that autonomy in learning is said to be a skill that cannot be developed naturally but that needs to be maintained by the learning environment. In a recent study, Benson (2001) proposed a clear taxonomy that reviews a variety of approaches and conditions that can be applied to foster students' autonomy; among which is a technology based environment that emphasizes independent interaction with technological devices such as computers. In the same line of thought, Erben et al. believe that, "technology-enhanced classrooms have been found to promote discovery learning, learner autonomy, and learner-centeredness" (2009: 81).

One of the claimed outcomes of CALL programs is the ability for students to learn at their own pace in their own time. CALL programs are designed to give teachers the role of facilitators rather than spoon feeders or knowledge providers. This role fits well with the constructivist view of learning which stressed offering students with more opportunities to handle responsibility for their own learning (Murray, 2007).

Similarly, Donaldson and Huggstrom (2006) contended that a successful CALL design may bring about qualitative changes in students autonomy because it allows them to make a link between their needs and the material to be covered which consequently helps them to construct their learning paths. Therefore, students' autonomy is said to be one of the underlying premises of CALL.

1.11.2. Feedback

Another pedagogical outcome of CALL programs is the immediate feedback it provides for students. According to Harmer, feedback in language learning does not entail only correcting students, but also offering them an assessment of how well they are performing (2001). It is, thus, considered as an essential ingredient of learning. Ford stressed its importance by stating that students cannot carry on progress towards their personal goals in the absence of relevant feedback (Zhang, 2012). In this concern Murray et al. claim,

> Feedback fosters learners' beliefs in their own potential and capacity for language learning, which in turn feeds into their capacity to take more responsibility for their learning and deal with factors negatively affecting their motivation (2011: 118)

In this sense, feedback can stimulate the student to reflect constructively on the areas that require improvement. Furthermore, it may have positive effect on motivation, and can promote a positive self concept and self confidence in the student (Dörnyei, 2001). Moreno posits that feedback can be motivating when, "it provides students with information about their increasing competence because it satisfies their need to know how they are progressing" (2010: 333).

The provision of immediate feedback is another benefit of CALL activities which is able to allow students identify what they have or have not understood. Depending on the nature of the activity, the computer program offers ease of re-listening and identification of misunderstandings that is not always possible in traditional classrooms (Donaldson and Huggstrom, 2006).

A well designed CALL program is the one that engage students in problem solving activities and constructivism. This goal cannot be accomplished only if the program provides immediate feedback after each response. There are two types of presenting feedback: providing a model answer; or providing an explanation of why the student's answer is incorrect. Hence, if relevant feedback is considered, CALL is more likely to result in enhanced learning.

1.11.3. Motivation

It is widely accepted for most fields of learning that motivation is a fundamental element for success. Without motivation students will certainly fail to make the necessary efforts to learn. It can be something internal to the student which pushes him to practice a course of action or external to him caused by a number of outside factors and/or environmental circumstances.

In an EFL classroom, the teacher may be faced by a range of motivations. Some students set goals, stimulated by external reinforcement to achieve it; while others have internal drives that prompt them to move and few among them have low motivation, whatever its type is. Increasing and sustaining students' motivation is one of the major challenges that educators and researchers attempt to deal with through the introduction of computer based materials. As educational psychologists Eloff and Ebersöhn propose that, "Learners can be assigned to computerized programs to increase motivation" (2004: 139). In addition, Seifert and Sutton agree with them since they expect from a single computer to enhance the learning of individual students with interest and motivation (2009). Rather, Donaldson and Haggstrom pointed to an important link between motivation, CALL programs and feedback by stating, "Motivation is an important element in language learning which can be fostered in software, courseware and language web pages through appropriate feedback". (2006: 37)

If motivation is the key to successful learning, then, Hendricks posits that it has to be an essential element carefully addressed in CALL programs (Donaldson and Haggstrom, 2006). The latter should, then, be interesting to

the students and attractive in its design, appearance and interface in order to motivate students to take full advantage of the presented material.

1.11.4. Access to Information

The access to information is a supplementary advantage afforded by CALL. CALL programs have the potential to offer students with more information via electronic dictionaries, encyclopedias or websites (Thomas, 2009). In this respect, Erben et al. say, "CALL offers much in terms of access to information and new tools to learn using this information" (2009: 158).

Furthermore, Blacheff et al. (2009) consider CALL programs as useful tools that provide more information, easier access to information and better communication of information. For instance, while students may be assigned to a listening activity provided by computer software they may simultaneously access to multiple types of information.

Therefore, it is not only the activity that can be accessed on the same computer, but there are clickable buttons giving students access to other available features from the same screen. They can click on a dictionary to see definitions of key words at the same time they reconstruct a blanked passage.

The internet is also a source of information that can be used as a window on the wider world outside the classroom. As it is demonstrated by Pritchard, "the internet gives access to an incredibly large amount of information across the widest possible range of topics" (2007: 19). Teachers as well as students alike can access to a wide variety of authentic websites in the target language where images, videos, and audio documents are accompanied by written texts.

1.11.5. Interactivity

In CALL environments, interactivity is another offered benefit includes the context created through CMC among individuals (student-student interaction) in addition to student-computer interaction through specific designed software (Chapelle, 2003, Murray, 2007 and Zhang, 2012). In this sense, there are three important technological platforms that provide tools to assist language learning for increased interactivity: the web, CD-ROM in a

form of specific software, and network-based communication i.e., e-mail, user groups, chat programs and video conferencing (Blake, 2008).

Nonetheless, Nagata considers student-student communication as the true form of interactivity CALL promotes (ibid). However, much learning occurs when students are working with their computers on their own. For that reason, the immediate feedback CALL programs provide is said to be a sort of interaction between the student and the computer.

1.12. CALL Success Factors

The availability of CALL resources does not necessarily lead to enhanced learning experiences particularly when student and teacher training are missing. According to Tognozzi, in order for CALL to achieve its intended benefits teacher and student training as well as classroom management are fundamental components (Donaldson and Haggstrom, 2006).

1.12.1. Teacher Training

Often used interchangeably with teacher education, teacher training is viewed by Roberts as a process by which the necessary teaching skills are granted and sharpened. As Thomas claims, it is a, "top-down process in which teachers are equipped to teach" (2009: 450). Whereas, teacher education is an umbrella term covers self initiation, self directed practices and more formalized training programs and systems, i.e., any experience teachers participate in to learn to teach or ameliorate their teaching (Thomas, 2009).

As researchers in the field of CALL, Donaldson and Haggstrom expressed an urgent need to prepare teachers and future teachers to incorporate technology in their classrooms,

> Not only will appropriate training allow teachers to overcome any fear of computers born of a lack of technical knowledge, it will also give them the ability to adapt to the constantly changing technologies for language teaching (2006: 32)

Certainly, providing teachers with the appropriate pedagogical frameworks for electronic learning and adequate technological skills has a vital importance in achieving the major benefits that CALL underlined, Thomas

(2009) argues. Nevertheless, the training itself has to involve two main stages. The first stage encompasses training teachers to evaluate the effectiveness of language education technologies such as software and language websites. The second phase, however, aims at training teachers to be actively involved in the creation of instructed materials using technology. It means to teach them the basics of how the different technological materials work, so that they would be able to plan technology enhanced lessons (Donaldson and Haggstrom, 2006).

To conclude, the provision of computers in classrooms as sort of learning enhancement and the quickly changing nature of these technological devices put language teachers in a difficult situation. Therefore, constant training is needed to keep up with the growing applications of CALL.

1.12.2. Students Training

Students' training in the technical skills is, on the other hand, an important factor for successful CALL. In this sense, students should be trained to use the different CALL materials (i.e., access to software, hardware and the internet) to direct their own learning in and out of the class. In a recent study, Burston argued that Grammar checkers built into word processor software had proved its benefits in helping students consider errors during their linguistic production. Such success, Burston stresses, can be achieved only when students are well trained to use the software effectively (Chapelle, 2003).

Furthermore, Balacheff et al. contended that the training of technology users has a considerable benefit in the improvement of their performance (2009). This training enhances the students' feelings of mastery, expertise, satisfaction and self-confidence which are all important conditions for well-being, motivation and accurate performance.

1.12.3. Classroom Management

In education, most researchers agree that classroom management holds an essential role for effective instruction. It refers to the ways by which teachers create a supportive learning environment, control students' behaviours, movement and interaction, and organize what has to be learnt in the classroom. Everston and Weinstein define it as, "the action teachers take to

create an environment that supports and facilitates both academic and social-emotional student learning" (qtd. in Babad, 2009: 121). Well managed classes do not encounter discipline problems and the students are dynamically engaged in learning experiences and activities which lead to high motivation and expectations for achievement. Thus, good teaching will be dependent on the teacher's managerial skills.

As an area of interest, classroom management is closely linked to the field of teacher education which aims at providing teachers with ideas and techniques to effectively manage their classrooms (Babad, 2009). Classroom management, therefore, includes a variety of organizational aspects ranging from the physical environment which denotes the totality of the surroundings, conditions and circumstances where learning occurs, to teacher's roles and personality styles, to classroom climate. The physical environment of the classroom consists of a wide set of features that affect learning, including light, seating arrangement, chalkboard use, equipments and the number of students and their diverse levels of proficiency. Thus, how a learning space is arranged contributes a lot to the task of learning (Brown, 2009).

In CALL environment, teachers are expected to properly arrange the available resources for the sake of attracting students' attention because the physical arrangement of the classroom is said to have a strong influence on students' expectations of what their year is going to be like. Moreover, CALL expected benefits are dependent on the teacher's skill to select computer software that would support the instructed material, Partin maintains,

> Although the potential of computer applications with multiple graphics, sounds, and instantaneous feedback is attractive and possesses a great deal of potential, the teacher must use valid criteria in selecting those games and simulations to use in class (2009: 230)

The criteria up on which the teacher selects the suitable CALL materials for delivering instruction are various, among which is what is useful to the student in terms of his/her interest, curiosity and enthusiasm (Partin, 2009).

By incorporating CALL resources as integral parts in students learning experiences, teachers' roles in the classroom will be completely different from that of the past. The teacher's main role will switch from the major source of input to a more constructivist teacher whose job is to guide, mediate, facilitate as well as evaluate the usefulness of technologies in shaping student-centered-teaching approach and creating a relaxing and enjoyable classroom climate (Donaldson and Haggstrom, 2006).

As a result, the teacher has to opt for a well managed CALL environment carefully designed to affect positively students' desires, attract their attention and activate their willingness to learn.

1.13. Conclusion

This chapter has provided a theoretical overview on motivation as a psychological variable and its main types. The major theories of motivation have also been highlighted in order to understand this variable from the different viewpoints. It has been discovered that the majority of the theories acknowledge its crucial role in achieving success in learning. Similar to any situation, learning English as a foreign language entails students' motivation as a critical aspect for successful acquisition.

The integration of CALL equipments in EFL classrooms has been suggested as new improved environments that can be used as an enhancement of students' motivation. However, within this integration, the teaching/learning processes will be changed and new skills for the teacher and the student should be developed. Thus, methodology and content of teaching should be transformed so that the student will benefit from the new technology. The teacher has to organize and arrange the available technological devices and spend time for planning well and scheduling his performance and for choosing carefully the devices that support the instructed material.

Nonetheless, as an exploratory case study this scientific research relies also on methodological approaches by which the researcher investigates the impact of CALL integration in EFL classes on students motivation. Thus, the research design and procedures of the present study will be highlighted in chapter two.

Chapter Two:

Research Design and Procedure

Chapter Two: Research Design and Procedure

2.1. Introduction

2.2. Case Study Research

2.3. Research Approach

2.3.1. Qualitative Approach

2.3.2. Quantitative Approach

2.4. Specific Procedure

2.4.1. Setting

2.4.2. Hardware

2.4.3. Sampling

2.4.3.1. Sample Design

2.4.3.2. Sample Population

2.5. Data Collection Methods

2.5.1. Classroom Observation

2.5.1.1. Aims of Classroom Observation

2.5.1.2. Description of Classroom Observation

2.5.2. Students Questionnaire

2.5.2.1. Aims of the Questionnaire

2.5.2.2. Description of the Questionnaire

2.5.3. Teacher's Interview

2.5.3.1. Aims of the interview

2.5.3.2. Description of the Interview

2.6. Approaches to Data Analysis

2.6.1. Qualitative Data Analysis

2.6.2. Quantitative Data Analysis

2.7. Conclusion

2.1. Introduction

Motivating students is a long and complex undertaking that has been for many decades plagued by debates among educational researchers who have highlighted a number of approaches and orientations to motivation. However, recent years witnessed much more increased attention given to the concept of introducing technology to enhance students' motivation. In order to explore the usefulness of technology in solving the problem of motivation in EFL classrooms the researcher has opted for a certain methodology.

Therefore, this chapter is devoted to the description of the research design and procedures, i.e., the ways in which the research is conducted, involving the approaches utilized for collecting data, the setting of the study, the research instruments, sampling techniques and data analysis methods. In fact, research design is defined by Kothari (2004) as the range of techniques used for the collection, measurement and analysis of data. It includes a well organised outline of what the investigator will do from defining the research problem to the final analysis of the data.

Thus, decisions regarding the choice of case study research and mixed methods approach are justified in this chapter. Moreover, the techniques by which the researcher has selected the sample, the methods used for data collection and the main approaches employed for the analysis of the obtained data are described.

2.2. Case Study Research

The world is now living in the age of ICT with almost every educational institution providing computer labs or embracing computers as central components of their transformation of teaching and learning. Today's EFL classrooms gradually incorporate students for whom English is a foreign language. Teaching English to foreign students through CALL encompasses the use of computers as pedagogical tools to assist the appropriate instruction of English language students across multiple areas. Whether only one computer is provided in the classroom, multiple computers or a computer lab, it has been commonly acknowledged that teaching English through CALL affords innovative strategies for various levels of access in which students are supposed to show high levels of motivation (Erben et al., 2009).

Recently, EFL higher education in Algeria has been enhanced by the provision of computer labs and other technological authentic materials such as smart boards, data show and chat rooms in an attempt to follow the contemporary international ways of teaching and learning and attract the students' attention which may result in increased motivation. The fact of using computers to solve the problem of motivation in EFL classrooms stimulated the researcher to assess the use of CALL in higher education as a means to promote motivation of second year undergraduate students at the University of Tlemcen in 2012-2013 academic year. Hence, the present work discusses an exploratory case study research project which aims at assessing undergraduate EFL students' motivation in CALL environment.

Often called a monograph, the case study is not a research method but utilizes a variety of methods and techniques for the investigation of a particular subject. It is the most appropriate approach in language education research. In this vein, J. McDonough and S. McDonough argued that case studies are, "very suitable format for studies of language learning" (2006: 203). Within educational research, the case study provides holistic descriptions of language learning or use within a selected sample i.e., it offers detailed reports on

specific students or sometimes whole classes within their learning setting (Mackey and Grass, 2005).

Case study is commonly viewed as a research approach where one or a number of instances of a specific phenomenon are dealt with in depth. It is more likely to be concerned with explaining and understanding the specific mechanisms between causes and effects rather than enlightening the main factors that cause an effect (Given, 2008). Thus, it focuses on a specific instance, item or phenomenon in action and tries to answer or suggest how and why something has occurred, "the case study is most appropriate for questions that begin with 'how' and 'why'" (Tayie, 2005: 102). Therefore, the main purpose sets out to the case study research is to place the factors that are responsible for the behavioural patterns of a given individual or group (Kothari, 2004). According to Yin, case study research means carrying out an empirical investigation of an existing phenomenon in its real context using numerous sources of evidence (Hancock and Algozzine, 2006).

> A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident. (Yin qtd. in Woodside, 2010: 1)

Whatever the selected entity for investigation is, case studies can be classified under three main types and the selected type will be dependent on the way the research is conducted and the objective of the research itself. Yin differentiates between three major kinds of case studies (J. McDonough and S. McDonough, 2006):

- ✓ Exploratory: tries to investigate a defined phenomenon through the provision of hypotheses to understand reasons and effects.
- ✓ Descriptive: generally portrays a situation or a phenomenon.
- ✓ Explanatory: employs a specific theory as a basis to test a particular phenomenon.

Yin further suggested that the design of a case study must incorporate five major components including: (1) the research questions, (2) its prepositions or suggestions, (3) the unit(s) of analysis, (4) a clear determination of how the obtained data are linked to the suggestions (hypotheses), and finally, (5) criteria to interpret the findings (Marczyk et al., 2005). In another suggestion, Stake as an educational researcher views case study as "the study of the particularity and complexity of a single case", and claims that it constitutes of two essential elements (J. McDonough and S. McDonough, 2006):

- ✓ Theme: refers to the subject matter under investigation.
- ✓ Issue: represents the problematic scaffolding up on which research questions are raised and hypotheses are proposed.

As an empirical inquiry, a case study is drawn from multiple sources of data to investigate systematically a small group or an individual within a group, and documents that group's or individual's experience in a specific setting. It is also said to be a qualitative research approach, nonetheless, this judgement is dependent on the nature of the methods of data collection (Lodico et al., 2006 and Tayie, 2005). Typically, the following table will review the essential features that characterize case study research.

Particularistic	Descriptive	Heuristic	Inductive
Emphasises a particular situation, event, or phenomenon with in a particular group or individual	Provides tremendous detailed information relevant to the case being studied.	Helps in understanding the topic under study through the provision of original interpretations, innovative perspectives, new meaning and fresh insights.	Relies on inductive reasoning while analysing data for the sake making generalizations.

Table: 2.1. The Characteristics of Case Study Research

These characteristics give a clear idea that any case study research is neither restricted to the study of a unique purpose nor does it have a single characteristic; as a consequence, it provides diverse information related to the phenomenon under investigation.

There are several advantages of case study research that derive from the various characteristics mentioned above. First, it is appropriate for various research objectives: explanation, description and exploration. Second, it enables researchers to understand the behavioural patterns of the studied group. Third, the information it provides while describing the nature of the phenomenon helps the researcher in the construction of questionnaire or the scheduling of other data collection methods. Finally, its results help in making generalizations about an instance or from an instance to a whole group (Kothari, 2004 and Cohen et al., 2000).

Nevertheless, despite these claimed strengths, case study research has a number of weaknesses as well. The first criticism has been made due to the lack of scientific rigour because it has been observed that the researcher in case study introduces biased views in order to impact the findings and conclusions. The second criticism to be made is that the results are not always generalizable to the wider population to which the studied individual or group (unit) belongs. Finally, case studies are said to be time consuming and may provide an immense quantity of data that are too difficult to summarize (Tayie, 2005).

After observing the characteristics of the selected group in order to probe deeply the intended phenomenon to be investigated, the researcher opted for the exploratory type of case study by formulating a problematic, asking three research questions, providing hypothesis and trying to prove/test them through the collection of quantitative and qualitative data.

Ultimately, the main objective of this case study is to explore the role of CALL in increasing second year EFL students' motivation at the University of Tlemcen. It will do so by assessing whether CALL environment has potentials

and effects on students' motivation, and examining its claimed outcomes for better learning.

2.3. Research Approach

The main purpose of any research project is to provide answers to questions through the use of a particular research approach depending on the nature and type of research. In fact, there are two basic approaches to research, quantitative approach and qualitative approach. The present case study has been undertaken for the sake of exploring EFL students' motivation in CALL environment using mixed methods approach which involves the combined use of quantitative and qualitative approaches with the endeavour of offering the best of both. The former is generally carried out to obtain numerical data e.g., numbers and percentages; whereas the latter is based on careful and detailed descriptive data that do not make use of statistics.

Although the two paradigms represent two diverse approaches to empirical research but they may not necessarily be judged as exclusive. The mishmash of their principles has led to the emergence of a new research approach referred to as 'mixed methods research'. This emerging approach has proved to be useful for case study research, accordingly Woodside states,

> While the literature often associates case study research with using qualitative research methods, we advocate viewing case study research as not being restricted to one set of research methods. Quantitative methods, including statistical hypotheses testing, are appropriate for many case studies. Also, the value of most case study reports may be enhanced considerably by using multiple tools, both qualitative and quantitative methods, in the same study (2010: 11)

Indeed, the aim behind such combination is embarked to result in complementary data, so that the analysis will not reflect only impressions or statistics. In this view, Dörnyei says, "I agree that qualitative and quantitative methods are not extremes but rather form a continuum" (2007: 25).

However, in order to understand more the mixed methods approach, it would be beneficial to shed light on each approach (quantitative and qualitative) in isolation. Obviously, both approaches differ in many ways; each one possesses unique features, strengths and weaknesses. No one is right or wrong, but one approach may be more useful than another depending on the nature and objective of the research.

2.3.1. Quantitative Approach

Conducting research using quantitative approach is based on the assumption that facts about reality can exclusively be obtained 'through the eyes of the researcher'. 'Quantitative' approximately implies 'quantity' or 'amount' denoting the degree to which something (e.g., phenomenon, event or situation) does or does not take place in terms of numbers, percentages or frequency. The word 'quantity' in this case means measuring or counting (Jonker and Pennink, 2010).

Originally inspired by the scientific methods of natural sciences the quantitative approach is one in which the investigator employs methods of data collection that result in numerical information which are then analysed using statistical methods (Dörnyei, 2007). In general, the scientific method involves three main stages in carrying out a research project. Firstly, it necessitates observing a particular phenomenon and identifying a problem. Secondly, formulating a number of research hypotheses. Finally, collecting a valuable amount of data and analyzing it using standardized procedures to test the claimed hypotheses. If the suggested hypotheses are validated, they will directly become recognized as scientific theories. Moreover, it should be noted that the scientific method is strongly associated with statistics and numerical values. In this sense, it provides an objective tool to explore questions which aim at minimizing the researcher's bias and prejudice and therefore results in what the quantitative approach supporters assume 'an accurate reliable description of the world' (Dörnyei, 2007). Consequently, Jonker and Pennink

regard the quantitative approach as being, "purely scientific, justifiable, precise and based on facts often reflected in exact figures" (2010: 38).

Therefore, the quantitative research is said to be based on the measurement of quantity or amount. It is, then, applicable to the study of phenomena that can be expressed in terms of numbers and statistics. As it is illustrated by Kothari, the quantitative approach involves, "the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion" (2004: 5).

The quantitative approach can be also sub-classified into three main approaches as it is shown in the following table.

Inferential	Experimental	Simulation
Aims at investigating the characteristics of a precised sample and then infers that the population has the same characteristics.	Organises the research environment to observe the effects that some variables have on others.	Constructs an artificial environment to observe the dynamic behaviour of a system under controlled conditions.

Table: 2.2. The sub Approaches of Quantitative Research

In cases where time and resources are limited, the quantitative approach would be very useful because this approach to research usually includes data collection methods such as questionnaires of close ended and multiple choice questions to assess specific variables. This instrument is able to provide useful data in a short period of time (Hancock and Algozzine, 2006). In addition to this quantitative approach offered option, Dörnyei (2007) has summarized a number of features that are listed below:

- ✓ Using numbers: providing data that is centred around numbers is typically the single features that distinguishes the quantitative approach from the other type of research

- ✓ Variables rather than cases: quantitative research emphasizes the study of variables that grasp the common features of groups of people.
- ✓ Statistics and language of statistics: they are considered as the most salient quantitative approach features resulting from the close link between quantitative research and statistic procedures. Therefore, most of the statistical methodology has become part of the quantitative vocabulary which in turn results in a unique quantitative language. In fact, statistical methodology entails calculating the average (mean) and percentages of several figures.
- ✓ Standardized procedures to assess objective reality: it is a significant aspect of quantitative research which refers to the process of avoiding researchers' subjectivity through the development of systematic canons and rules for each facet of data collection and analysis.
- ✓ Quest for generalizability and universal laws: this characteristic is achieved through the use of numbers, statistics, standardized procedures and scientific reasoning that all fall under the quantitative quest for making generalizations from the particular to the wider context.

From these characteristics, one may deduce that the quantitative approach claims to be systematic, rigorous and focused. It also entails defined measurement in an attempt to produce reliable and valid data that are generalizable to the wider context. In order to achieve these research qualities, the present study employs the quantitative approach through the design of a rating scale to mark the frequency of the observed behaviour, and a questionnaire that is composed of some questions administered specifically to attain data of numerical nature. Nevertheless, this study does not rely only on numbers in investigating motivation but it uses a qualitative approach as well to make sense of the gathered data in terms of the researcher's interpretations

of events that occur in the research environment and the participants' definitions of the situation.

2.3.2. Qualitative Approach

Qualitative procedures to investigation are often contrasted with the quantitative ones. Qualitative approach uses different principles, strategies of inquiry and methods of data gathering and treatment. It relies heavily on data in the form of texts (such as: field notes, journal and diary entities, documents) and images (Creswell, 2012).

Clearly associated with qualitative phenomenon, the qualitative approach to research involves the use of data collection methods that result in absolute non-numerical data which are then analysed using non-statistical procedures (Dörnyei, 2007). It is defined by Hancock and Algozzine as, "any kind of research that produces findings not arrived at through statistical procedures or other means of quantification" (2007: 86).

Moreover, this research approach is said to be concerned with assessing the participants' attitudes, opinions and behaviours subjectively. Hence, the research in this situation is dependent on the researcher's insights and impressions. The results are, thus, generated in non-quantitative form that is subjected to rigorous quantitative analysis (Kothari, 2004).

The qualitative approach is a useful type of research in behavioural sciences, in that it may be employed to investigate the reasons behind human behaviours such as motivation which is considered as an important type of qualitative research. It aims to answer the question of why people behave in a particular manner or do certain things (Kothari, 2004). Using the qualitative approach to assess students' motivation in CALL environment as an example is, therefore, useful to explore the underlying motives and desires of human behaviour. By undertaking such a research, the investigator would be able to analyse the various factors which motivate students to behave in a certain manner or which make them like or dislike a particular thing.

Conducted only in natural settings, the qualitative research focuses on studying people behaving in real life situations portraying the world around them using their own words. In this manner, Jonker and Pennink claim, "the essence of qualitative research is to identify the characteristics and structure of phenomena and events examined in their natural context" (2010: 77). In such setting, qualitative researchers attempt to personally collect in-depth information on a relatively limited number or participants (Cozby, 2009).

Furthermore, the qualitative approach is largely inspired by inductive reasoning. Qualitative investigators often start with making field observation and analyzing documents then generating hypotheses. This technique is closely linked to inductive approaches. In addition, these hypotheses may be modified or changed by further data collection which means that the study remains open so that it can respond in a flexible manner to the new details that may appear throughout the research (Lodico et al., 2006).

Drawing heavily on what was previously stated in this section, the investigator summarized the main features that characterize the qualitative research approach:

- ✓ Explores the areas, phenomena, situations or events that relate to or involve quality or kind.
- ✓ Takes place in natural settings.
- ✓ Answers 'why' questions
- ✓ Provides open-ended data of non-numerical nature reflecting the participants' opinions and the researcher's interpretations.
- ✓ Tries to expand the scope of research through making generalizations.
- ✓ Offers the option of longitudinal assessment of phenomena in an attempt to explore the sequential events or the changes that occur through time.
- ✓ Gives the researcher the opportunity to modify, redefine or change things during research in a flexible way.

For collecting data, qualitative research requires the use of a range of methods that are characterized by interactivity such as interviews and observation, i.e., the methods that entail the active involvement of participants in the process of data collection where the researcher creates rapport and credibility with participants (Creswell, 2012).

Therefore, for the purposes of obtaining data of qualitative nature and accounting for a mixed approach the researcher has adopted classroom observation to provide careful descriptions of students' behaviours, desires, actions and activities in CALL environment in the form of field notes and an interview addressed to the teacher.

Clearly, the qualitative and quantitative approaches to research are not contrasted to each other but rather hold different principles and purposes while undertaking a research project (Tayie, 2005). The following table will present the many areas where the two approaches differ:

	Quantitative approach	Qualitative approach
Role of the researcher	The researcher has no presence in the collected data in order to ensure objectivity and neutrality.	The researcher is an integral part of the data
Research design	The design of the study is determined before it begins.	The design may be evolved during the research. It can be changed or modified as the study progresses.
Setting	The study may be conducted in artificial settings such as laboratories	The research is conducted in the field, i.e., real surroundings to present natural and holistic picture of the studied phenomenon.
Data collection methods	Employs the instruments	Stresses the use of

	that can be used in the absence of the researcher such as questionnaires or tests.	instruments that entail the researcher's participation like observation and individual interviews.
The description of findings	Based up on statistical analysis of data	Based on the researcher's interpretations.

Table: 2.3. The Main Differences between the Quantitative and Qualitative Approaches

Although the quantitative and qualitative approaches reflect antagonist views about how research is conducted, a combination of them in the same study may offer valuable insight, more opportunities for testing hypotheses and complementary data (Jonker and Pennink, 2010). Generally known as mixed methods approach, this combination is considered as a new means that uses the strengths of both approaches to best investigate research problems. Or to quote, Mackey and Gass who are investigators of second language research, say,

> The growing practice of utilizing qualitative and quantitative data illustrates the fact that these two research approaches should not be viewed as opposing poles in a dichotomy, but rather as complementary means of investigating the complex phenomena at work in second language acquisition (2005: 164)

For instance, Sullivan and Pratt (1996) have used both quantitative and qualitative approaches to investigate the effects of computer technology on ESL (English as a Second Language) students writing. By using the two approaches the investigators were able to provide a thorough representation of how the computer technology impacts the quality of students' writing, their patterns of discourse, and their viewpoints concerning the importance of using technology in learning (Mackey and Gass, 2005).

Typically, using more than one research approach allows the researcher to present a detailed method that hopefully provides diverse types of data for better understanding of the studied phenomenon. In this inquiry, Given stresses that, "the use of both qualitative and quantitative approaches will provide a more complete understanding of the research problem than either approach alone" (2008: 527).

In this study, the researcher has used the two approaches to provide both quantitative information about degree and incidence as well as qualitative information from participants' opinions and the researcher's evaluation of the studied phenomenon. Therefore, the investigator has first explored the data qualitatively taking notes through classroom observation with the purpose of identifying the variables that need to be tested in another quantitative instrument.

2.4. Specific Procedures

Among the various hypothesized benefits of CALL, its positive effects on students' motivation have been most frequently reported. Thus, this research project seeks to investigate and points out the benefits of CALL environment and the use of specific software to have students motivated to learn the language. It strives to show that creating the appropriate CALL environment will have a positive impact on EFL students' motivation.

After reviewing the major theoretical data concerning students' motivation and CALL as a modern suggested instructive means, selecting case study as a research format and mixed methods as the suitable research approach, the researcher opts for certain procedures while planning this research project. These procedures encompass decisions about where will the study be carried out or simply the setting in which the study is conducted. What should this setting be consisted of which means the main CALL resources available in this setting; and the subjects selected for the study. All these are planned for arguing that with the help of computers and every kind of

technological equipments students can be active, motivated and involved in the language learning process.

2.4.1. Setting

Directly after identifying the behaviour or the phenomenon to be investigated, the investigator has to select the setting in which this behaviour or phenomenon takes place with enough frequency. In this sense, the choice of the setting is totally dependent on the nature of the research problem.

The research setting refers to the place where the study of a particular phenomenon is carried out, it has been defined by Given as, "the physical, social and cultural site in which the researcher conducts the study" (2008: 787). In other terms, the setting reflects the participants' natural environment which can be a classroom, school, region or community.

Generally, any research conducted in the participants' natural setting is referred to as field research which employs naturalistic observation as the suitable method for data collection (Bordents and Abbott, 2011). The researcher often goes to the site (e.g., classroom) to carry out the research which enables him/her to provide more details about the participants in their real setting and to register their experiences, attitudes and behaviours (Creswell, 2012).

The present research work has been conducted on a group of forty (40) second year EFL students and their teacher at Tlemcen University in 2012-2013 academic year attending oral expression lectures where CALL resources are used by the teacher as tools to present learning materials. The setting of this study is a computer laboratory in the department of foreign languages where the researcher assessed the use of CALL to enhance and increase students' motivation in their natural setting for a period of time collecting, primarily, observational data.

This laboratory is located in the ground floor; it consists of the basic CALL equipments (these equipments will be listed in the following subsection). It is considerably large and clean, painted with a pastel colour, and contains many extensive windows and a wide door. The students' desks are too close to each

other arranged to form a square and in each desk there is a computer for personal use. The teacher's desk is placed at the front of the room in a prominent position. The amount of light during lectures is high for some tasks and low for others (such as the use of table lamp) purposely designed for visual stimulation.

2.4.2. Hardware

The computer is considered as one of the most ingenious inventions of the contemporary technological age. It is currently used in almost every aspect of life. Indeed, the computer is a system which consists of many components including those that can be actually touched and seen commonly referred to as Hardware. Other components such as Windows 7, Microsoft Word and other programs are non-visual called Software.

Consequently, Hardware refers to the physical equipments that comprise a computer system, in this respect Kothari says, "All the physical components (such as CPU, Input-output devices, storage devices, etc.) of computer are collectively called hardware" (2004: 363). It contains input devices such as keyboard, image scanner and microphone. The Computer Processing Unit which undertakes the function of storing data in the optical disk drives CD-RW and DVD-RW. Finally, output devices such as screen, printer and speakers present data received from internal storage of the Computer Processing Unit. The main Hardware components used in the studied setting are:

- ✓ The system unit: the core of a computer system consists of many components that store information such as the Computer Processing Unit, often called microprocessor serves as the brain of the computer. Its poor state did not enable the students to store and retrieve information in a flexible way which subsequently prevented them from working effectively during lessons.
- ✓ Mouse: each computer is provided with a mouse which is the small device used to select items on the screen. It is connected to the system unit by a long wire.

- ✓ Key board: is a tool used for typing texts into the computer. It is an important device required in many CALL programs because it is considered as a means of interacting within the computer.
- ✓ Screen: also called monitor displays information in visual form using text and graphics. The monitor offered in the setting of this study is of LCD (Liquid Crystal Display) type. It produces sharp images and is much thinner and lighter than the CRT (Cathode Ray Tube) type.
- ✓ Speakers: are the equipments used to play sound effects from the computer. It is connected to the system unit with cables. Two kinds of speakers are offered in this laboratory. Two big speakers suspended on the highest part of the walls for collective use and small ones connected to each computer for personal use.
- ✓ Microphone: is an equipment allows students to speak into the computer. In fact, there are numerous kinds of microphones, but the one used in the studied site is headphone i.e., a headband with a pair of speakers over both ears and a small microphone derives from the right ear speaker. Therefore, this computer devise is designed to play different roles. It may be used for listening to sounds and speaking into the computer.
- ✓ Data Show: is a device that presents the computer's output onto a white fabric screen or a wall. It was widely used for slide presentations.

It must be mentioned that the internet which is one of the most important CALL materials was not provided in the studied setting the fact that prevented the researcher from investigating the potentials of its offered benefits on motivation.

2.4.3. Sampling

Studying the whole population is considered to be a complex task for researchers; therefore, they often need to be able to obtain data from a smaller group or division of the total population or the universe. The process of choosing particular units from the entire population is referred to as sampling. This overall process goes through two major stages. (1) Defining the

population, and (2) selecting a specific sample from that population. Hence, the sample is regarded as the subset of a given population.

However, selecting items for the sample or sampling is not an arbitrary process that occurs in a vacuum; it is based on a number of scientific techniques and procedures that have to be adopted by the researcher.

2.4.3.1. Sample Design

The design of a sample is regarded as a definite plan adopted by the investigator to decide on a sample from a given population and make decisions about the number of items to be included in that sample (Kothari, 2004). Such plan has great influence on the generalizability of the collected data, thus, Morrison claims that the good quality of any research project is not only the result of the appropriate methodology and instrumentation but the suitability of sampling strategies and procedures as well (Cohen et al., 2000).

In general, there are two main types of sample designs based on two different criteria: the representation basis and the element selection technique. Based on the former type, the sample selection can be made through probability sampling technique or non-probability sampling technique. Under probability sampling, the researcher selects randomly from the wider population, and each item (informant) has an equal probability or chance for being chosen for the study. It is viewed by Jonker and Pennink as,

> A sample in which every member of the population (simple random sample) or some subset of the population (stratified sample) being tested has an equal chance of being included in the sample (2010: 155)

There are two types of random sampling: simple random selection which is said to be the best technique to get a sample that is characterized by representativeness, and complex random sampling technique which uses rather different criteria while selecting items (Mackey and Gass, 2005).

Examples of this type include stratified sampling which classifies the items of the sample into groups and categories in terms of age, sex or occupation.

In contrast, non-probability sampling chooses the research items in a non-random way i.e., the participants do not have the same chance for being included in the sample. This type of sampling entails that the items are deliberately and purposely selected by the researcher. The main types of non-probability sampling are convenience sampling and purposive sampling which in turn includes quota and judgement sampling.

On element selection basis, there are 'unrestricted sample' which implies that each sample item is selected individually from the large population and 'restricted sampling' which incorporates all the other types of sampling (Kothari, 2004). The following figure will show the sample design as explained previously.

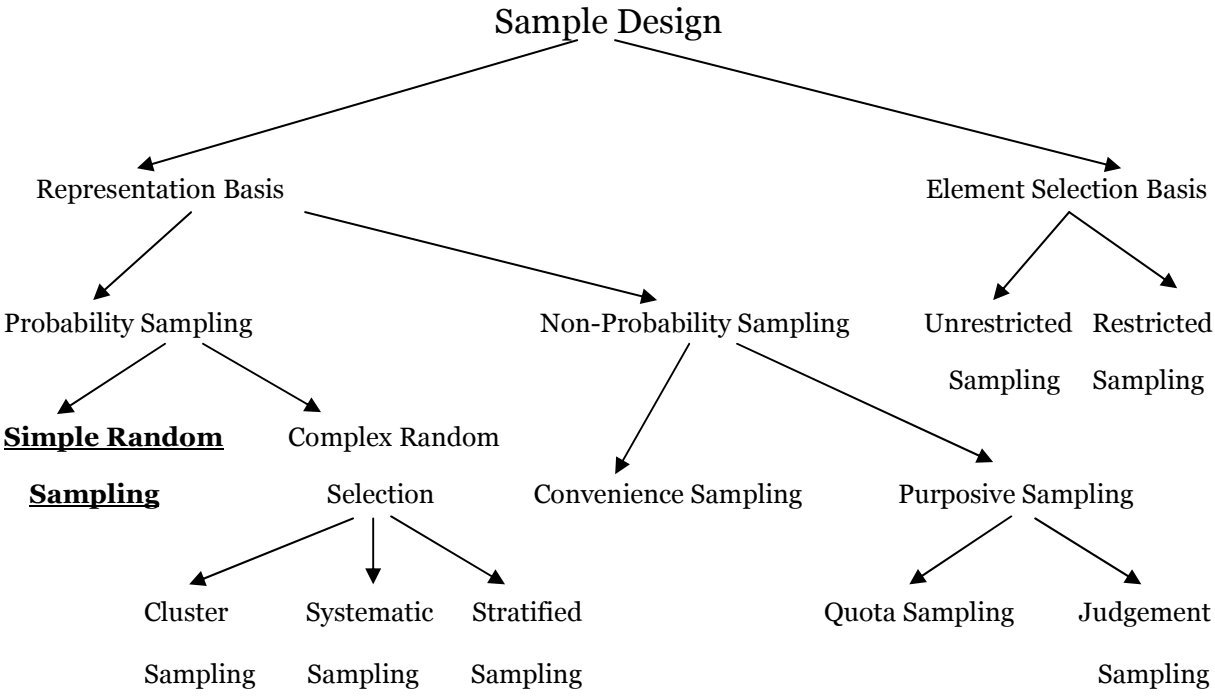


Figure: 2.1. Basic Sample Designs

The present study is designed on the basis of representativeness in a sense that the gathered information would be representative to the entire population under investigation in a hope to make generalizations from the findings. The

wider population is all EFL students in CALL environment. Because access to all those students is a complex and time consuming task, an accessible sample that is representative has been selected in a simple random way i.e., among many groups receiving lectures in CALL environment the researcher has opted for one group to be the sample. The randomization principle was used to ensure that each member of the population as whole has an equal probability of being included in the sample, and to eliminate any kind of bias as well.

2.4.3.2. Sample Population

As a case study, this research work attempts to assess the effects CALL environment has on EFL students motivation, therefore, the researcher has opted for a sample randomly obtained from the total students who learn the language through CALL.

The selected sample is a group of second year university students enrolled in oral expression lectures where CALL is essentially used as a tool for the delivery of instructed materials, management and instruction, in addition to their teacher.

After observation, the researcher has decided to conduct this investigation upon second year students because in their first academic year they are sometimes shy, dependent on their teachers and unconfident about speaking the foreign language in front of the whole class, the fact that makes assessing their motivation during this educational stage a complex task. However, in their second year, the researcher has observed that students seem more or less use the language in an effective way because they have already studied most of the elementary grammar rules and vocabulary. Although students at this level still make some basic mistakes but they are eager to speak and use the language they have already studied.

Moreover, this group has experienced learning English through computers in their first academic year. In this sense, they are familiar with the

environment in which CALL devices are used, the fact that encouraged the researcher to rely on this sample to test her hypotheses.

To sum up, the members involved in this study are forty (40) second year university students aged between 20 and 35 years old. They were 14 male and 26 female participants. In fact, they have received English lectures for seven years before entering the university. In the first academic year at the university, they took lessons in grammar, phonetics, linguistics, language skills (reading, listening, writing and speaking), research methodology and ICT. The latter module stands for Information and Communication Technologies in which students are supposed to acquire the basic skills to use computers; however, the lack of the appropriate computer components has prevented teachers from dealing with the practical side and obliged them to present only theories about computer use. Throughout the second year, they continue studying the same modules in addition to literature (American, British, and African), civilization (American, British, and African) and psychology.

The teacher is a young lady who has been teaching English through technology for four years. It should be noted that she is the only teacher in the department of English language who is using computers as integral parts of the instructed materials in almost all lectures. The other teachers are using multimedia resources such as data show from time to time. This occasional use cannot be considered as a form of CALL.

2.5. Data Collection Methods

While designing a foreign language programme, the designers try to address two basic goals: linguistic and non-linguistic. The linguistic goals place considerable emphasize on developing one's competence to read, write, speak and understand, and there are many tests available to assess these skills. Whereas the non-linguistic goals focus on such psychological aspects of learning the language as motivating students, developing interest in learning the foreign language and desire to continue studying the language. Nonetheless, a limited number of tests have been put forwards to measure

these psychological variables especially in today's classrooms where technology holds a major role in presenting lectures. For that reason, classroom observation, questionnaire and interview are the main research instruments employed by the researcher to provide data of verbal and numerical nature.

Actually, using more than one research instrument allows the researcher to triangulate the results and guarantee their validity and vigour. Indeed, triangulation occurs when the researcher relies on different sources of data to get a variety of perspectives (Biggam, 2008). It is defined by Cohen et al. as, "the use of two or more methods of data collection in the study of some aspect of human behaviour" (2000: 112).

In the same line of thought, Woodside (2010) believes that deep understanding of case studies is achieved through the use of multiple data gathering methods i.e., triangulation which often involves (1) the researcher's direct observation of the studied site, (2) probing by asking the participants for explanations and interpretations, and (3) analysis of written documents and natural sites taking place in the studied case. Following the same steps, the researcher has adopted a multi-method approach to data collection as means to identify and explore different dimensions of the phenomenon under investigation, and to reduce bias caused by using only one method of inquiry.

2.5.1. Classroom Observation

Classroom research is a broad term used to refer to the empirical investigations that take the classroom as a research setting. In this sense, it examines teaching and learning in the natural context. Consequently, classrooms in general and the foreign language classroom in particular are considered as prime research sites due to the unique features and conditions they provide. Several research methods have been used by classroom investigators such as observation which is considered as a developed data collection method useful for studying learning environments (Dörnyei, 2007). In this respect, Mackey and Gass say,

> Observations are a useful means for gathering in-depth information about such phenomena as the types of language, activities, interactions, instruction, and events that occur in second and foreign language classrooms. Additionally, observations can allow the study of a behavior at close range with many important contextual variables present (2005: 186-187)

Being one of the oldest research methods, observation entails documenting the observed setting using all the researcher's senses, particularly looking and listening, in a purely scientific and purposeful way to gather information about a phenomenon of interest in its natural setting. Although considered as a fundamental research instrument but it is frequently used with other methods (Given, 2008). In this vein, Mason noted that observation usually refers to,

> Methods of generating data which involve the researcher immersing [him or herself] in a research setting, and systematically observing dimensions of that setting, interactions, relationships, actions, events, and so on, within it (qtd. in Mackey and Gass, 2005: 175)

Accordingly, actions, activities and events are assessed and recorded to explore what participants do, why they behave in a particular way and with whom, what is happening in their setting, and what are the main apparent aspects in their activities. In addition, characteristics of the physical setting in which the participants act should be noted as well, such as the equipments found in it. Hence, every detail is of crucial importance and needs to be registered in order for the researcher to understand the studied case.

Therefore, the data obtained through observation are said to be eye-catching since they provide the researcher with the opportunity to gather 'live' information from 'live' situations (Cohen et al., 2000). In classroom settings, observation is considered as one of the basic data sources for empirical research because it provides direct information. However, there are many different ways by which researchers can observe classrooms, to organize these

ways three dichotomies are offered: “structured” versus “unstructured observation”, “participant” versus “non-participant observation” and “covert” versus “overt observation”. The three dichotomies are classified into three main categories as it is shown in the following table.

Observation					
According to the design organization		According to the role of the researcher		According to ethical considerations	
Structured observation	Unstructured observation	participant observation	Non-participant observation	Covert observation	Overt observation

Table: 2.4. Observation Categories

Highly structured observation, often called observational schedule, entails going into the classroom with a precise focus and planning. It needs a sort of preparation in advance where objectives and hypotheses are stated and the recording tools, such as a checklist or a rating scale, are chosen. On the contrary, the unstructured observation is less clear as it means observing before deciding what objectives or points have to be elicited from the observation. Thus, it does not involve any specific planning rather completing narrative field notes while observing.

The second classification includes two types “participant” and “non-participant observation”. The former means the total involvement of the observer in the observed process. In this case, the researcher becomes an integral member of the observed group and a member of it as well. In contrast, non-participant observation refers to the type in which the researcher is a complete observer as he is not involved in the observed setting.

The final classification consists of two main forms of observation according to ethical considerations, namely “covert” and “overt”. Covert observation means that the researcher does not inform the observed subjects about the purpose of observing them or attending the class. Thus, the observer

does not take into consideration the principle of informed consent. Whereas in overt observation the subjects are informed that they are being observed for a specific purpose.

In a case study research related to behavioural sciences, observation of the studied setting is a frequent method that can result in objective information related to the participants' behaviours and attitudes in context (Kothari, 2004). Therefore, the researcher has selected a specific observational design to investigate students' motivation in the real environment of CALL.

2.5.1.1. Aims of Classroom Observation

While collecting data through observation, the researcher aims to provide careful descriptions of students' motivation and its related constructs such as attention, interest, needs, desires, actions and activities in the classroom. It offered the observer with the opportunity to record direct information as it occurs in a setting. To quote, Dörnyei point out, "the main merit of observational data is that it allows researchers to see directly what people do without having to rely on what they say they do" (2007: 185).

Without interfering in the events in which the students are engaged i.e., non-participant observer, the researcher has sited on the back of the room to investigate and record the phenomenon of interest in order to achieve a complete understanding of what is happening during the observation section, and to gain an objective sight of the setting being investigated.

Moreover, regular observations of the participants in the selected site enabled the researcher to achieve profound understanding of the participants' motivation in context and collect data of qualitative and quantitative nature.

To put in a nutshell, observation was used as a means to explore and describe how EFL students in CALL environment learn, behave, participate and experience the setting and of course the impact of such environment on their motivation. Therefore, a kind of observational design was adopted in

addition to the planning of a particular schedule as it will be discussed in the following sub-section.

2.5.1.2. Description of Classroom Observation

Case studies are usually associated with a longitudinal approach in which observation of the phenomenon under investigation is made for a considerable period of time. In this case study, the researcher has made observation in CALL environment over one academic year to assess students' motivation using a variety of techniques to collect information.

In fact, the students were informed that they are observed without knowing the purpose behind this observation in an attempt to avoid the halo effect which may occur when the students behave in a positive manner because they like the researcher and want to provide her with the information she wants or expects.

A combination of structured and unstructured observation in which the investigator is complete observer was designed. In highly structured observation, a rating scale to be completed during observations was used to emphasize certain points. Indeed, the rating scale involves qualitative descriptions of an aspect or a human trait being judged according to the researcher's evaluation of events. It was used to emphasis specific features or constructs of the target phenomenon, and to generate numerical data.

There are many kinds of rating scales, including, semantic differential scales, Thurstone scales and Guttman scaling. However, the one which is used in this investigation is a Likert scale (named after his inventor, Rensis Likert, 1932) where a range of responses has been proposed for a given statement. In that the observer marked the degree to which motivation displays during lessons presented to students through CALL programs. Ratings on a five-point scale (extremely low- low-fair- high-extremely high) were provided for motivation related constructs. The points are classified in a table and the researcher points out her rating by putting a tick (see appendix 1). The

following is an example in which the observer determines students' interests in CALL environment.

	Extremely low	Low	Fair	High	Extremely high
The students' interests				✓	

Table: 2.5. A Five-Point Scale Rating for Students' Level of Interest

However, the researcher may ignore some points or insights which may be interesting for the research work or the students may generate some actions which are not considered in the rating scale. To capture such actions or insights, Bailey (1991) suggested that structured observation techniques may be combined with alternative forms such as note taking (Dörnyei, 2007). In general, the latter involves both descriptive and reflective notes. The former includes:

- ✓ Setting (date, time, place) and duration of the observation.
- ✓ The number of the observed items.
- ✓ Descriptions of items' interactions, activities and behaviours in the observed setting.

Whereas reflective notes encompass the observers' impressions, intuitions, perceptions and evaluations of the events that take place in the studied site recorded in a form of open-ended or qualitative comments (see appendix 2).

2.5.2. Students Questionnaire

The questionnaire is, generally, a document consisting of a limited number of questions or other forms of items designed especially to ask for information appropriate to explain and test research problems (Jonker and Pennink, 2010). It is, typically, regarded as a useful research instrument that provides qualitative and numerical data on behaviours, attitudes and opinions

from numerous informants; therefore, it has been widely employed to investigate problems in many fields, including, behavioural sciences, social sciences and English language teaching research (Dörnyei, 2007 and J. McDonough and S. McDonough, 2006). It is defined by Brown as,

> Any written instrument that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting them among existing answers (qtd. in Mackey and Gass, 2005: 92).

In the same line of thought, Wilson and McLean view the questionnaire as the suitable data collection method for gathering survey information, providing data of structured and quantitative nature, being able to be administered without the presence of the researcher, and being easy to analyse as well (Cohen et al., 2000).

Depending on how they are structured, planned and ordered, the questions or items used in a questionnaire must be designed carefully to obtain valuable qualitative and quantifiable results. In fact, there are several types of questions and response styles in questionnaires, including:

- Factual questions: seek to give the researcher some personal information or facts about the respondents such as demographic characteristics (e.g., age, sex), occupation, level of education and residential location.
- Close-ended questions: precise a variety of responses from which the respondents have to select. In general, this type includes many kinds of questions such as,
    - Dichotomous questions which entail a 'yes'/'no' response.
    - Rating scale is the one in which degrees or intensity of response are offered in a form of choices to a given question or statement.
    - Multiple choice questions are the kind in which a range of alternative responses is prescribed for the respondents to tick only one or several choices. Such questions are used to elicit responses about opinions, attitudes and perceptions.

- Open-ended questions: require the respondents to produce a free piece of writing using their own words through the provision of a blank space (e.g., dotted lines) to fill in. This type of questions seeks to obtain personalized data about views, attitudes and perceptions along with reasons for why such answers are given (Cohen et al., 2000).

Closed questions are, thus, quick and easy for the respondents to answer but they do not permit the inclusion of actual opinions, justifications and comments to the prescribed alternatives. However, these questions tend to be easy to code and very useful for quantitative treatment and analysis. Open-ended questions, on the other hand, are difficult and time consuming to administer but they enable the respondents to explain and clarify their responses, and suggest new issues. Hence, the data they provide are of qualitative nature. Nonetheless, if diverse responses are given, it will be a hard task for the researcher to code and interpret them (Dawson, 2009).

Accordingly, Dörnyei claims that the questionnaire may be used to result in three types of data depending on the nature of the questions. It provides factual data about the participants; behavioural data in terms of actions, life styles and habits; and attitudinal data mainly about opinions, beliefs, interests and values (2007).

The effective questionnaire is the one that offers valuable information for the researcher, thus the latter has to pay enough attention to the question-sequence and wording while preparing the questionnaire. The most appropriate sequence should be clear and smoothly moving from the general to the specific and from the close-ended questions to the open-ended questions. In the earlier questions, the researcher has to ask for factual information using simple items. Then, move on to closed questions giving unambiguous statements or questions. Finally, the open-ended questions have to be inserted in an accessible way asking for only one piece of information at a time (Kothari, 2004).

To put in a nutshell, the questionnaire popularity in many fields of research can be attributed to the fact that it is immensely versatile in its nature and exclusively capable of obtaining an incredible quantity of information in a relatively short period of time.

2.5.2.1. Aims of the Questionnaire

As a psychological variable, motivation in CALL environment needs to be investigated through the collection of a remarkable amount of representative data. In order to achieve this goal, the researcher has relied on classroom observation, interview in addition to a questionnaire that has been designed carefully to gather quantitative and qualitative information.

Therefore, the questionnaire which was administered to the students seeks to afford reliable and valid index of the various motivational characteristics in CALL labs. The aim behind is set out to get information about the participants using computers in different scopes. To argue, Mackey and Gass say,

> Questionnaires allow researchers to gather information that learners are able to report about themselves, such as their beliefs and motivations about learning or their reactions to learning and classroom instruction and activities-information that is typically not available from production data alone (2005: 93)

It should be noted that the researcher has opted for a questionnaire due to some reasons. During the process of selecting the research methods, the researcher has chosen interview instead of the questionnaire, but in one of the early observations, the investigator has asked some students about their interests in learning through computers. The remark that has been made is that these students still encounter serious difficulties in expressing themselves orally, however, when they were asked to write down their responses, they have written many ideas that were difficult for them to articulate. Therefore, a

questionnaire has been selected to elicit huge amount of information from students in a short period of time.

Attentively designed to assess the impact of CALL on EFL students' motivation, the present questionnaire relies on two types of questions, namely closed questions and opened questions. The former type is used to collect quantitative data, or to quote, "closed questions are useful in that they can generate frequencies of response amenable to statistical treatment and analysis" (Cohen et al., 2000: 247). Whereas the latter is drawn for the sake of accumulating qualitative information, "an open-ended question can catch the authenticity, richness, depth of response, honesty and candour which are the hallmarks of qualitative data" (ibid: 255).

From what has been stated, it can be inferred that the reliability and validity of the collected data is closely related to the nature of the questions, their wording and the order.

2.5.2.2. Description of the Questionnaire

At it has been reviewed in the first chapter, theories on motivation postulate that it is largely influenced and inspired by a variety of psychological constructs, such as perception, desire, interest, enjoyment, engagement and autonomy. Each theory emphasized certain constructs and explained how they lead to increased motivation. These psychological states were chiefly addressed in this questionnaire which was designed for students experiencing English language learning assisted by computers. The questions were elaborated to explore how these constructs are influenced by the environment CALL provides in order to explain motivation.

The opening of the questionnaire is based on the idea of informed consent, that is to say, informing the respondents about the purpose of the questionnaire and asking them to take part in the research by answering some questions. In this introduction, the researcher has also given the informants some instructions (put a tick or comment).

Later on the questions were organized in two parts. The first one seeks to attain demographic information about the participants, mainly age and gender. The second part includes 15 questions of different types. The first is a dichotomous question based on Rogers Humanistic theory which postulates that motivation is closely associated with the student's perception of environmental factors. Thus, it aims at finding about the respondents' perceptions concerning the use of technology in class. In addition, there is another dichotomous question based on the same principles (number 3) asks the students about their viewpoints vis-à-vis the effectiveness of technology in learning (see Appendix 3)

This part also contains 6 Likert scale items (2, 4, 5, 7, 8, 9 and 12) in which ratings on a five-point scale are identified for each statement or question. Item two is about students' proficiency of using technology. The students level of persistence and interest in learning English through technology is investigated in item four where the researcher assesses whether students pay attention to leaning when technological devices are used or not. Item five asks students if they get pleasure from learning language items using technology.

The fact that CALL enhances students learning and elicits high levels of involvements was examined in the seventh item. Moreover, the relevance of autonomy to motivation which has been highlighted in the self determination theory has stimulated the researcher to investigate students independence and capacity to take charge of learning which may be enhanced by the environmental conditions CALL provides in items eight and twelve.

The feedback provided by CALL programs is considered as an external stimulus that is used to reinforce students' responses. Therefore, it is a mechanism seeks to arouse students' motivation. Its usefulness it assessed in the ninth scale.

The expectancy-value theory argued that students' motivation is dependent on their expectation from learning a particular task in addition to

the value they place on learning and the way learning tasks are presented. Hence, the researcher has asked a multiple choice question (number 6) in order to check if students value learning through CALL.

Furthermore, open-ended questions were also inserted in this questionnaire. For instance, in question number ten, the respondents were given the opportunity to report if they explore other possibilities and qualities on their computers while the teacher is delivering instruction. In other terms, this question aims at identifying whether students are eager and curious to discover facts by themselves. Then they were asked to speak about the difficulties they face during the lectures presented through CALL in question number 11.

The role of the teacher in CALL classrooms is of crucial importance. The ways by which he/she manages the classroom i.e., offers solutions to problems, organizes the lecture and guides the students have remarkable effects on students' motivation. In this respect, two open questions have been used, mainly questions number 12 and 13.

It is widely expected that CALL environment constitutes a more relaxed and stress-free atmosphere. Students' impressions about such atmosphere are questioned in the final item.

2.5.3. Teacher's Interview

An equally well known qualitative data collection method to observation in case study research is interviewing. A qualitative interview involves the presentation of an oral verbal question by the interviewer (researcher) followed by an oral verbal response replied by the interviewee (Kothari, 2004). This research instrument has the advantage of providing the researcher with rich and personalized information (Hancock and Algozzine, 2006).

In fact there are many forms of interviewing such as focus group interviews, telephone interviews and e-mail interviews, but the one which is used in the study is a one-to-one interview in which the researcher asks

questions and records answers from only one participant in the study. In this vein, Kvale states,

> The typical qualitative interview is a one-to-one professional conversation that has a structure and a purpose to obtain descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomenon (qtd. in Dörnyei, 2007: 134)

One-to-one interviews can be divided into three main types according to the level of structure in the process

- Structured interview involves the use of a set of questions that are prepared in advance and administered to all the respondents in the same order and format.
- Semi-structured interview relies on the use of a precise set of pre-prepared questions that are subject to progress during the process of interviewing, thus, its format is open-ended and the interviewee is encouraged to expand the raised points through the technique of probing. Indeed, probes entail that the researcher will employ what the interviewee has said as a starting point to ask another question.
- Unstructured interview includes a general discussion of the topic after the interviewee is informed about the subject and is given the opportunity to speak freely. This type does not entail the use of any interview guide but the researcher has to think of a number of opening questions to elicit the interviewee's narratives (Dörnyei, 2007). Throughout the conversation the interviewer may ask an occasional question for further elaboration.

Along with Dörnyei (2007), in order for the qualitative interview to obtain valuable data, it must possess a number of key features.

- ✓ It runs naturally with the various questions connecting flawlessly, i.e., the interviewer must give the respondent the occasion to express the piece of information freely without interrupting him/her.
- ✓ It is rich in details. In this area the use of probes can make the difference.
- ✓ The neutrality of the researcher which lies in the fact that the interviewer should ask the questions without imposing his personal views or directing the interviewee to provide specific answers, i.e., bias.

Like the questionnaire, interview may also include four types of questions: factual, dichotomous, multiple choice and open-ended depending on its design organization. The researcher should pilot it in order to check the quality of the questions and the way of asking them in order to get data of good quality.

2.5.3.1. Aims of the Interview

Hancock and Algozzine (2006) claim that Semi structured interview is the suitable type for case study research especially when the researcher has a clear idea about the studied phenomenon. Therefore, it has been chosen for the study. Moreover, this interview format was selected on the basis that the researcher was able to insert questions in advance about the topic and did not want to employ prêt-à-porter response categories that may restrict the deepness and length of the respondent's story. This type therefore requires "an interview guide" which is discussed in the following sub-section.

In order to gather data from diverse sources, the present interview was designed for the teacher with whom the researcher attended CALL lectures within the selected sample. Since there were no teachers who teach English through computers regularly in the department of English language this interview was especially designed for one teacher. Therefore, the objective of using semi-structured interview in this study is to cope with the teacher's evaluation of the motivational role of CALL and also to enhance the validity of

the collected data so that it will not reflect only the researcher's judgements (classroom observation) and students' opinions (questionnaire).

To sum up, semi-structured interview was used for the sake of highlighting the teacher's expectations from using CALL, and also her assessment of students' motivation to learn English while using computers.

2.5.3.2. Description of the Interview

After selecting the semi-structured type of the interview, the researcher has carefully designed a series of steps starting first with the ethical considerations and mainly the idea of informed consent. Then the researcher has prepared an interview guide which is composed of few relevant questions of different natures, notably closed-ended and open-ended questions.

However, before describing the questions, it should be mentioned that the researcher has relied on note taking to record information, thus, a space has been left after each question to write down the interviewee's answers and comments. Despite the fact that it is a hard task for the researcher to concentrate on all what the informant is saying and to probe where necessary this recording tool has some advantages. According to Dawson, "interviewees may think they have something important to say if they see you taking notes – while you write they may add more information" (2009: 67).

The first two items of the interview are easy personal questions asked for the purpose of gaining factual information and helping the interviewee to relax and consequently encouraging her to open up. The following items are content questions in which the researcher seeks to get the teacher's opinions, performance, evaluations and experiences. Nonetheless, the final closing question has been carefully designed to permit the interviewee to have the final say (see appendix 4).

Depending on what the respondent will say, probes were also planned in the interview guide to ask for more information and enhance the richness and depth of the response. For example,

- ✓ That's interesting; can you explain this fact in more details?
- ✓ Can you elaborate a little more?
- ✓ Could you expand upon that idea a little?

The research methods employed in this study were carefully designed to result in complementary data, i.e., the points that cannot be addressed in classroom observation like students' perceptions, expectations and impressions were evidently examined in the questionnaire. On the other hand, the issues that were not tackled in the questionnaire such as students' actions, interactions, the physical environment and the techniques employed by the teacher to manage the classroom were assessed in a number of classroom observations. Furthermore, a semi-structure interview was used to ask for the teacher's personal point of views regarding the motivational role of CALL in order to increase the reliability and validity of the gathered data. In this way, the researcher has tried to capture all the possible variables that contribute to students' motivation. The following figure summarizes the procedures of data collection employed by the researcher.

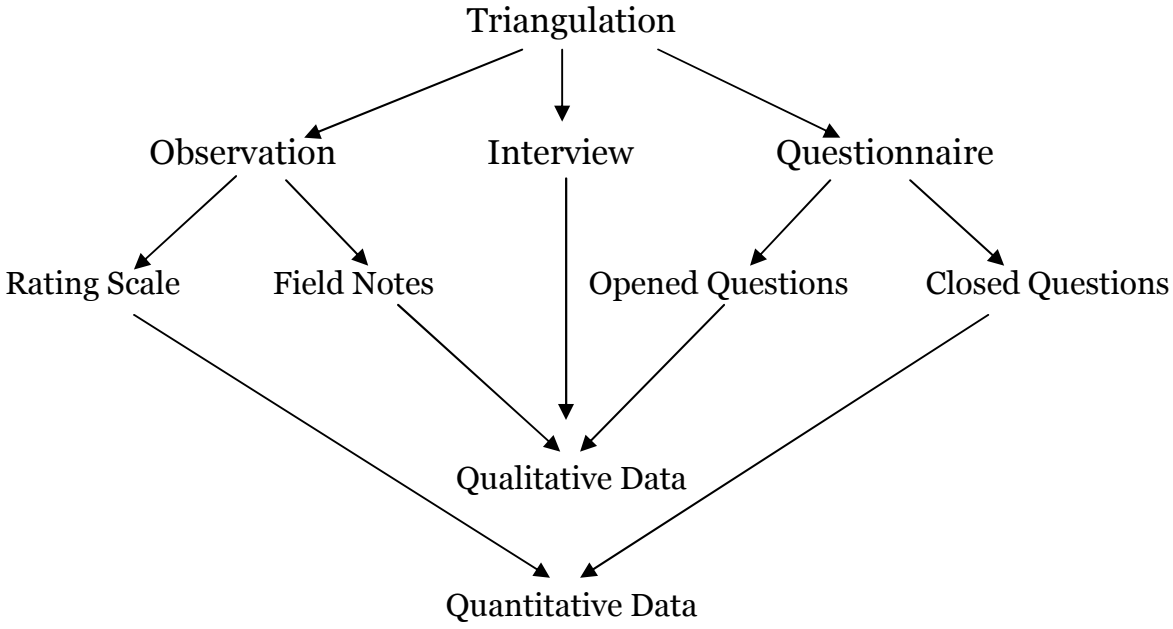


Figure: 2.2. Data Collection Procedures

1.6. Approaches to Data Analysis

As Brown points out, collecting the necessary data is 'half the battle', thus, researchers need to tackle the other half which encompasses the analysis of these data. In fact, analysis is the process by which the researcher organizes, simplifies, abstracts transforms and summarizes the obtained data. Cooper and Schindler perceive the process of data analysis as, "editing and reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques" (qtd. in Jonker and Pennink, 2010: 142).

Since the chosen research instruments were carefully designed to obtain quantitative and qualitative information, the analysis of these data will be quantitative and qualitative as well.

1.6.1. Quantitative Data Analysis

A quantitative approach to data analysis has been employed in order to provide a clear and objective overview of the data. Given (2008) claims that the analysis of quantitative data is useful in enhancing the validity, credibility, honesty and transferability of the research results. Indeed, quantitative analysis incorporates the use of a range of mathematical procedures, called statistics (Dörnyei, 2007). However, statistics are of two kinds: descriptive and inferential. The objective of descriptive statistics is to summarize and portray the collected information in numbers and figures, whereas inferential statistics aims at making generalizations from a sample to the entire population (Given, 2008). For the purpose of presenting a complete picture of the studied phenomenon, the two kinds were used in the present research work.

Nonetheless, undertaking mathematical procedures is not the only process in analysing quantitative data. There are other procedures that include arranging the gathered data, reporting the results and discussing them. Therefore, the researcher has followed a set of interrelated steps proposed by

Creswell (2012) while analysing the rating scale used in classroom observation and the closed questions mentioned in the questionnaire.

- ✓ The first phase entails preparing the data for analysis and determining how to assign numeric scores to the data. This process is also known as coding, it is defined by Kothari as, "assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classes" (2004: 123).
- ✓ The second phase involves analysing the data using both descriptive and inferential statistics. Conducting a descriptive analysis of the information involves calculating percentages of scores. Along with descriptive statistics, inferential statistics were used to generalize the findings to other language students, i.e., to make inferences. In general, researchers have proposed three inference modes: abduction that is proposing a hypothesis after studying observational data; induction which means testing the proposed hypothesis; and deduction which was selected for the study. Typically, deductive reasoning can be achieved when the researcher proposes a hypothesis from a theory, opts for a representative sample, collects quantitative information and then makes generalizations after testing the hypothesis.
- ✓ In the third stage, the researcher reports the statistical results in:
    - ➢ Tables that sum up statistical information in rows and columns. In fact, a specific table is designed for each variable mentioned in the rating scale.
    - ➢ Pie-Charts that represent the data gathered from every quantitative question or statement used in the questionnaire.
    - ➢ And passages that provide detailed explanations after each table and pie-chart.
- ✓ The last stage includes interpreting the findings with reference to the theories of motivation mentioned in the literature review, deducing the research limitations and concluding with some suggested recommendations.

1.6.2. Qualitative Data Analysis

Broadly speaking, qualitative data analysis is a simple process which requires a full understanding of the collected data in order to be able to deduce answers for the research questions. It is defined by Dawson as, "a very personal process, with few rigid rules and procedures" (2009: 116). He further states that it consists of three main processes:

- ✓ Thinking about the data during the procedure of collection.
- ✓ Judging the value of the data.
- ✓ Interpreting the data so that the readers can understand the studied phenomenon.

In highlighting the main characteristics of qualitative data analysis, Dörnyei (2007) stated that it is a language based analysis because most of the qualitative findings are transformed into a textual form. Moreover, it is iterative in its nature follows a non-linear pattern. In contrast with quantitative data analysis which begins with selecting the sample, choosing the research instruments then gather and analyse the data, there is no particular step in which qualitative data analysis starts rather the researcher moves back and forth between the process of collecting, analyzing and interpreting the data.

While analysing the qualitative findings gained from note taking, the questionnaire's open-ended questions and the teacher's interview, the researcher has relied on inductive analysis, i.e., analysing the findings in texts and passages.

1.7. Conclusion

Chapter two embodies the main steps followed by the researcher while collecting primary data, ranging from the choice of case study as the suitable research approach to explore the motivational value of CALL enhanced by the use of a mismatch of quantitative and qualitative approaches to data collection, to the selection of a sample that is representative to the wider population in order to make generalizations.

Then, the researcher has moved to the description of the setting in which the study is conducted and listing the research instruments used to gather quantitative and qualitative data, namely classroom observation, questionnaire and interview. Furthermore, a detailed description of both instruments has been provided in addition to the aim behind their use.

As a final step, a quantitative approach including descriptive and inferential statistics have been reviewed in order to analyse the quantitative findings as well as a qualitative approach involving inductive analysis has been defined to summarize the qualitative results.

The following chapter will analyse and discuss the findings of each research instrument in addition to the interpretation of the main results according to the research questions and hypotheses formerly raised.

Chapter Three:

Data Analysis and Interpretations

Chapter Three: Data Analysis and Interpretations

3.1. Introduction
3.2. Analysis of Classroom Observation
    3.2.1. Field Notes
        3.2.1.1. The Performance of the Teacher
        3.2.1.2. The Performance of the Students
        3.2.1.3. Teacher-Students Relationships
        3.2.1.4. The Classroom Atmosphere
    3.2.2. Rating Scale
    3.2.3. Discussion of the Results
3.3. Analysis of Students Questionnaires
    3.3.1. The Findings
    3.3.2. Discussion of the Findings
3.4. Analysis of the Teacher's Interview
    3.4.1. The Results
    3.4.1. Summary of the results
3.5. Interpretation of the Main Findings
3.6. Limitations
3.7. Conclusion

3.1. Introduction

In the previous chapter the researcher has described the design of the present research work which involved the selection of a number of data collection techniques, namely classroom observation, questionnaire and interview. The main results obtained from the three data collection methods are going to be systematically analysed, discussed and interpreted in this chapter in an attempt to answer the research questions.

This chapter, therefore, stands for the practical part of the study which involves the combined use of both quantitative and qualitative data analysis techniques.

3.2. Analysis of Classroom Observation

In the present study, classroom observation was selected to document the teacher's and students' behaviours, interactions and actions where CALL materials are used as tools to introduce learning tasks. To collect the required data, the researcher has attended 15 sessions using a draft to write down information about the environmental conditions being paired with a rating scale prepared in advance for all the observed sessions to account for motivation related variables. The former is going to be treated qualitatively in texts and passages; whereas the latter will be analysed using quantitative techniques.

In the following sub-sections, the main results obtained from note taking and rating scale are reviewed and followed by a discussion related to the aforementioned hypotheses and secondary data, mainly motivation theories and CALL benefits.

3.2.1. Field Notes

The major purpose behind taking notes while rating a variety of motivation related variables is to describe the classroom sessions including both students' and the teachers' performance, the teacher-students

relationships, the physical environment and the classroom atmosphere. This technique may add validity to the results of the questionnaire; therefore, may provide a better understanding of the motivational role of CALL.

3.2.1.1. The Performance of the Teacher

For the sake of developing the students' oral production skill, the teacher has selected a number of CALL materials for developing listening strategies, speech-making and spoken interaction. During the first lectures the teacher has informed the students that they will first receive some lectures to develop their listening skill using a variety of programs such as Word Processors and Windows Media Player. Then, they have to prepare an oral presentation using multimedia computing.

Concerning the students' listening skill, the teacher has selected some learning experiences in which pieces of recorded speech are sent to the students' personal computers. The students are required to catch the words delivered to them and write what they have heard. However, before engaging students in these learning tasks, the teacher has described the entire process in details, dealing especially with the main computer software and hardware used.

Before presenting free talks using PowerPoint, the teacher has explained the main steps of planning an effective PowerPoint presentation giving the following instructions:

- Your Oral Presentation Should Contain:
  - An opening that makes your audience eager to hear what you are you going to say.
  - Main points that express a few main ideas in a clear and simplified words.
  - A closing that summarizes the main points and opens the door for negotiations or debates.
- The slides should be concise and precise.

- They should also contain the main points in one line or two and not long paragraphs.
- Do not forget that it is an oral production lecture and not reading comprehension, thus, the role of the slides is to remind you about the selected ideas.
- Enhance your ideas with pictures, graphics, sounds and videos if you can to capture your peers attention.

During the presentations, the teacher was most of the time walking around, listening to the students, helping them when facing technical problems and trying to engage the whole group in learning. After the students had finished with the talk, the teacher immediately asked those who were listening about their opinions and impressions about the presented topic. She directed her speech to all the students without exception even those who did not seem interested in the lesson.

When mistakes were made, she pronounced the mistaken word with high pitch and let the students discover the fault and correct it using their e-dictionaries.

At the end of each discussion, the teacher evaluates the topic, the slides and the students' performance enlightening first the positive points, then dealing with the negatives so that the other students would be aware of them while presenting their topics.

The frequently marked note in the fifteen observations is that the teacher was most of the time smiling when explaining unclear ideas the fact that encouraged students to express themselves without stress.

All along the researcher's presence with her in the classroom, the teacher was unable to solve many of the technical problems that students met. In many occasions some students were helping their peers and teacher to overcome these obstacles which indicated that there was a lack of technical knowledge on the part of the teacher.

3.2.1.2. The Performance of the Students

Throughout the first semester, the students have received some listening activities in which they utilised a variety of software and hardware components. Once they receive a recording from their teacher, they open it using Windows Media Player. Through Headphones, they listen carefully to the speech and type it using Microsoft Word, then send it back to the teacher for correction.

During the second semester, the students were asked to choose a topic of interest and prepare a presentation using Microsoft Office PowerPoint. They were allowed to work individually, in pairs or in groups of no more than four members, their performance during the presentations included

1) A talk: it was an oral presentation of the topic in which the students started with greeting the audience, calling for attention then introducing themselves. In a short introduction, they stated the title and the purpose of the talk; later on they presented the main points of the talk in Slides using quotations, examples and figures. The slides were brief and most of the time full of audio-visual stimulations. This normally took 15 to 20 minutes.
2) A discussion: this happened at the end of each presentation. It included mainly the audience (i.e., students and teacher) comments and questions.

In addition, the assigned lectures comprised from time to time some activities in a form of Quiz in which students were asked to answer closed questions, fill in gapped passages and match sentences. The immediate feedback they received after each response has made the process very enjoyable because they were noted as very attracted and stimulated to complete the task.

Over the fifteen observations, the researcher has noticed that the majority of the students had an acceptable technical knowledge that enabled them to

direct their own learning in many sessions. However, once they experienced the use of new computer components, they were marked as stressed and dependent students especially in the fifth and tenth observations.

3.2.1.3. Teacher-Students Relationships

The relationship between the teacher and the students is a crucial circumstance for a motivating learning environment. In this respect, Jones and Jones (1998) stressed that the quality of the relationship that merges the teacher with his/her students in the classroom has a strong influence on whether the students' internal needs are satisfied or not (Coetzee, 2008). Therefore it has been taken into account during all the observations.

The researcher has noticed that the teacher had a good relationship with every student which helped them a lot in carrying out tasks and engage in learning. The feedback she provided with a smiling face after each student's response, even the incorrect ones, has reinforced students to interact and exchange ideas freely without fear of ridicule. Moreover, the optimistic language she has used with the students like "it is quite easy, just try you can do it" has encouraged them a lot to complete learning activities, develop their unique abilities and instigate in them a sense of creativity.

Further, it should be mentioned that the teacher was most of the time trying to ensure that all the students are encouraged, however, the technical problems and the time pressure constituted a handicap that hindered the creation of a positive classroom climate. It has also been noted that she was interacting with all the students equally in a positive way which has certainly influenced their expectations and pushed them to accomplish more challenging tasks.

Moreover, the teacher has demonstrated that she is personally interested in the students by calling them using their first names, saying "Good morning, Asma", "Hi, Youcef", "Welcome, Mohammed", and specifying some minutes to discuss external topics with the students about their lives and interests.

3.2.1.4. The Classroom Atmosphere

The atmosphere in the classroom is an important factor for an effective classroom management. It has been emphasised in many motivation theories which stressed the maintenance of an atmosphere of comfort and mutual respect that supports learning, working and achievement.

Over fifteen sessions, a learning atmosphere in which the teacher and students feel respected by and connected to each other has been noticed, i.e., there were neither disruptions nor disciplinary problems. Throughout thirteen observed sections, the teacher has created a relaxed and stress-free atmosphere of high expectations in which CALL materials were selected, planned and varied lessons were presented and discussions were managed.

The activities such as discussions have given the students a sense of belonging and connection with the environment that encouraged the free exchange of ideas and, thus, willingness to learn.

However, in the fifth and tenth observations, the majority of the students were afraid to fail in their attempts at new CALL experiences and were noted as too dependent on their teacher. It should be also noted that during the fifth session there was a problem in the light because it stopped several times.

Furthermore, there were other factors that have negatively affected the classroom atmosphere and students' motivation during all the observed lectures such as the problems in the students' computers that obliged the teacher to put more than one student in front of one computer.

3.2.2. Rating Scale

Aiming at summarizing the relative occurrences of different students' behaviours in the classroom, a Likert-type scale was used to provide guidance to the observer in making decisions about five degrees of incidence (extremely low- low- fair- high- extremely high) based on her judgements of what she has observed over 15 observations. It sought to address the following motivation

related constructs: interest, curiosity, attention, engagement, autonomy, participation, enjoyment, stress, confidence, satisfaction, willingness, persistence, efforts and enthusiasm. In fact, ratings were marked according the number of the students e.g., if the all the students express high interests in learning, a tick would be put on the fourth column (extremely high).

- ✓ Item one: students' interests

Interest refers to the extent to which students express a desire or a tendency to learn. Some educational psychologists consider interest in learning as a form of intrinsic motivation, therefore, the researcher wanted to see if CALL grasp students' interests in learning English as a foreign language. The following table summarizes the levels of interests that the students showed during the 15 observations.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2			✓		
Observation 3					✓
Observation 4				✓	
Observation 5		✓			
Observation 6				✓	
Observation 7					✓
Observation 8				✓	
Observation 9				✓	
Observation 10		✓			
Observation 11				✓	
Observation 12					✓
Observation 13				✓	
Observation 14				✓	
Observation 15					✓

Table: 3.1. EFL Students' Interests while Learning through CALL

Students' interests while learning through CALL were not permanent, they decrease and increase as a result of external conditions. Nonetheless, the table cited above demonstrates that CALL has positive effects on students' interests which were high in eight sessions and extremely high in two. However, the students have also showed lower rates of interest on two observed sessions due to technical problems.

- ✓ Item two: students' curiosity

Because motivation is more than simply interest, emphasis was also placed on searching other variables such as curiosity which is in turn regarded as the driving force that underlies intrinsic motivation and interest. The role of CALL in stimulating students' curiosity is shown in the following table.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2			✓		
Observation 3					✓
Observation 4				✓	
Observation 5		✓			
Observation 6				✓	
Observation 7			✓		
Observation 8				✓	
Observation 9					✓
Observation 10		✓			
Observation 11				✓	
Observation 12				✓	
Observation 13			✓		
Observation 14			✓		
Observation 15				✓	

Table: 3.2. EFL Students' Curiosity in CALL Environment

The ratings in the above table denote that students' curiosity was very high during two observations, high in seven, fair in four and low in two. It is closely linked to interests, that is to say, if the students are interested in learning, they are consequently curious and eager to explore and vice versa.

- ✓ Item three: students' attention

As announced by Moreno (2010) while explaining Bandura's social learning perspective, attention is major sub-process that should be addressed for increased motivation through sustaining students' interest in learning. Once interest is raised, attention is immediately directed towards learning, it is a purely internal process by which students allocate their cognitive resources to a task or a stimulus. This is why, the animation, sound effect and feedback provided by CALL software components tended to focus students' attention on learning. The table below presents the degrees to which EFL students pay attention while using CALL materials.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2			✓		
Observation 3				✓	
Observation 4				✓	
Observation 5			✓		
Observation 6				✓	
Observation 7					✓
Observation 8				✓	
Observation 9				✓	
Observation 10			✓		
Observation 11				✓	
Observation 12					✓

Observation 13				✓	
Observation 14				✓	
Observation 15					✓

Table: 3.3. EFL Students' Attention when Using CALL Materials

Clearly, the results in the above table reveal that EFL students' attention was extremely stimulated throughout three observations. In nine sessions, a great deal of students demonstrated high attention to learning tasks whilst using computer devices. Nevertheless, their attention was not clear in three sessions. Such findings prove the efficacy of CALL in attracting the attention of the students and keeping them on learning tasks or experiences.

- ✓ Item four: students' engagement

Rogers' motivation theory hypothesized that the key to motivation to learn is engagement which refers to the students' active involvement that can be positively affected by the appropriate environmental conditions. When properly used, CALL tools are supposed to promote students' engagement in learning. The correctness of this claim is going to be treated in the following table. In fact, it was by means of interactions with the teacher, peers and the computer that the researcher rated the students' degree of engagement.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2			✓		
Observation 3				✓	
Observation 4				✓	
Observation 5	✓				
Observation 6				✓	
Observation 7				✓	
Observation 8				✓	
Observation 9				✓	

Observation 10		✓			
Observation 11					✓
Observation 12					✓
Observation 13				✓	
Observation 14				✓	
Observation 15				✓	

Table: 3.4. EFL Students Engagement in CALL Environment

Over two observations, all the students demonstrated extremely higher rates of active engagement and in ten occasions the majority of them were highly involved in learning. In the fifth observation, their level of engagement was rated as extremely low and in the tenth as low because the researcher has noticed that they lost in keeping their attention and interest.

- ✓ Item five: students' autonomy

As a pedagogical mainstream, CALL aims at promoting students' sense of autonomy by offering them with a learning environment that allows them to interact independently with the computer which in turn gives diverse sources of information and options. The extent to which EFL students were autonomous in such an environment is shown in the following table.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1			✓		
Observation 2				✓	
Observation 3				✓	
Observation 4					✓
Observation 5		✓			
Observation 6			✓		
Observation 7				✓	
Observation 8			✓		
Observation 9					✓

Observation 10	✓				
Observation 11				✓	
Observation 12				✓	
Observation 13			✓		
Observation 14			✓		
Observation 15				✓	

Table: 3.5. Students' Autonomy while Using CALL Tools

The results marked in the above table denote that the entire class was highly autonomous in two occasions, and in six observations the majority of students showed high levels of autonomy. They were neither autonomous nor dependent during five observed lectures. Nevertheless, the students were totally dependent on their teacher in two observations when they experienced the use of new computer components which demonstrated their lack of technical knowledge.

- ✓ Item six: students' enjoyment

If students' behaviours are naturally and internally driven towards the accomplishment of certain tasks, learning will be enjoyable, pleasurable and effective. Therefore, the enjoyment of learning is considered as a characteristic of intrinsically motivated students. The enjoyment that EFL students got from engaging in CALL activities is scored below.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1					✓
Observation 2			✓		
Observation 3					✓
Observation 4				✓	
Observation 5	✓				
Observation 6					✓
Observation 7					✓

Observation 8			✓		
Observation 9				✓	
Observation 10	✓				
Observation 11					✓
Observation 12					✓
Observation 13			✓		
Observation 14			✓		
Observation 15				✓	

Table: 3.6. EFL Students' Enjoyment of CALL Activities

Findings accumulated over six observations indicated that while using computer components in learning, all students produced higher rates of task enjoyment. During three sessions a considerable number of students found learning through computers enjoyable. In four sessions, their level of enjoyment was neither high nor low, and in two occasions the entire class expressed extremely low levels of enjoyment.

- ✓ Item seven: students' level of stress

A successful CALL environment requires the establishment of a stress-free atmosphere to result in increased motivation. Stress is an affective variable that most pervasively hinders the learning process. Students' high level of stress can lead to motivation impairment, thus, it has been assessed in the present study to indicate the worry and fear aroused when learning through or using computers.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1	✓				
Observation 2	✓				
Observation 3	✓				
Observation 4	✓				
Observation 5				✓	

Observation 6		✓			
Observation 7	✓				
Observation 8			✓		
Observation 9	✓				
Observation 10				✓	
Observation 11	✓				
Observation 12	✓				
Observation 13	✓				
Observation 14	✓				
Observation 15	✓				

Table: 3.7. EFL Students' Level of Stress while Learning through Computers

Throughout eleven observations all the students showed a very low level of stress and during only one observation few of them were stressed. In single observed session their level of stress was fair and in two occasions they generated higher rates of stress.

- ✓ Item eight: students' confidence

Learning by computers is expected to make students feel more confident to communicate in the target language. In fact, students' self-confidence is considered as one of the most important contributors to motivation. The role of CALL in supporting students' self confidence is rated in the following table.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1					✓
Observation 2				✓	
Observation 3				✓	
Observation 4					✓
Observation 5		✓			

Observation 6					✓
Observation 7				✓	
Observation 8		✓			
Observation 9					✓
Observation 10		✓			
Observation 11				✓	
Observation 12				✓	
Observation 13				✓	
Observation 14				✓	
Observation 15					✓

Table: 3.8. EFL Students' Self-confidence in CALL Environment

The results confirmed that CALL activities developed students' confidence to the extent that all of them were motivated to use the target language and communicate with their surroundings during five observed lectures. The largest part of the observed group was generally rated as highly confident in seven observations, and as unconfident in three.

Item nine: students' willingness

Willingness is a motivational feature that is rooted in the students' desire to undertake learning activities. Among the ultimate goals of CALL programs is the enhancement of students' willingness to learn the language. Therefore, the degree to which students expressed a willingness to carry out learning experiences through CALL is marked in following table.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2		✓			
Observation 3					✓
Observation 4				✓	
Observation 5			✓		

Observation 6				✓	
Observation 7				✓	
Observation 8				✓	
Observation 9					✓
Observation 10			✓		
Observation 11				✓	
Observation 12				✓	
Observation 13				✓	
Observation 14				✓	
Observation 15				✓	

Table: 3.9. EFL Students' Willingness when Learning through Computers

The results indicate that the observed group willingness was greatly inspired in two sessions and in ten the researcher has noticed that the majority of the group members were highly willing to learn. Through two observations, their willingness was rated as fair and in one as low.

- ✓ Item ten: students' persistence

Motivation is made up of a variety of psychological behaviours, among which is persistence. The latter refers to putting forth effort to continue to do something in spite of opposition. High motivation is generally associated with greater persistence in the face of difficulty and boredom. The level of persistence students produced in the fifteen observations is marked in the following table.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2				✓	
Observation 3					✓
Observation 4			✓		

Observation 5			✓		
Observation 6				✓	
Observation 7				✓	
Observation 8			✓		
Observation 9				✓	
Observation 10			✓		
Observation 11				✓	
Observation 12					✓
Observation 13			✓		
Observation 14				✓	
Observation 15				✓	

Table: 3.10. EFL Students' Level of Persistence in CALL Activities

The continuity of students' systematic efforts to gain understanding of the learning material presented through computers was judged as extremely high in two sessions, high in eight and fair in five.

- ✓ Item eleven: students' enthusiasm

Enthusiasm is a positive affective state that, as mentioned in the literature review, is likely to promote motivation and learning. It is apparent when students display high energy, vitality and excitement about learning. The flexibility that CALL environment provides is supposed to raise students' enthusiasm for achieving high motivation. The following table clearly shows the enthusiastic role of CALL in EFL classrooms.

Ratings / observations	Extremely low	Low	Fair	High	Extremely high
Observation 1				✓	
Observation 2			✓		
Observation 3					✓
Observation 4			✓		
Observation 5		✓			

Observation 6				✓	
Observation 7				✓	
Observation 8			✓		
Observation 9					✓
Observation 10			✓		
Observation 11				✓	
Observation 12					✓
Observation 13				✓	
Observation 14				✓	
Observation 15					✓

Table: 3.11. EFL Students' Enthusiasm while learning through Computers

The table clarifies that over fifteen observations the level of students' enthusiasm has been marked as extremely high in four sessions, high in six, fair in four and low in one.

3.2.3. Discussion of the Results

Attending CALL sessions within the selected sample has given the researcher the opportunity to assess all the possible elements that may contribute to motivation. The obtained results have given a clear idea about both external conditions and students' internal events.

While using technological devices such as computers and data show in learning, most students were excited and enthusiastic. It has been found that applications such as Word Processors, graphic tools, and presentation software were helpful in enhancing their task enjoyment and persistence, and consequently motivating them as it is illustrated in the following graphical presentation.

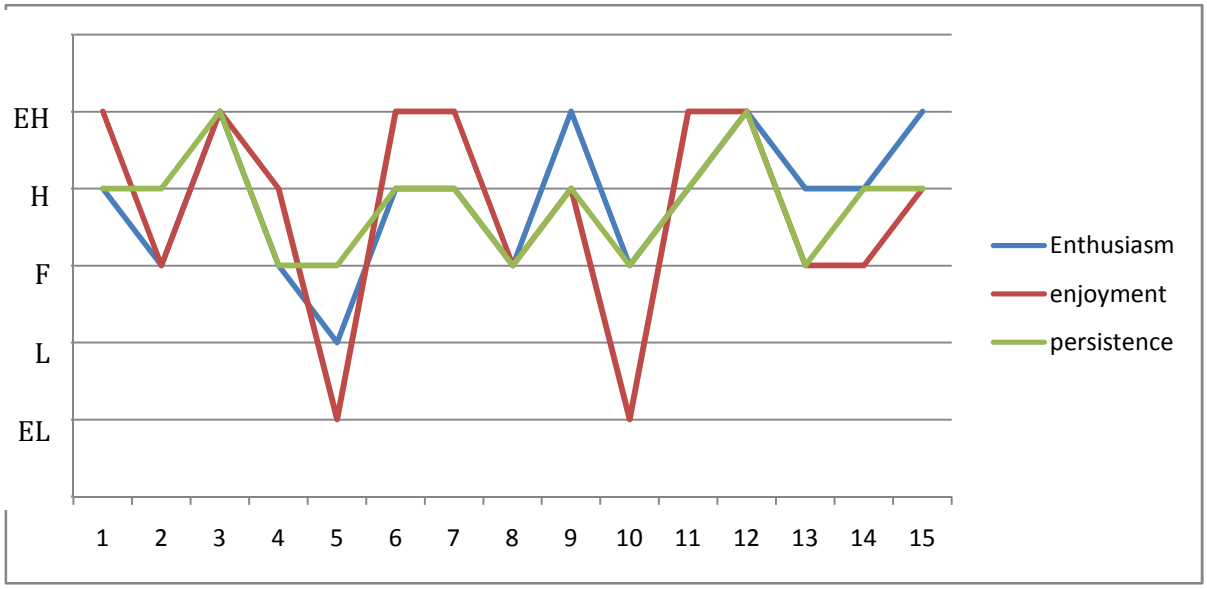


Figure: 3.1. The Levels of Students' Enthusiasm, Enjoyment and Persistence over Fifteen Observations

Moreover, the students have shown high levels of interest, curiosity, attention and willingness during the majority of the observed sessions which indicated that they were motivated to learn the language through technology. Nonetheless, these internal states were too dependent on the students' perceptions of the environmental factors, that is to say, if a supportable CALL atmosphere was created, the students were curious and interested in learning, but once they encountered problems they lost they interest which directly resulted in lower rates of curiosity and attention. The following graphical presentation gives a clear idea about EFL students' interests, curiosity, attention and willingness throughout the fifteen sessions.

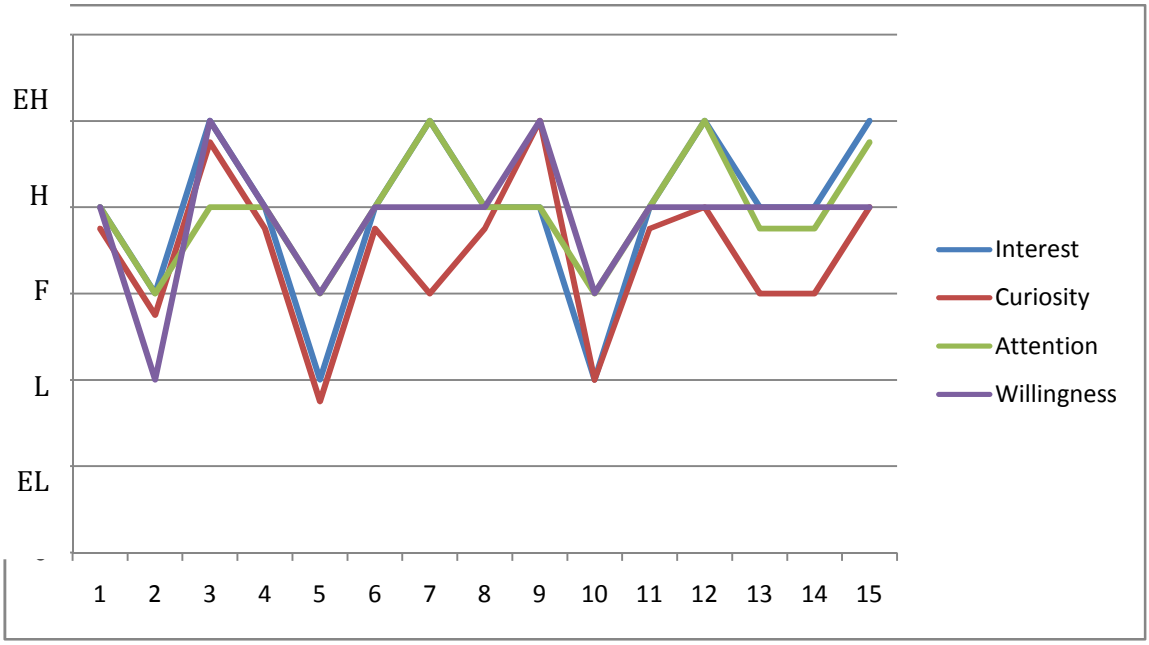


Figure: 3.2. EFL Students' Interests, Curiosity, Attention and Willingness all through the Fifteen Observations

Furthermore, the self determination theory postulated that students' intrinsic motivation increases when they are provided with opportunities to take personal responsibilities for their own learning. It also stressed the role of external social circumstances in fostering students' internal drives. In addition, the constructivists have also recognized the importance of autonomy for increased motivation. Thus, according to both theories high motivation requires autonomy supporting classrooms. Over fifteen observations, students' autonomy has been rated as high in only eight observations when a stress-free atmosphere was provided. It has been noticed throughout these eight sessions that while interacting with the computer, the students were able to write recordings and create presentations that reflected their degree of motivation and engagement. Therefore, CALL experiences were motivating when students were able to direct and control their own learning in the appropriate environment. The following figure summarizes students' autonomy, engagement and stress during all the obsevations one graphical presentation.

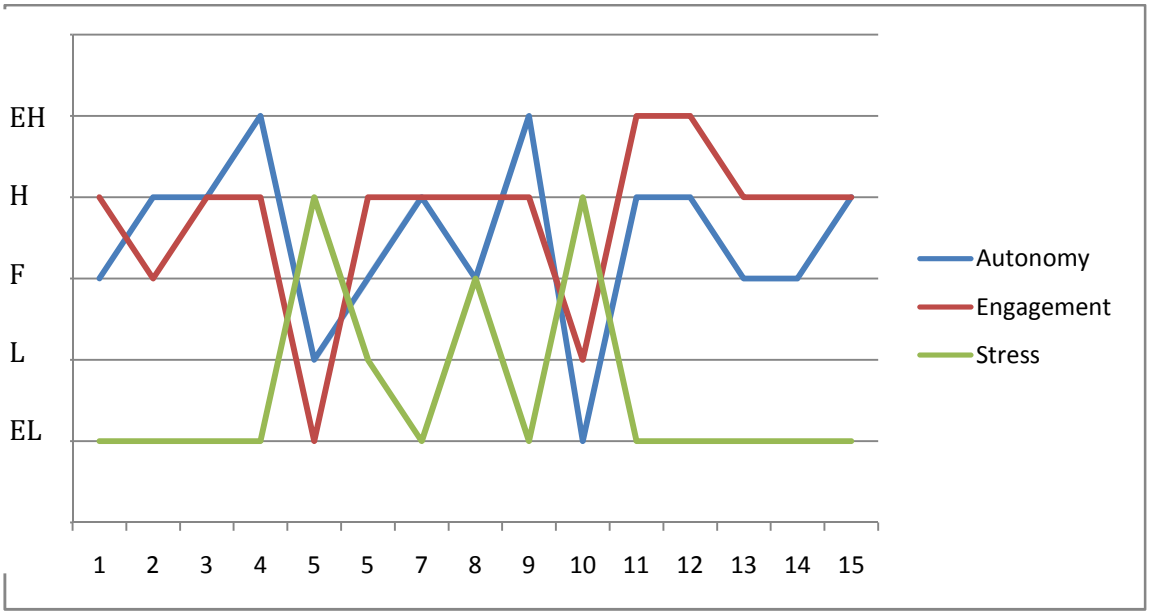


Figure: 3.3. EFL Students' Autonomy, Engagement and Stress during all the Fifteen Observations

The students' self esteem and feeling of belongingness are considered by Maslow as motives that must be maintained. Thus, the students need to feel confident and connected with their surroundings in order to reach high degrees of motivation. These basic needs have been rated as high in the majority of the observed sessions which once again proves the effective role of CALL in motivating students. The following graph illustrates the extent to which EFL students were self-confident when using computers in learning.

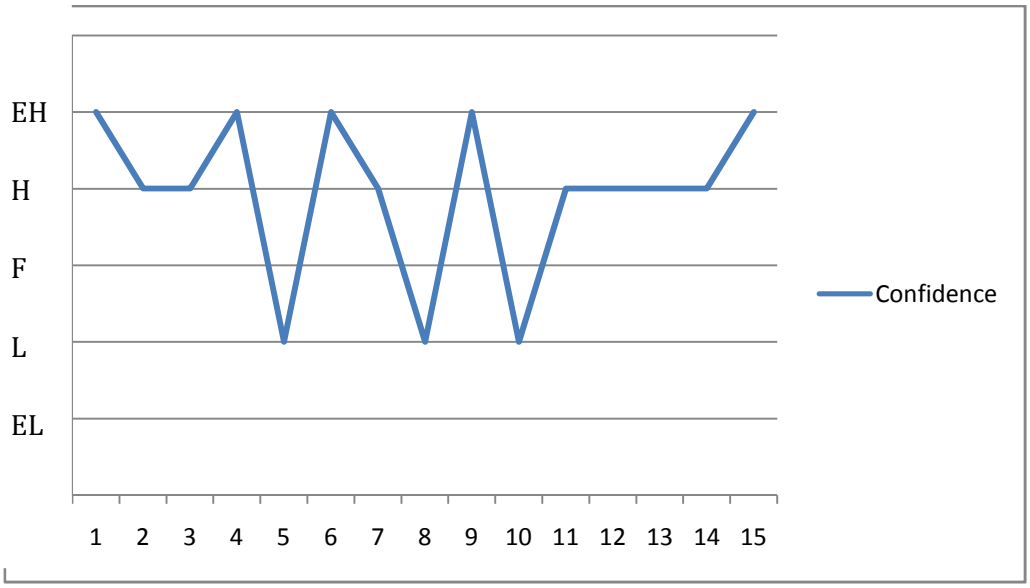


Figure: 3.4. EFL Students Self-Confidence throughout Fifteen Observations

When analyzing the results the researcher has also noticed that the timing of the lectures has had a strong influence on the class atmosphere and motivation related constructs as well. The students have shown high levels of willingness, interest, attention, interest, curiosity, engagement, enjoyment and persistence in almost all Tuesdays' lectures when they started at 10:00 am. However, when attending Wednesdays' class lectures at 11:30 am, the students seemed very tired and most of the time unwilling to learn.

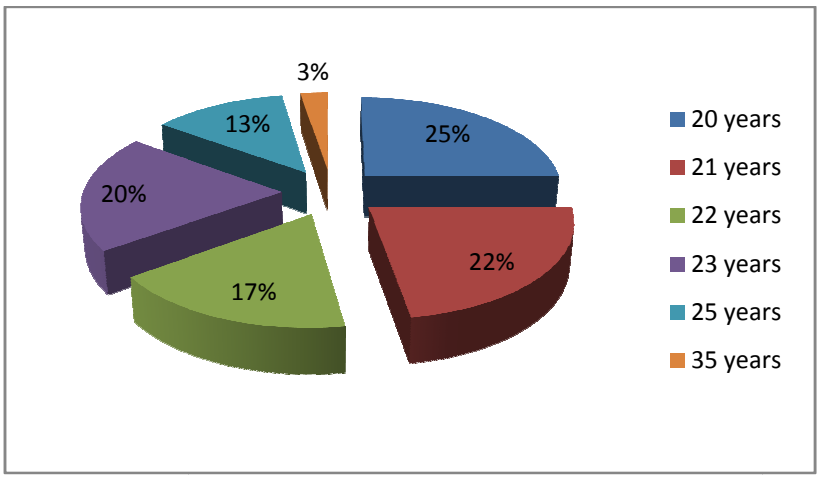
3.3. Analysis of Students' Questionnaire

The administration of the questionnaire was made in the first week of March during the participants' first semester exam in order to ensure that all the students would fill in and give back the questionnaire. In fact, filling the questionnaire took 15 minutes.

3.3.1. The Findings

After administering the questionnaire, the researcher has treated the collected data in Pie-charts and analysed the items according to their appearance and order in the questionnaire.

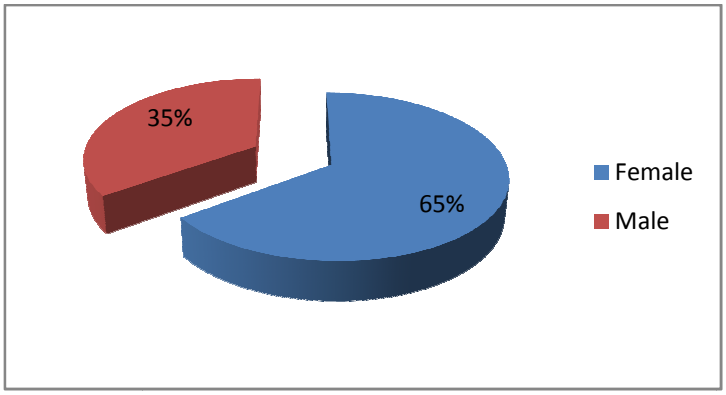
- Part one:
  - Item One: Students' age



Pie-chart: 3.1. Student's Ages

It is worth reminding that the questionnaire had been distributed over to forty students and that all of them gave it back. The results show that most of the informants (97%) are young adults aged between twenty and twenty five years except one who is thirty five years old.

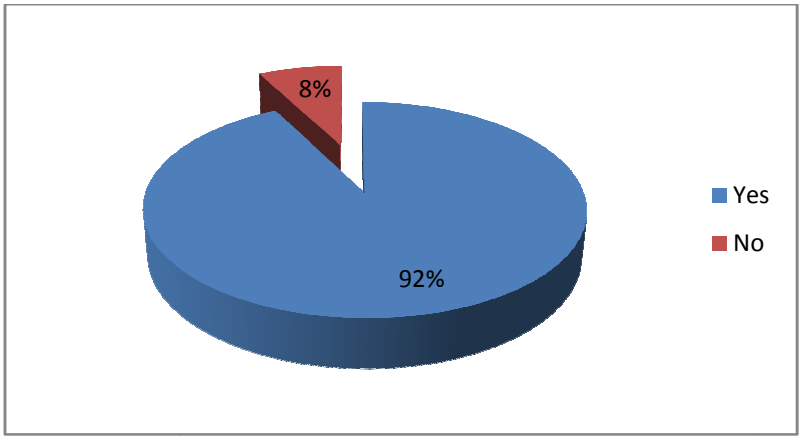
- Item two: Gender of the informants



Pie-chart: 3.2. Students' Gender

As mentioned previously, this classroom embodies forty (40) students. The pie-chart reveals that 65% are females and 35% are males. This makes it clear that the collected data do not reflect only one gender of informants but both sexes.

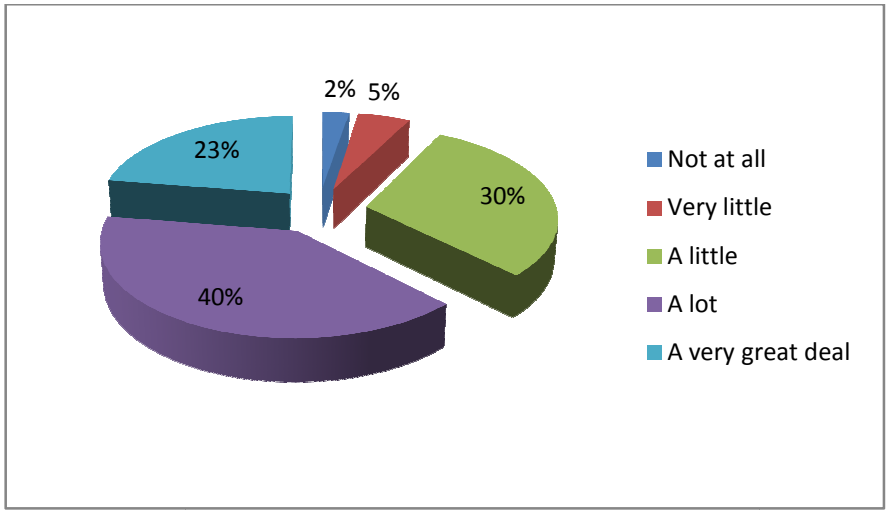
- Part two:
  - Item one: do you like using technology in class?



Pie-chart: 3.3. EFL Students' perceptions regarding the use of technology in class

The first question of this questionnaire is, indeed, very important and a negative response to it may extirpate this research work. Fortunately, as presented in the above pie-chart (92%) of the students said that they do like using technology in class and only a minority of (8%) reported that they don't.

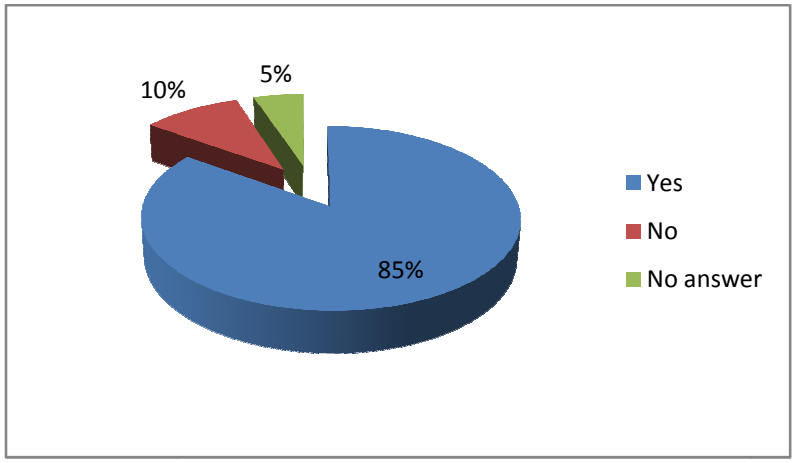
- Item two: do you have an advanced knowledge in using technology?



Pie-chart: 3.4. EFL Students' Technical Knowledge

The above pie-chart reveals that (23%) of the informants master the use of technological devices to a great deal, (40%) said that they master their use a lot, (30%) have a little technical knowledge, (5%) have a very little knowledge and (2%) reported that they do not master the use of technology at all.

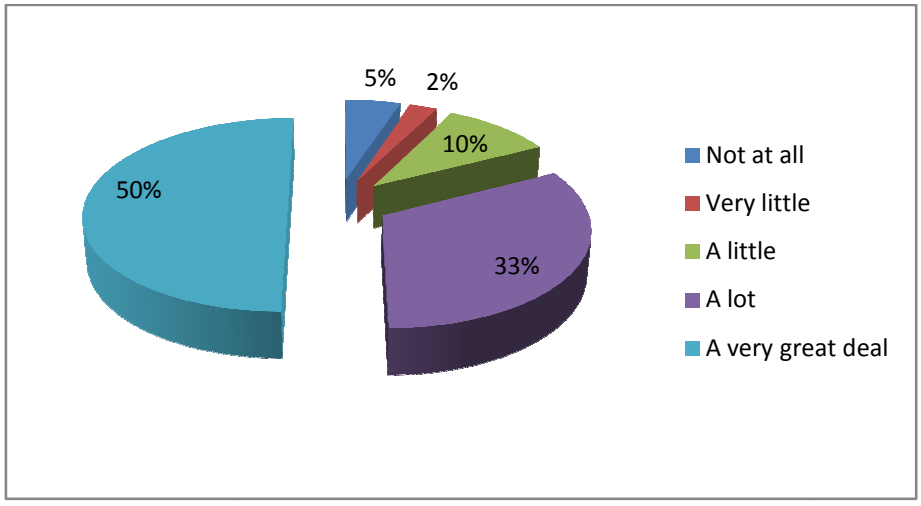
- Item three: do you learn the language better when the teacher uses technology in lessons?



Pie-chart: 3.5. The Effectiveness of Technology in Language Learning

The results in the above mentioned pie-chart shows that (85%) of the informants find language learning through technology effective, (10%) perceive it as ineffective. However, (5%) gave no answer to this question.

- Item four: does the use of technology sustain your interests in learning English?

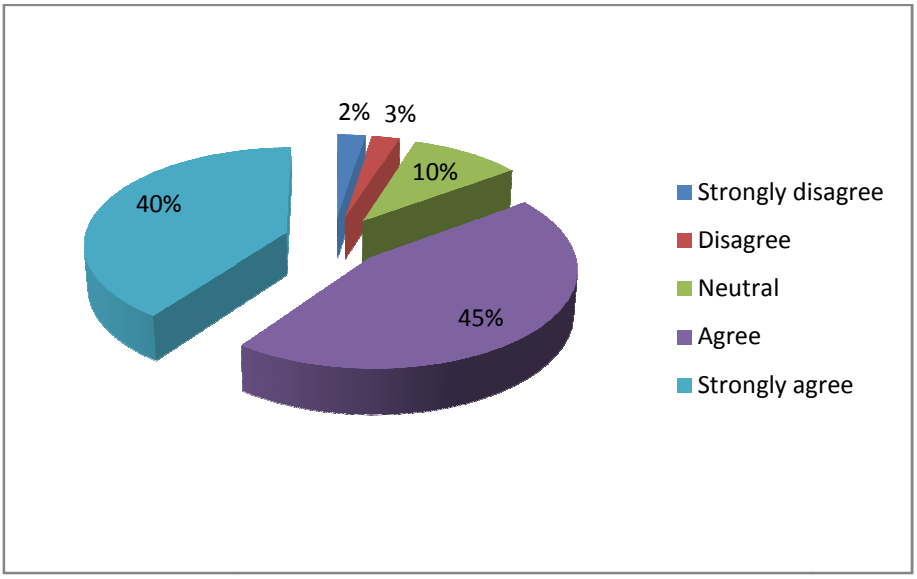


Pie-chart: 3.6. EFL Students' Interests in Learning English through Technology

The results demonstrate that (50%) of the students said that technology sustains their interests in English learning to a great deal, (33%) stated that it sustains their interests a lot, (10%) expressed little interests while learning

through technology, (2%) revealed very little interests and (5%) reported that technology did not raise their interests in learning English at all.

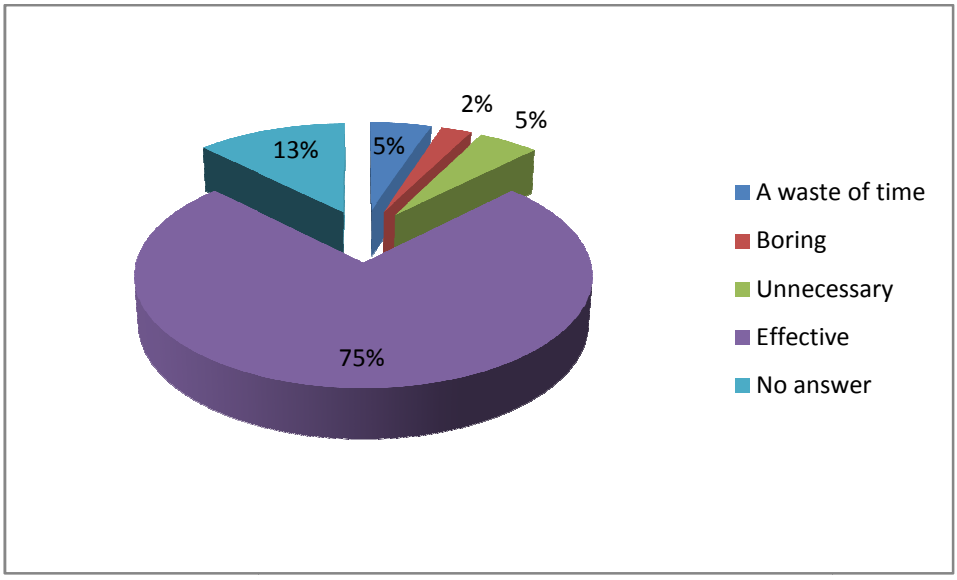
- Item five: leaning English through technology enhances your task enjoyment.



Pie-chart: 3.7. EFL Students' Task Enjoyment while Learning through Technology

The data introduced in the pie-chart show that (45%) of the informants are agreed that technology enhances their task enjoyment, (40%) are strongly agreed, (10%) are neutral, (3%) are disagreed and (2%) are strongly disagreed.

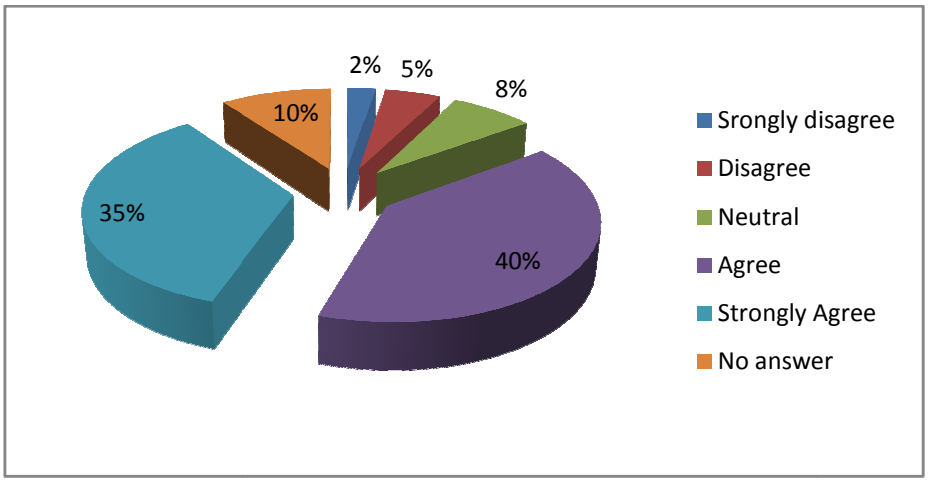
- Item six: learning English language assisted by computer is: (1) a waste of time, (2) Boring, (3) unnecessary, (4) effective.



Pie-chart: 3.8. EFL Students' Expectation from Learning through CALL

As it is shown above, the majority of the students (75%) consider learning through computers as effective, (5%) of the informants find it unnecessary, another (5%) perceive it as a waste of time, (2%) reported that it is boring and (13%) did not insert any answer.

- Item seven: computer programs energize you to engage in the learning process

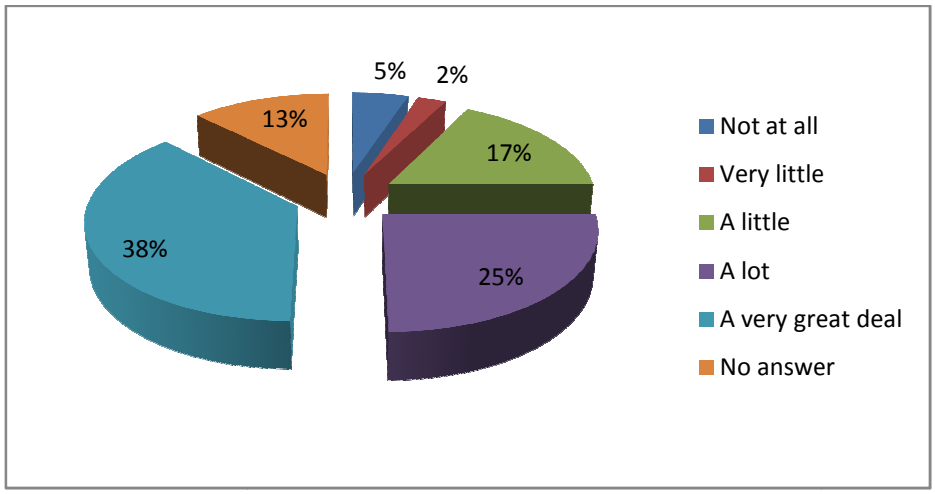


Pie-chart: 3.9. EFL Students' Engagement in CALL Activities

This pie-chart denotes that (40%) of the informants do agree that CALL programs help them to engage in learning, (35%) are strongly agreed that these

programs enhance their engagement, (8%) are neutral, (5%) are not agreed, (2%) are strongly disagreed and (10%) haven't answered this item.

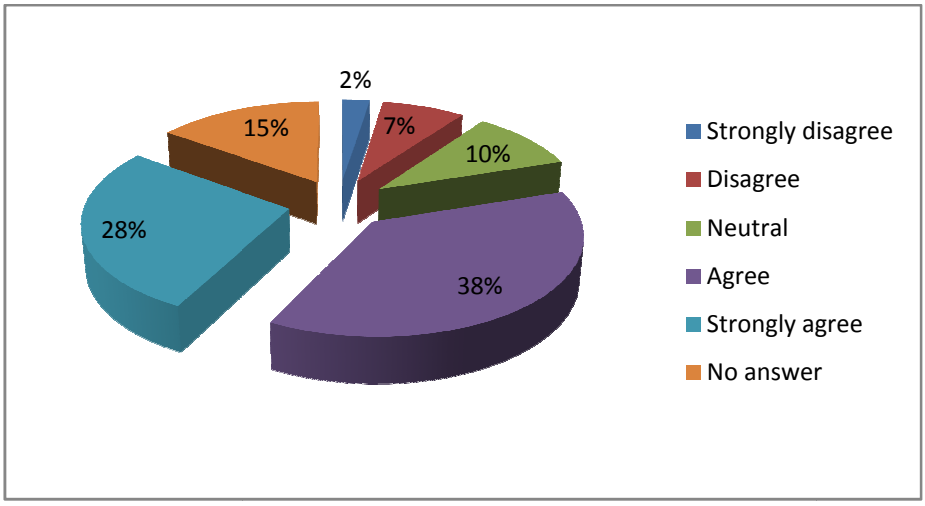
- Item eight: does CALL help you to direct your own learning (i.e., to be autonomous student)?



Pie-chart: 3.10. EFL Students' Autonomy while Learning through Computers

The pie-chart above shows that (38%) of the students recognize the role of CALL in enhancing their self directed learning to a large extent, (25%) reported that it helps them a lot to be autonomous students, (17%) stated that it helps them a little and (2%) expressed that it aids them very little. However, (5%) did not see that CALL is effective in helping them to be autonomous students at all and (13%) did not give any answer.

- Item nine: feedback provided by the computer stimulates you to complete learning tasks



Pie-chart: 3.11. The Role of Feedback Provided by CALL Programs in Stimulating EFL Students

As shown in the above pie-chart, (38%) of the respondents do agree that the feedback they received from the computer has stimulated them to carry out activities, (28%) are strongly agreed, (10%) are neutral, (7%) are disagreed, (2%) are strongly disagreed and (15%) have not provided any answer to this statement.

- Item ten: what programs do you use on your computer while the teacher is presenting the lecture?

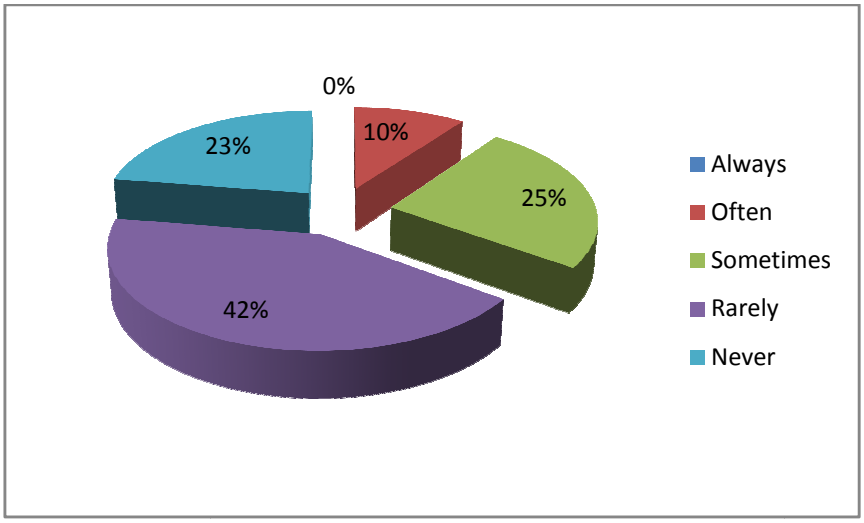
Regarding this question, it appeared that a great deal of the informants were not eager to explore facts by themselves because they reported that they favour listening to the teacher and if they have to use any program they prefer using Microsoft Word to take notes. Some students stated that they make use of e-dictionaries to see definitions of unfamiliar words and others declared that they access to e-books to get information. It should be noted that (17,5%) of the students did not provide any answer for this question.

- Item eleven: what difficulties do you encounter while learning through CALL?

Through this question the students confirmed that they master the use of computers because the majority stated that they do not have any problems when computer components are used in learning. Nonetheless, the rest of the

students were agreed that the difficulties they have rest in the complexity of the programs they are using which indicates their lack of technical skills.

- ✓ Item twelve: how often do you call for help?



Pie-chart: 3.12. The Frequency of Calling for Help

It is noticeable from the previously mentioned pie-chart that (23%) of the students are really able to use computers on their own because they reported that they never need help, in addition (42%) stated that they rarely call for help. (25%) of them said that they require assistance from time to time and (10%) expressed that they frequently ask for direction.

- ✓ Item thirteen: how does your teacher help you to overcome obstacles?

Regarding the students opinions concerning the role of the teacher in providing help, the answers revealed that the majority of them recognized her guidance during lectures. They reported that she always encourages them to try and does not blame them when they make mistakes. Furthermore, some students believe that the explanations she provides push them to continue learning and promote their motivation. Nevertheless, a small number of students reported that the teacher was unable to help them in some cases when they faced technical problems.

- ✓ Item fourteen: how would you describe your relationship with the teacher?

The positive relationships between the teacher and the students are crucial for establishing a supportable classroom environment that is advantageous to motivation. After asking the informants to portray their relationship with the teacher, the findings demonstrated that all the students without exception are generally satisfied with the quality of the relations they have with the teacher. Even those who do not like using technology in class and consider learning through computers as boring reported that they have good relationship with the teacher. Comments such as: “my relationship with my teacher is strong enough to keep up with him all along the lecture, my teacher respects me, she explains for me several times, the teacher always appreciates my efforts, she encourages me, and the teacher cares for me” are statements that denote the degree to which the teacher is interested in every student.

- ✓ Item fifteen: how would you describe the atmosphere of your class while learning through CALL?

As stated in the literature review, motivation entails the creation of an atmosphere that cherishes and supports students to engage in the learning process. Moreover, the way the students perceive this atmosphere can either positively or negatively affect their expectations from learning and, thus, their motivation to engage in tasks. The results obtained from the last question indicated that almost all the students hold positive opinions regarding the atmosphere in which CALL devices are used. In their responses, they stated that it is a relaxed, enjoyable, funny and dynamic atmosphere that allows them to interact, reflect and do many things at the same time. As one student clearly puts it, “CALL atmosphere enhances my motivation to lean”. In just a few comments, it appeared that the students do not expect anything from learning through computers as they describe the atmosphere in which computer components are used as learning tools as boring, uninteresting and tedious.

3.3.2. Discussion of the Findings

The analysis of the collected data from students' questionnaire revealed that most of the informants, who are young adults, have positive attitudes towards the use of technology in learning. The quantitative analysis makes it clear that almost all of the students under investigation admire utilizing technology in classroom lectures and more than half of them consider their technical knowledge as advanced. They appreciate its effects on making language learning more effective and acknowledge its roles in raising their interests in learning English and enhancing their task enjoyment which demonstrated that technology greatly motivates them to learn the language.

Moreover, the percentages presented in the previously mentioned pie-charts indicate that a great deal of students have high expectations from learning through CALL and really value its importance as they see it as effective. Indeed, motivation is closely linked to students' expectations as highlighted by Atkinson. Furthermore and regarding the advantage of CALL in engaging students in the learning process the findings show high levels of engagement. Therefore, one may deduce that computers are useful in motivating EFL students.

Fostering the students need to feel autonomous is considered as a motive and a well known premise afforded by CALL activities. From their responses it is obvious that autonomy while learning through computers is, for the majority of the informants (63%), high. In addition, it has been found that the feedback offered by CALL programs was useful in supplying students' motivated behaviours since (66%) of the informants were of the view that they were reinforced to complete tasks when their responses were followed by feedback. Thus, CALL proves again that it can foster EFL students' motivation.

Additionally, the treatments of qualitative data point out that the teacher has created a supportable learning atmosphere in which students are encouraged to engage in CALL activities.

3.4. Analysis of the Teacher's Interview

The findings of the interview; which aimed at gathering in-depth information about the motivational role of CALL in EFL classrooms and confirming the results gained from other sources, fundamentally, classroom observation and students' questionnaire; have been also subject to discussion. As it has been stated before, the interview that the researcher had with the teacher was semi-structured in its nature, i.e., the researcher has relied on a pre-prepared outline and probing where necessary.

The interview was conducted with only one teacher who is a Magister holder preparing for the doctorate thesis, the equivalent of PhD. Actually, she is teaching the module of oral expression assisted by computers for two groups of first year and one group of second year EFL undergraduate students. She is also teaching other modules such as research methodology using only the data show for PowerPoint presentations.

3.4.1. The Results

The interview questions have revealed a considerable amount of information that are reviewed as follows.

- Item one and two: For how long have you been teaching English? For how long have you been teaching English through technology?

The respondent's answers revealed a short teaching experience of five years in which she has taught EFL modules in the department of English language for one year without using technological devices and four years through the use of computers and other technological tools.

- Item two: Have you received a special training to teach English through the technological devices you are using now?

As it has been mentioned in the literature review, providing teachers with the adequate technological skills is vital for CALL to motivate students. Unfortunately, the teacher expressed that she did not receive any kind of

practical training concerning the use of computers to assist students' English learning. However, when asked to explain from where she got her skills to use CALL applications, the teacher replied that she is first of all personally interested in teaching English through technology, thus, she has made many research. Then the respondent added that she has attended a number of symposiums and conferences where CALL was spoken about.

- Item four: Why do you use technology in teaching?

Regarding the reasons why the teacher makes use of technology in the teaching of English language items, she said that computers should be adopted in teaching as they are the tools that almost all university students use outside the classrooms. She further stated that by using computers she aims at attracting the students' attention to learn the language and moving them out of classical learning modes to updated, open and engaging learning environment.

- Item five: As being an English teacher, do you think that students are generally motivated to learn the language through computers?

Concerning her view point vis-à-vis students' motivation while using computers in English learning, the teacher replied that most of the time the majority of the students are highly interested in oral expression items and motivated to engage in the learning process while undertaking CALL activities. When asked to elaborate the idea of most of the time a little more, the teacher explained that when the students are familiar with the computer components they are using, they are highly involved and interested and, thus, motivated to learn the language, but when new software or hardware components are assigned many problems appear to influence their motivation negatively.

- Item six: According to you, do students lack the necessary technological skills to learn the language through computers?

About the student technical abilities to use computers the teacher considered that not all of them are incapable of using computer on their own, in fact, there are some students who are very autonomous and knowledgeable.

The number of technologically incompetent students is small, the respondent said. Then she added that she has some students who are in-between. The researcher directly asked her to clarify what she means by the word in-between. The respondent stated that they are not totally dependent students as they are intelligent and can quickly grasp the instructions provided for them.

- Item seven: What strategies you usually use to engage those incapable students more in the learning process?

Regarding this question the teacher said that the class is composed of different levels and abilities and she is most of the time restricted by time, thus, the only strategy she uses with those students is providing help from time to time.

- Item eight: Rather than students lack of technical skills, have you ever come across other difficulties when teaching the language through computers?

The teacher responded that the only problem she faces is the poor state of the students' personal computers which obliges her to group more than two or three students in front of machine.

- Item nine: Do these difficulties constitute a handicap for CALL motivational role?

She assumed that the students' lack of technical skills have a strong negative influence on their interests in and expectations from learning through computers and, thus, on their motivation to learn English. Later on, she added that the technical problems in the students' personal computers contribute also to their interests, attention and willingness to complete learning tasks.

- Item ten: If you are asked to summarize the process of teaching English through computers, what would you say?

The respondent answer revealed that EFL instructors have to teach English through computers since they are useful in making language learning

effective, enjoyable and motivating. Moreover, she expressed an urgent need for the provision of a technician who may offer help in case of technical problems and a practical module for students to cope with computer sciences and all what is related to technology.

3.4.2. Summary of the Results

To sum up, the interview results indicated that the respondent, who is a university English teacher, has a relatively short experience of teaching through computers without receiving accurate training concerning the use of CALL. The researcher strongly believes that this fact has had an influence on the teacher managerial skills and more precisely on the classroom atmosphere she created. For more clarification, this fact is apparent in the way the teacher answered the seventh question.

Nevertheless, the information she provided for the majority of the questions fit well with the findings obtained from the other data collection instruments. For instance, the way students' motivation displays during CALL activities and the main circumstances that may foster or hinder its level are confirmed. Moreover, the same difficulties that were noted during classroom observation were also expressed by the teacher.

3.5. Interpretation of the Main Findings

Classroom observation, students' questionnaire and teacher's interview have enabled the investigator to collect a considerable amount of data concerning the motivational role of CALL in EFL classrooms. The aim was to explore students' motivation and assess the degree to which CALL encourages and motivates them to learn English. Furthermore, the researcher looked for the main conditions that are crucial for CALL to achieve its benefits. In this section, an interpretation of the main results obtained from the three research instruments is supposed to provide answers to the three research questions and conforms or informs the suggestions expressed in the hypotheses. In fact,

descriptive statistics is used along with deduction which is an inference mode to test the hypotheses and make generalizations.

Regarding the first hypothesis, the previously mentioned results gathered from classroom observation showed that computers and data show are useful in making language learning motivating and effective as they are the tools that students enjoy and like to use. For validating these results the first five questions of the questionnaire have been used. The findings revealed that most students are in favour of using technological devices in learning English as they find them effective. There was a general perception among the majority of the students that learning English would be more interesting and enjoyable if technological tools are used. From their responses to the questionnaire items number 1, 2, 3, 4 and 5 it becomes apparent that this sample of EFL students are agreed with and enthusiastic to learn English through technology. Furthermore, the interview results revealed that students displayed a strong desire towards using technology in learning English.

Therefore, in terms of achieving the goal of motivating EFL students to learn the language, technology has proved what was supposed in the first hypothesis. This corresponds to the fact that, currently, most EFL students like to learn English through technology.

In the second hypothesis, the researcher proposed that CALL programs are motivating as they energize students to undertake learning experiences, enhance their autonomy and promote their engagement. The discussions of the results demonstrated that for most of the participants CALL is as an efficient tool for English language learning that makes them self-directed students, encourages them to speak and activates their involvement. These data appear to support the hypothesis. Thus, one may deduce that the actual use of CALL is the intrinsic motivating purpose behind learning English.

These findings lead the researcher to assume that EFL is one of the subjects that needs to be taught on the computer because of the following benefits. First, language learning requires a valuable amount of students'

motivation. When a learning activity is introduced on the computer, students are interested and attracted by the various options they have and, thus, empowered to complete these activities. Second, language learning is individual. Third, the student-computer interaction is efficient in raising the level of students' engagement.

As far as the last hypothesis is concerned, it was found that CALL as a pedagogical tool had a positive influence on students' motivation while used in a manageable classroom environment. Most of the students' responses to the questionnaire items number 11, 12, 13, 14 and 15 denoted that they were equipped with computers to learn English in a motivating classroom atmosphere in which the difficulties are few and the needed help is provided by the teacher. In addition, they reported that they had a strong relationship with the teacher which helped them a lot in destroying any kind of stress. It should be noted that these results corroborate the third hypothesis.

Nevertheless, the main results related to observing the sample and the teacher's interview demonstrated that its success was predicted by the teachers' classroom management skills. Moreover, these findings disclosed that when the teacher creates a classroom atmosphere that is supportable, flexible, open and positive; in which students are using computers on their own and the teacher's role in the classroom is only to provide guidance, CALL activities are more likely to motivate students. However, once the technical problems, the use of new computer components and the students' lack of technical skills were met in the same lecture the teachers' role was unclear and the classroom climate was inappropriate for CALL to result in increased motivation. At this level, it can be maintained that CALL positive effects on EFL students' motivation related variables (such as interests, attention, engagement and willingness) are dependent on the teachers' managerial skills and the availability of proper CALL devices.

3.6. Limitations

At this level, the researcher has identified two types of limitations, notably, participants and methodology. It is worth reminding that this research work is an exploratory case study aims at assessing the impact that may CALL have on EFL students' motivation. Nonetheless, the participants, who have been selected for this study, are only one group of forty (40) students and one (1) teacher. This fact may have some impact on the generalizations of the results; however, it opens the door for further research and further understanding of students' motivation to learn English in CALL environment. Concerning the methodology, the use of mixed methods approach requires more than three research tools for three different data sources which may not be considered as enough for such a work.

3.7. Conclusion

In this chapter, an attempt to present, analyse and discuss the main findings of the different data collection tools has been made. First of all the researcher has exposed the data collected from observing the selected sample, then moved to the students' self reports of their view points, perceptions and expectations obtained from the questionnaire, and as a final point she ended with those in-depth information gained from teacher's interview. Based on the entire findings, the three research hypotheses have been tested and conformed.

Finally, the analysis and interpretation of the main results have given a clear idea about the degree to which may CALL raise EFL students' motivation and, thus, allowed her to propose some beneficial recommendations that are presented in the following chapter.

Chapter Four:

Suggestions and Recommendations

Chapter Four: Suggestions and Recommendations

4.1. Introduction

4.2. Providing Good Conditions for the Use of CALL

4.2.1. Supplying the Basic CALL Equipments

4.2.2. Developing the Teachers' Technology Knowledge

4.2.3. The Role of the Technician

4.2.4. The Scheduling of Sessions

4.3. Fostering Students' Technology Skills in the Classroom

4.4. Evaluating the Potential of CALL in the Classroom

4.5. Effective EFL Teaching with CALL

4.6. Promoting EFL Students' Motivation through CALL

4.6.1. Intrinsic Motivational Strategies

4.6.1.1. Developing Students Natural Willingness to Learn

4.6.1.2. Supporting Students' Need to Feel Accepted

4.6.1.3. Supporting Students' Need to Feel Competent

4.6.1.4. Supporting Students' Need to Feel Autonomous

4.6.1.5. Fostering Students' Attributions about Causes of Success

4.6.2. Extrinsic Motivational Strategies

4.6.2.1. Grades

4.6.2.2. Incentives

4.6.2.3. Positive Reinforcement

4.7. Conclusion

4.1. Introduction

The data collected data about Tlemcen undergraduate students' motivation to learn English in CALL environment has been the focus of the third chapter which centred on the analysis, discussion and interpretation of the main findings. Indeed, the results revealed the existence of some problems and difficulties that have negatively affected students' willingness to learn and the classroom atmosphere as well.

Accordingly, in the fourth chapter of the current study and for the purpose of increasing EFL students' motivation using CALL technology as an enhancement, the investigator has endeavoured to introduce some suggestions and recommendations which may help both educational institutions and CALL teachers to come across or reduce the difficulties identified in the third chapter.

Therefore, based on the analysis of the obtained data, a set of recommendations for the use of CALL to motivate EFL students, besides, the appropriate conditions that are necessary to achieve its intended outcome have been suggested. Moreover, the researcher has also proposed some strategies to promote students' motivation through CALL.

4.2. Providing Good Conditions for the Use of CALL

Nowadays' EFL students have unprecedented possibilities to acquire the four basic language skills, namely listening, speaking, reading and writing, in multimedia CALL environment. By incorporating computer Hardware and Software components, the university EFL class has been observed as dynamic, attention-grasping, and providing the students with new authentic ways of developing their listening and speaking skills. The results of this study have proved the increase of students' motivation to complete the learning tasks presented through CALL materials and therefore validated the motivational value of CALL.

Nonetheless, the accumulated findings obtained from the three research instruments used in this research work have also indicated a number of issues that strongly affected technology use and, thus, have to be taken into account while integrating CALL technology into EFL classrooms. In this sense, universities need to understand these facts and to provide the educators with the required support to successfully incorporate CALL technology into their teaching methods.

The researcher has identified four necessary elements for a motivating CALL environment. First of all, it entails the availability of the proper computer-related technological resources and materials, the adequate up to date teachers' training, the scheduling of CALL lectures and a technician to interfere when teachers and students stumble upon technical problems.

4.2.1. Supplying the basic CALL equipments

Since the early 1960s, computers have been promoted as new tools which can be used to enhance and facilitate the teaching and learning processes, particularly English language teaching. Hence, for decades, CALL has been given a significant amount of interest among EFL researchers and educators who have undertaken many studies in which they proved that it is effective in providing a motivating, autonomy and interactive learning environment.

However, its effectiveness is dependent on the number and quality of computers provided for the language teacher. If students are not provided with personal computers, then they will not be motivated. Thus, the availability and accessibility of CALL materials such as Hardware and Software are key factors for successful CALL use. Nonetheless, the lack of the needed number of computers is not the only missing ingredient, the breakdown of computers during lectures causes interruptions in the absence of the constant technical maintenance. Therefore, the following recommendations have been put forward.

- ✓ Based on teachers' and students' needs analysis or in more technical terms a "situation analysis" in addition to defined educational goals, universities can come to a decision concerning the needed number of computers.
- ✓ As barriers, the poorly maintained computers, low quality hardware devices and outdated educational software could disengage students from the learning process. Subsequently, CALL materials need to be updated from time to time in order to convoy the rapid change of technology.
- ✓ As machines, computers are subject to damages, thus, constant and regular repairs are advantageous to preserve the materials at hand.
- ✓ It is crucial to provide universities with the appropriate technical support to maintain computer components infrastructure. If there is no technical support both teachers and students become frustrated with troubleshooting computer problems which often reduce their interests, enjoyment, willingness and enthusiasm while teaching and learning through CALL.

These recommendations are classified in four basic classes that must be met to result in a motivating learning environment. Once these conditions are provided, students will in fact be liberated from the external pressures that may hamper their motivation.

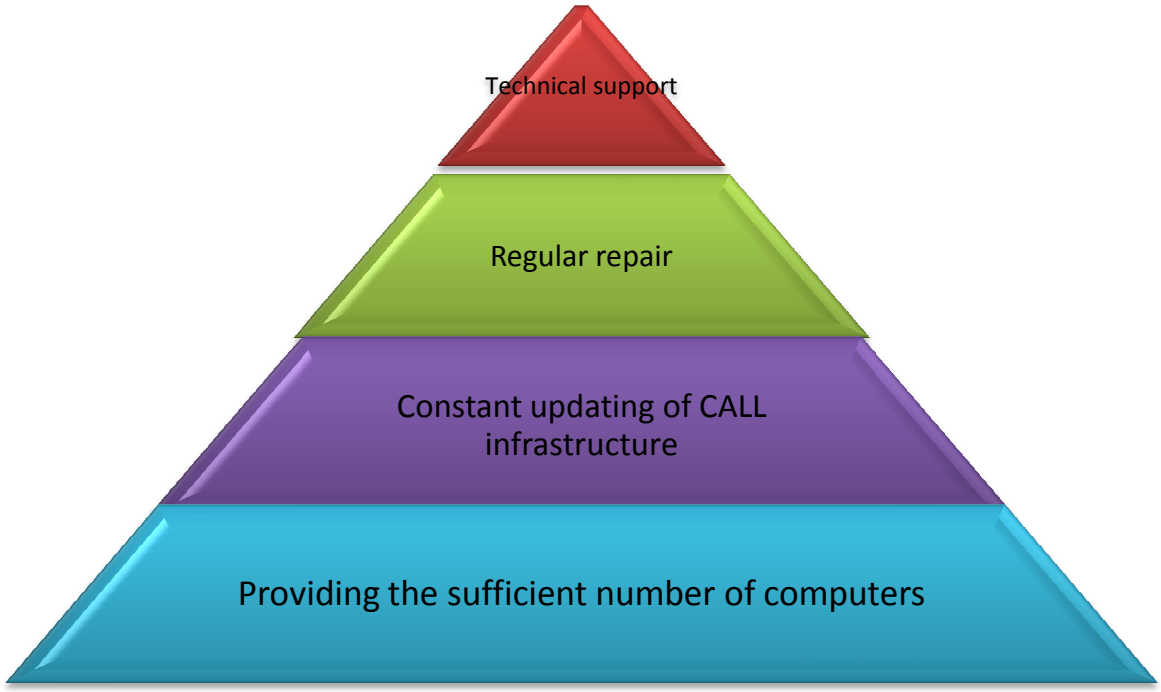


Figure: 4.1. CALL Physical Success Conditions

To sum up, personal access to computers, high quality Hardware and software resources and the fitting technical support are necessary physical conditions for a motivating CALL atmosphere.

4.2.2. Developing the Teachers' Technology Knowledge

In language teaching and learning, computers are widely recognized as effective tools and their applications are constantly developing in the field of TEFL (Teaching English as a Foreign Language). Although Algerian universities have been equipped with computer labs, their use is still limited due to many reasons, among which are the insufficient number of computers and the Hrdware problems. In addition, the researcher has found that the teachers' training to use CALL in their teaching practices is the second inhibiting obstruction that influences its implication.

In this sense, it can be further assumed that the lack of teachers' training to use technology in the Algerian educational institutions is one of the reasons that prevented teachers from using computers in their language classes.

As a result, the technical skills of teachers contribute tremendously to the realisation of CALL premises. Therefore, university administrators need to

- ✓ Define the teachers' existing technical skills and the limitations in their CALL knowledge in order to be able to design training programs.
- ✓ Encouraging teachers to express their attitudes, ideas and needs and using them to reflect on the type of training required for their CALL professional development.
- ✓ Developing the teachers' technology skills on the basis of the pre-defined educational goals they want to get with the assistance of CALL.
- ✓ Giving teachers opportunities to practice teaching English through CALL during the training programs.
- ✓ Convincing teachers that they need to become lifelong learners as technology introduces an incredible quantity of inventions every day.

For instance, if a teacher has never used any technological device in teaching, it would be very useful to show him/her examples of how an English course is presented through CALL materials besides learning how to use technology itself. The aim behind is to enthuse teachers and direct their awareness towards the usefulness of technology.

The following graphical presentation clearly demonstrates the aforementioned recommendations in a linear way moving from the first basic step to the last one in teachers' training to use CALL in their EFL teaching.

Figure: 4.2. The Design of EFL Teachers' Training Programs to Incorporate CALL

Nevertheless, the teachers' technical skills in using new technologies are not the only necessary elements that should be addressed in their training programs; the pedagogical training has an equal importance as well. Teachers' practices, methodologies and content of teaching should be transformed so that students will benefit from the new leaning possibilities. CALL as a modern technological tool, for example, provides teachers with new instructional materials which maintain supportive, open and autonomous learning, thus, they are required to create learning experiences in which the traditional roles in the classroom are changed, and act as tutors and facilitators.

Hence, in order for CALL to be effectively incorporated in EFL classes to foster motivated and engaged learning, teachers should be frequently well provided with both technological and pedagogical training in order to be kept up-to-date with the continually changing technologies.

4.2.3. The Role of the Technician

While providing the needed technical support, university administrators should be aware of the role of the technician in CALL classrooms. The presence of a technician to serve and maintain the functioning of the computer laboratory is of crucial importance. A session of one hour and half was too short for the teacher to explain the use of the computer software or hardware, present the material and offer technical support for students, but if a technician was assigned for troubleshooting the technology-related difficulties, there would be better use of time during sessions and it would be fruitful.

For the sake of making CALL classroom more engaging and motivating, the researcher proposes two kinds of assistance.

- ✓ The provision of a technician who sets up the available equipments before each session. Furthermore, he/she has to
  - o Monitor the operation of the hardware.
  - o Test and ensure the appropriateness of the computer applications (software).
- ✓ Enhancing the computer laboratory with a technician who assists all the sessions to
  - o Identify the technical difficulties and quickly overcome them.
  - o Pay attention to the events in the classroom and respond to the students' and teachers' needs
  - o Intervene whenever complications arouse in order to offer help.
  - o Supply the required help for students with low technology knowledge.

In fact, classroom technicians should receive training on the use of computer components for educational purposes. They need to be prepared to offer help to students and teachers when expressing a kind of dependence on the use of machines and programs. Thus, before putting them at universities as computer technicians, they should have at least some basic knowledge about the syllabus, how to serve students whenever they encounter problems, and the

difficulties that they may face along their presence with the students in the classroom. As an example of these difficulties, a number of students may ask for help at the same time, in this case the technician should be skillful, pleasant and supportable, in addition he/she doesn't have to show any kind of negative response such as grumbling and complaining as these behaviours may harmfully affect students' motivation.

4.2.4. The Scheduling of Sessions

The results of the current study indicated that there were many conditions that influenced students' motivation related variables in CALL environment. EFL students showed high levels of interest, curiosity, attention and engagement in some lectures; while in others they were unwilling to and uninterested in learning in addition to their low levels of persistence due to the scheduling of lectures.

Thus, the appropriateness of time allotted for learning is crucial for a motivating CALL environment. The suggested requirements for lectures planning are as follows

- ✓ Scheduling the computer laboratory sessions in the morning, i.e., from 8:30 to 11:30 as it has been found that it was the best time to learn for students.
- ✓ As a strategy, the investigator proposes giving the students the opportunity to take charge of planning their schedule and timeline for enhancing their motivation and learning. In this manner, Schunk claims that allowing students to control and choose the preferable time to learn is expected to promote their interests and feeling of self-efficacy (2012).

Accordingly, the schedule that the university administrators put for CALL sessions should be carefully designed to allow students gain the benefits of the new technology and, then, learn effectively.

4.3. Fostering the Students Technology Skills in the Classroom

Many EFL teachers around the world are using technology in their classrooms for a variety of purposes, such as engaging students more in the learning process, motivating them to continue learning and creating autonomy-supporting classrooms. Nonetheless, the classroom in which each student is provided with a computer needs to become more student-centered, constructivist and supportable in order for technology to achieve its promises.

The three research instruments employed in the present case study have provided a substantial amount of data that have shown that although the students encountered a number of problems and difficulties due to their lack of computer literacy skills (i.e., the capability to use the computer components proficiently, for example mastering the use of the key board, or saving, storing and passing data), the majority has expressed a positive attitude towards using technology in classroom lectures, and they confirmed that it enhances their task enjoyment, engagement and interests in learning English. Moreover, they further claimed that it helps them to direct their own learning. Yet students' proficiency in the use of software and hardware is a necessary condition to enhance their motivation in CALL classrooms. Accordingly Moreno claims, "Developing computer skills frequently motivates students to want to produce high-quality work" (2010: 373).

As teachers are one of the most important actors in the educational setting, they have to ensure that students have at least some of the necessary technical skills that enable them to use computers effectively in learning before placing them in CALL laboratories. Thus, it is vital to provide CALL specialist teachers to teach students the needed computer skills in a real setting, i.e., a setting that contains the main CALL authentic materials. In this sense, the researcher suggests a number of skills that need to be acquired to use technology effectively.

- Mastering the use of the various hardware devices used.
- Interacting effectively with the computer.

- Storing and retrieving information smoothly.
- Gaining control over the main CALL applications, e.g., PowerPoint.

The aforesaid skills were among the various barriers that affected the motivational role of CALL in the studied setting. Hence, if students are well equipped within these skills, the advantage of technology in EFL classrooms can be achieved.

In fact, there are other competences and components that can be created by the language teacher through the use of a number of strategies during sessions in order to encourage students learn the language items effectively and productively in a technology enhanced classroom.

The familiarity that should exist between the students and the main technology devices and systems is a basic component that can be promoted in the classroom through

- Explaining the use of each technology tool or resource before their employment in presenting materials.
- Allow searching and exploring during sessions.
- Direct students attention to the concepts and options that they do not know.

Problem solving and decision making are important characteristics of motivated students (Sansone and Harackiewicz 2000), and among the competences that can be fostered throughout CALL activities by the teacher as he/she

- Introduces a series of authentic problems or questions for investigation.
- Assigns activities that allow making decisions about the use of the appropriate technology resources.
- Presents multiple data sources that allow students explore alternative solutions.

Furthermore, the teacher can also assist the students' research and information gathering using electronic resources and media through

- Providing them with strategies to collect, evaluate and use information.
- Helping them to select the information sources and digital tools based on the assigned tasks.
- Introducing the main steps of presenting their research using multimedia software components.

To help their students gain these computer literacy skills, teachers themselves need to be furnished with the basic CALL competences. Therefore, prior the beginning of CALL integration in EFL classrooms, training courses should be held to improve both students and teachers knowledge in using computers.

4.4. Evaluating the Potentials of CALL in the Classroom

In recent years, EFL teaching and learning in Algerian universities have witnessed a growing interest in the use of technology and especially computer-related materials as pedagogical tools for the sake of making language learning more effective. Nonetheless, CALL cannot be effective without the appropriate infrastructure for its applications, trained and skillful teachers, computer literate students in addition to a set of appreciate objectives for its use and clearly defined plans for evaluating its effects on the accomplishment of these objectives and goals.

In this vein, it should be noted that motivation acts as a significant variable that contributes a lot to the achievement of good results in foreign language learning. Thus, any pedagogical tool purposefully designed to improve students' learning can be judged to result in positive effects on their motivation. In this sense, motivation and learning are interrelated; therefore, the same principles are used to evaluate the effectiveness of technology in promoting both of them.

For evaluating the potentials of CALL in EFL classrooms the researcher suggests a number of criteria for teachers to assess whether its activities actually do improve students' learning or not.

- The first and the most important step is to decide on the best way to use CALL materials in teaching, i.e., select the resources that fit well with the instructed material, for instance, if it is a grammar lecture, what can be the most useful software and hardware components for students to gain understanding.
- The second step for teachers is to design specific goals for the use of CALL materials and carefully define how its interventions are expected to bring about qualitative changes in learning. As an example, if PowerPoint presentations are used for the purpose of motivating students, they need to be firmly created to attract their attention, sustain their interest and task enjoyment, and engage them in the process of learning.
- Thirdly, teachers need to pay attention to the assigned activities that are vital to students' engagement. Accordingly, Salaberry (2001) claims that the success of technology resources in learning strongly depends on the particular activities involved (Zhang and Barbar, 2008).
- The fourth step requires from teachers to create a supportable, open and flexible learning environment which is said to be a crucial component for effective CALL.
- As a final step, teachers need to critically evaluate each CALL material used in terms of its potentials to achieve the predefined goals taking into consideration all the above stated steps.

For better clarification, the aforementioned steps are summarized in the following graphical presentation that clearly presents them in a linear manner.

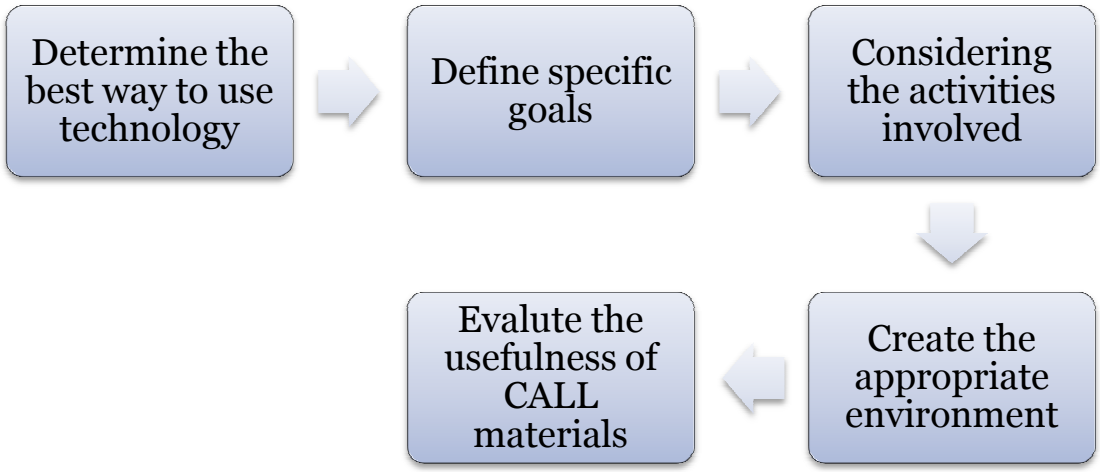


Figure: 4.3. The Process of CALL Evaluation

Technology in general should be carefully employed as a tool to help teachers meet up the educational needs. Hence, examining the impending value of its integration on the achievement of the academic goals is a necessity to find out its main advantages and disadvantages.

4.5. Effective EFL Teaching with CALL

The emergence of technological tools such as computer devices in educational institutions has caused many changes in the forms in which instructed materials are presented and, thus, the teaching and learning strategies used by educators.

As noted before, computer literacy skills are immensely important for the EFL teachers to benefit from the new possibilities that technology provides for education. Nevertheless, effective teaching with CALL is not only dependent on the teachers' technology skills but on the strategies used to make language learning attention grabbing, interesting, enjoyable and engaging. In this manner, a number of strategies are proposed as follows.

- While delivering instruction, the language teacher has to utilize his knowledge of the subject matter, teaching and learning in educational settings, and technology to put students in learning experiences that enhance their motivation, creativity and innovation through
    - Encouraging innovative thinking.
    - Engaging students in exploring authentic language situations using CALL resources.
    - Stimulating students' reflection using CALL activities as means to denote their understanding.
- The teacher has to assign, develop and assess authentic learning experiences using CALL resources to enhance content learning and to increase students' motivation. For doing so, he needs to
    - Adapt appropriate learning experiences that incorporate CALL resources to encourage students' learning.
    - Provide a suitable technology enhanced learning environment that inspires students' curiosity and makes them active participants in the learning process.
    - Design learning activities that fit with students' diverse needs and styles.
- CALL as a pedagogical tool requires from teachers to use its resources in introducing knowledge and skills in a way that is representative to a universal and modern digital world through
    - Demonstrating fluency in using technology systems.
    - Promoting students technology skills constantly so that they would be able to use the emerging digital tools.
    - Presenting relevant ideas and information to students using updated technological tools.
- EFL teachers need to continuously engage in pedagogical and professional growth of CALL in order to improve their teaching practices and achieve the premises of technology. Thus, they are required to

- Take part in local and international symposiums and conferences to explore the innovative applications of CALL to improve students' learning.
- Look into and reflect on contemporary research to make effective use of existing and emerging CALL applications.

The following figure attempts to sum up all what is required from teachers to effectively use CALL in EFL classrooms.

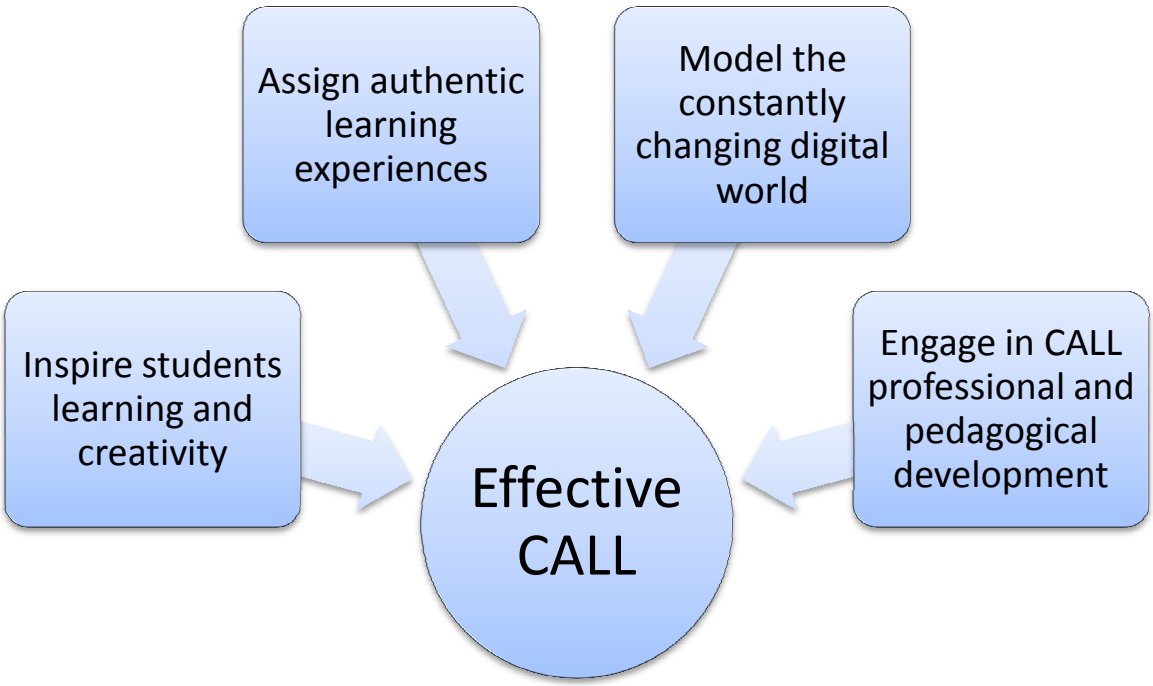


Figure: 4.4. Strategies for Effective Use of CALL

4.6. Promoting EFL Students' Motivation through CALL

Motivation is key to learning. If they are motivated, EFL students could learn an incredible quantity of linguistic input. The results of the present study indicated that motivation is a sensitive variable which can be influenced by both external and internal factors. After summarizing the main external barriers that hinder students' motivation to learn effectively and proposing a number of recommendations to overcome these barriers; the researcher moves to the student himself and what may motivate him. Therefore, a number of

motivational strategies is overviewed in the following sub-sections to deal with both motivation facets, namely, intrinsic and extrinsic.

4.6.1. Intrinsic Motivational Strategies

Students' intrinsic motivation, the feeling associated with internal drives, willingness and needs to explore new ideas and acquire knowledge, is considered by many ELT researchers as one of the most significant elements that are needed for effective foreign language learning, among whom is Brown who says, "… an appreciation for creativity and for satisfying some of the more basic drives for knowledge and exploration" (1994, 40).

Due to its importance, five students-related elements to sustain intrinsic motivation to learn English in CALL environment are presented. Particularly, students' natural willingness to learn, their needs for belongingness, competence and autonomy, as well as their attributions about causes of success and failure are discussed. For each student-related condition, strategies for teachers are suggested to set the basics that students require to become intrinsically motivated.

4.6.1.1. Developing Students Natural Willingness to Learn

Willingness to learn and develop as a characteristic of intrinsically motivated students is apparent when they ask questions, look for information in books or other sources, experiment and think. In CALL environment, students' natural willingness to learn English can be fostered by addressing enthusiasm, curiosity and interests when designing activities.

As for enthusiasm and excitement about learning English items, the teacher needs to

- Pay attention to the enthusiastic feature of CALL activities which should contain a considerable amount of visual appearance, sounds and feedback. In this concern, Zaphiris and Zacharia contended that many studies of foreign language learning in technology-based environments revealed that

the combination of sounds, texts and videos for materials delivery are very successful in terms of exiting students because they refer to a real context closed to reality (2006).

- Promote thought-provoking problems through the use of CALL authoring programs. The latter enables language teachers to create simple software using their own materials. In this way, teachers are able to design the program to fit their own lessons. Examples of these authoring programs include
  - Wida Software.
  - Hot Potatoes Software.
  - Camsoft Software.

The aforementioned programs contain a number of applications which help language teachers in creating

- ✓ Interactive multiple choice exercises in which feedback can be fixed to correct and incorrect responses. For instance, after a grammar course concerning the present perfect tense, the teacher may assign a multiple choice activity like the following example,
  - Tick the appropriate answer.

  1. Since 2008 Brack Obama
     - Have become president of the United States of America.
     - Has became president of the United States of America.
     - Has become president of the United Stated of America.
- ✓ Matching sentences exercises.
- ✓ Gap-filling exercises in which multiple correct answers can be included into the exercise. As an example, the core material may be a listening course where students are required to fill in gaps in the text transcript. For directed help, small segments form the listening passage could be given to students.
- ✓ Text reconstruction exercises where students are provided with articles or essays and asked to rebuild texts from the beginning. This type of

exercises relies on the students' ability to organise ideas and use of his/her existing vocabulary.

- ✓ Vocabulary exercises in a sort of games such as the "Which Word" game which asks students to choose the appropriate word from a list to fit a specific context.

Another vital element to the development of students' natural willingness and tendency to learn and progress is to find out about students' personal interests and what may arise their curiosity to ask and explore while assigning CALL activities. According to Renninger, Hidi, and Krapp, students are more likely to be curious and to direct their energy towards learning if they are personally interested in the instructed material, which consequently will lead to higher rates of performance (Moreno, 2010). Teachers can promote students interests and curiosity in the following ways.

- ➢ Tailor CALL activities to students' interests. Identify students' personal interests before planning lectures by asking them to suggest the topics or activities that they interested in.
- ➢ Present students with authentic problems that promote curiosity, the cognitive sentiment that arouses when the student feel thrilled about learning experiences.
- ➢ Design activities that generate cognitive conflict such as contradictory questions. In this vein, Moreno asserts that, "another way to elicit curiosity is to create cognitive conflict by posing paradoxical questions or by using demonstrations with seemingly contradictory results". For example, the teacher may use one of the authoring programs to create a short/long answer Snap activity which is a timed activity can be played either against the computer or another student, aimed at increasing the students' sense of challenge and mental effort. An exemplar of paradoxical questions:
    - o What might be the auxiliary might if it is not an auxiliary?
    - o Who has written this poem if it has been written by the author himself?

- If the whole poem is passage, then how many verses it contains?

- Provide students with opportunities to hold active roles in the process of presenting the selected material. For Schunk, students construct knowledge by questioning, answering, commenting, solving and proposing (2012). Thus, when they are allowed to interact with learning materials, students are expected to be highly motivated. In this sense, instead of presenting only what is personally interesting, offer students with Encyclopedia-type programs or any other information-based software that allow them to conduct research, then throughout the presentation process, pose questions and ask the students to use those programs to find out answers or interfere to add more information whenever possible.

Nevertheless, while eliciting students' enthusiasm, interests and curiosity, teachers should be aware that these strategies may not be appropriate for all the students. Teachers need to use their knowledge about students to reflect on the usefulness of each strategy. Thus, it is of crucial importance to establish interpersonal relationships with each student and collaborate with other teachers to provide more support for learning and motivation.

4.6.1.2. Supporting Students' Need to Feel Accepted

It appeared throughout the process of data analysis that there were some students who lacked the necessary technical skills to undertake CALL activities, the fact that made them require special support in many areas. The need to feel that they are a wanted part of the group is one area that should be addressed by the teacher. Furthermore, this area is considered by many educational psychologists as an internal drive. Hence, in order to be intrinsically motivated to learn English through computers, those students need to feel accepted.

Also known as the need for belongingness and relatedness, the need to feel accepted has been highlighted in both Maslow's theory of basic needs (occupies the third level of the hierarchical set of motives) and the self-

determination theory put forwards by Deci and Ryan (the third innate psychological need).

Consequently, the students' intrinsic motivation is closely associated with their sense of self acceptance, which in turn, depends on their feeling that their teachers, classmates and those whom they consider as important care profoundly about their feelings, thoughts and needs. On the contrary, Moreno stresses that, "the feeling of alienation or rejection is associated with low intrinsic motivation, low achievement, and behavior problems; it is also one of the major causes of dropping out of school" (2010: 377). In fact, alienation is perceived by Mann (2001) as the students' state of isolation from a class activity or group in which they should be involved or belonged to.

When students feel alienated from the classroom activities due to the poor computer literacy skills they have, their sense of belongingness disappear as they feel disconnected from classmates and teachers. Therefore, greater senses of affiliation and relatedness should be fostered by the teacher through

- Recognizing the students' unique abilities by encouraging them to express their needs without fear or shame and accepting all their opinions even though they may be out of the subject matter.
- Showing genuine care and respect to each students through defining their problems, listening carefully to them, perceiving their questions as important even if they are not, and provide assistance in nonthreatening ways. The following dialogue shows a good model of the caring teacher who listen to the students with interest and acceptance.
    - Teacher: Mohammed, I noticed that you are facing troubles with in this activity [defining the problem]. Would you tell me what is going on with you [encouraging the student to express what he needs].
    - Mohammed: I do not like this kind of activities because when you send us the piece of the recorded speech I cannot find it quickly as my friends always do. In addition, once I found it, I do not

know how to play it and replay it again. My friend always helps but he is absent today.

- Teacher: okay [listening carefully to the student].
- Mohammed: I also have to write it and I do not really master the use of the keyboard. Further, I failed many times in sending the written version to you at time
- Teacher: let us see how can we do all what you have said together. We need first to look for the recording here in the received documents, once you find it click twice on it, put you headphone, listen carefully, if you want to re-listen go to replay and click. Later on, open a new Microsoft Word page, use the keyboard to write, when you finish register what you have written in a new document, give it a name; and you can use your name; then send it to my personal computer by this way [providing assistance with pleasure]. This kind of assistance is expected to help students become active participants and, then, develop acceptance.

- Engaging students in cooperative activities by allowing them to work in pairs or groups. However, to guarantee the usefulness of such activities in developing students' sense of self acceptance, teachers should stress the mutual respect between students, the significance of exchanging ideas, scaffolding and collaboration.
- Transforming the classroom into a small community by promoting teacher-students and student-student relationships. In order to do so teachers need to create a supportive atmosphere that is positive and open for all the students who may participate in and take part in the classroom decisions.

As a basic need, acceptance needs to be met in the classroom in order for students to be intrinsically motivated. Although students may come to the classroom with varying degrees of the belongingness need, teachers have no choice but to identify the extent to which each student requires support,

recognise the different abilities in the classroom and offer assistance in order to have a well managed CALL classroom.

4.6.1.3. Supporting Students' Need to Feel Competent

Another basic psychological need proposed by the cognitive self determination theory of motivation is the students' need to feel competent. Accordingly, Deci and Ryan consider the students' feelings of competence and self efficacy as motives that must be promoted (Salkind, 2008). Thus, the students need to feel a sense of capability to be intrinsically motivated to learn.

As a founder of intrinsic motivation, self efficacy is important for students to feel that they have something valuable to add and they are able to contribute to many tasks. If they feel that they are ineffective, useless and incompetent they become frustrated by the external pressures and, then, they lose their motivation. In this manner, Moreno believes that students would undertake challenges, engage in activities, set goals and express a strong natural tendency to learn and develop only when they are satiated with high self efficacy (2010).

As it has been stated before, the lack of the required computer literacy skills has negatively affected the students 'sense of belongingness, besides it has also made them feel that they are incompetent the fact that may impact their motivation to learn English at all. Teachers can sustain students' sense of self competence by

- Emphasizing learning and progress rather than performance and grades.
- Expressing high expectations for all students. For instance, the teacher may address the students' self confidence by saying: "with little efforts, you can do it". The student may perceive himself as competent and able to do many things as the teacher expects a lot from him.
- Avoiding the situations in which comparison between students may exist. Demonstrating that there are some students who perform better than others is harmful and may not be perceived as a sort of competition

but may lead students to think that they are unable and there is nothing they can do perform better than others.

- Helping students in achieving the learning goals they set for themselves through scaffolding. It is important for students to reach success in order to feel that they are competent. Therefore, teachers need to define the students' weaknesses and offer the required support to help them complete tasks and achieve their goals.
- Recognizing and acknowledging students' achievements and innovative ideas.
- Enhancing CALL activities with immediate corrective, diagnostic or informational feedback that provides students with information about their proficiency.
- Allowing students to learn from their mistakes. Teachers can help students identify their mistakes by stating the mistaken word or phrase and repeating it several times until the students discover the mistake, then giving him/her the opportunity correct it.

From what has been stated, it can be assumed that instructional activities should be accompanied by emotional activities to meet the needs of students and create a motivating learning atmosphere in which each student has an equal chance for being supported and assisted both psychologically and educationally.

4.6.1.4. Supporting Students' Need to Feel Autonomous

Intrinsic motivation increases only when students are offered with opportunities to have control over their own learning not only for the self determination theory of motivation, but it is also one of the basic principles of the constructivist approach to learning. The students' sense of self dependence or autonomy is said to be a kind of internal drive that encourages them engage more in learning experiences.

Accordingly, Deci and Ryan are of the view that letting students handle responsibility for making choices in the classroom would give them the

capacity to complete learning tasks, engage in their work and avoid misbehaviours (Moreno, 2010). Thus, it would be beneficial to enhance students' intrinsic motivation by creating the opportunities that would promote their sense of autonomy and control in the classroom. The following are some strategies that can be employed by teachers to encourage autonomy in CALL environment.

- Creating an autonomy supporting environment in which both teacher and students work together to overcome difficulties, solve problems, discuss classroom matters and exchange ideas about what students want to learn and what are the areas in which they require more assistance. Hence, collaboration in the classroom may motivate students to express themselves, make them feel that they are important as their opinions guide classroom practices and therefore they have a role in the process of planning classroom activities.
- Fostering the students' feeling that the teacher is only a tutor who provides help and not a controller who does not allow them to make contributions, and limits their choices. As a major actor in the classroom, the teacher has to help students understand that they are no more passive students as CALL environments give them the occasion to direct their learning. The fact of placing every student in front of one computer and giving only instructions before engaging him in CALL activities may promote in him a sense of self independence which often increases his intrinsic motivation.
- Supporting the students' belief that they are capable of accomplishing the tasks which they consider as complex. Due to some reasons, such as low language proficiency, lack of self confidence or the limited computer literacy knowledge, students may regard classroom activities as hard to solve. Encouragement and high expectations on the part of the teacher are essential to help students throw away their negative feelings. Furthermore, by doing so the teacher aids students to understand that the negative feelings which come from their thought processrs are

useless, thus, they are able to achieve academic success by choosing to think more positively.

- Helping students set mastery goals which are strongly associated with intrinsic motivation. First of all, teachers need to give some guidance such as what is useful to the students and let them choose their learning goals, then, help them to opt for a way to attain those goals. Finally, involve them in learning activities that are relevant to their personal goals. As a motivational strategy, supporting students' selection of academic goals shows them that have a role to play in their academic learning.

Teachers who strive for the creation of an autonomy supporting learning environment are more likely to have intrinsically motivated students than those whose style is controlling and authoritative (Grolnick et al., 2002). Nonetheless, there are many external pressures that may hinder the use of these strategies such as time constrains and the long syllabus that the teacher has to deal with.

4.6.1.5. Fostering Students Attributions about Causes of Success

In general, attributions represent the students' perceptions about the causes of success and failure. As a cognitive perspective on motivation, attribution theory was proposed Weiner who postulated that how students perceive, explain and evaluate the causes of success and failure will determine and influence their expectations of success and failure and consequently their motivation to engage in learning experiences where both success and failure are possible outcomes (Bentham, 2002). In this respect, Salkind says,

> Students' retrospective judgements of the causes of a successful or a failed outcome affect their emotional responses and subsequent motivations in systematic and predictable ways (2008, 693)

According to Weiner's theory, students make attributions about success and failure factors along three dimensions: locus, stability and controllability.

An attributions locus signifies the location of the source of success or failure which may be either internal or external, and the stability of an attribution implies its relative permanence. For instance if a student attributes the best mark in a task to his/her intelligence, the locus is internal and stable, then the student will experience positive emotions (e.g., satisfaction, enjoyment and pride) about the success he achieved and attempt to apply the same effort to achieve more difficult tasks in the future; however, if he/she attributes the mark to the simple nature of the task, then the locus is external and unstable. Whereas, the controllability of an attribution identifies the degree to which the student expands effort for the achievement of a particular task. As an example, if the student attributes a successful task completion to the efforts he/she puts forth studying, then the source of success is controllable; nonetheless, if the student attributes the mark to luck the source of success is said to be uncontrollable (Seifert and Sutton, 2009 and Salkind, 2002).

As a strategy, the researcher proposes that the teacher has to help students attribute success to sources that are internal, stable and controllable by focusing on making a link between learning and efforts. Students who hold negative attributional beliefs ("I failed to complete this activity because I do not know how to use the computer") have very low success expectations. For instance, along the researcher's presence with the selected sample, there was a student who struggles to use the computer and thinks that he will never be able to use the computer for learning. Even when the teacher explained many times and modeled for him many strategies, the student did not apply these strategies because he believed that he cannot change and ameliorate his existing ability. Teachers can foster students' attributional success factors by

- Convincing students that the use of the modeled strategies leads to increased success.
- Directing their attention to the fact that the lack of the necessary efforts result in failure.
- Acknowledging their efforts and achievement.

- Giving them the opportunity to evaluate the effects of the efforts that they have placed on the achievement of tasks.

To sum up, the following figure represents a synopsis of all the recommendations offered for teachers to foster some of the internal drives that are necessary for students to develop intrinsic motivation.

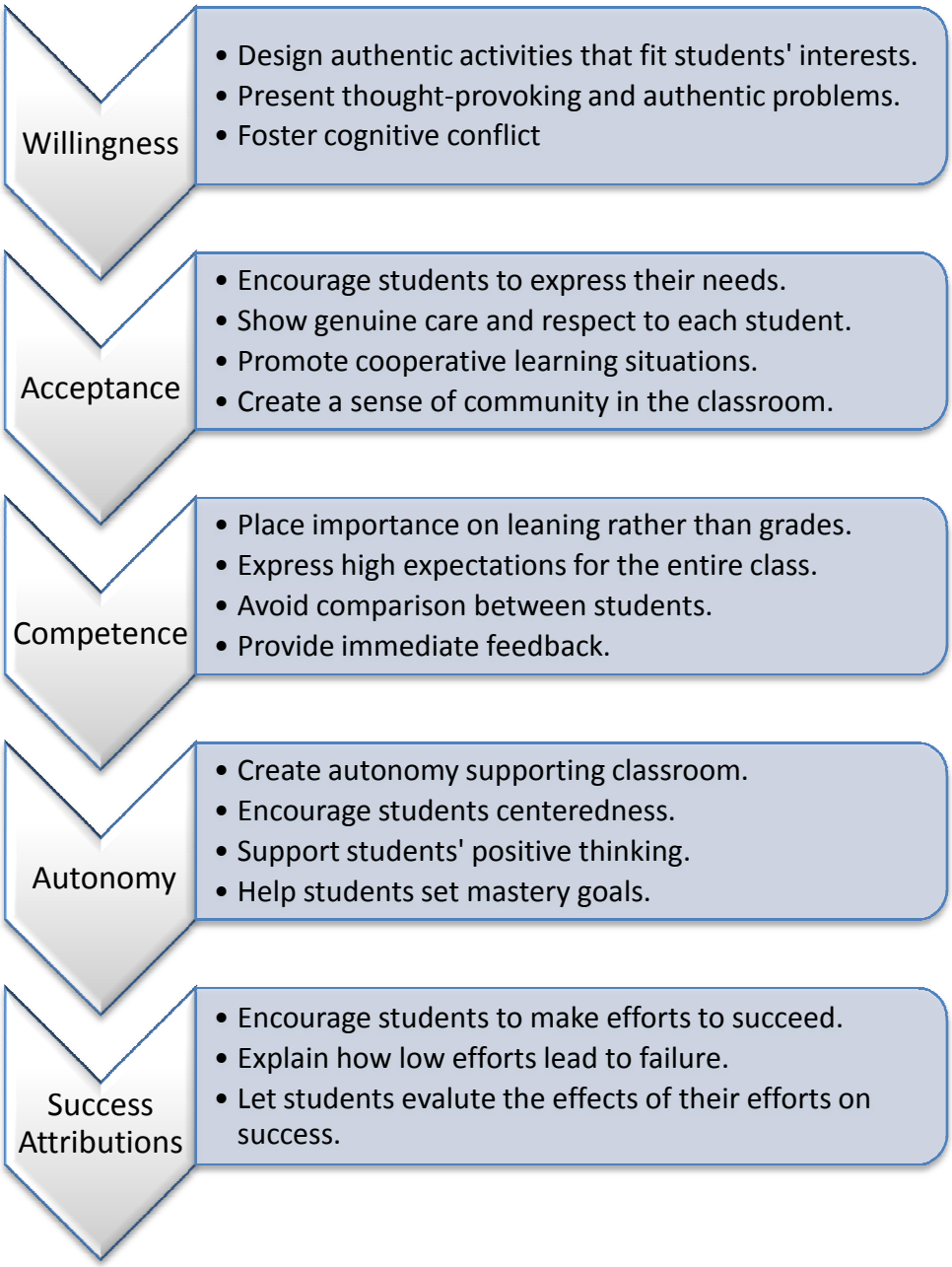


Figure: 4.5. Intrinsic Motivational Strategies

4.6.2. Extrinsic Motivational Strategies

Extrinsic motivation is a tendency to learn regulated by external factors such as gaining high test/course grades. Traditionally, the extrinsic form of motivation was contrasted with the intrinsic one. However, more contemporary research in foreign language teaching and learning favours the idea that both forms are complimentary (Brown, 2000, Dörnyei and Csizér 1998).

As stated in the literature review, extrinsic motivation is closely linked to students' performance goals which entail learning as means to an end. Therefore, a number of strategies that can be used to stimulate students' to engage in CALL activities because completing these activities effectively will bring them valued outcomes is proposed. These strategies include grades, incentives and positive reinforcement. Moreover, some recommendations for the effective use of these strategies are reviewed.

4.6.2.1. Grades

Grades are considered by Shindler as the most frequently used extrinsic motivators to demonstrate the completion of a task or the quality of students' performance. They may also act as incentives to stimulate students' learning. In this vein, Reeve and Deci claim that grades are effective only when they are related to valuable outcomes (Shindler, 2010).

Assessing students' performance is not an easy task as teachers have to pay attention to many things while grading. When using grades as means to stimulate students' extrinsic motivation to perform better in CALL activities, teachers should

- Use authentic measures that include performance assessment rubrics.
- Help students to make a link between the grades they have got and their abilities to achieve their selected goals so that they would be

able to reflect on their performance and, as a result, work to ameliorate it.

- Deliver grades in a way that evades comparison between students. Such way is expected to give the student an impression that the grade he/she has achieved is related to his/her performance not to the other students' achievement.
- Assess the outcomes they are trying to foster in the classroom. For instance, if the teacher promotes cognitive conflict, cooperative learning and thought-provoking problems but does not assess them, students may perceive them as invaluable, i.e., assessing only tests and exams makes students feel that the other outcomes are meaningless.

As a result, grades as extrinsic outcomes should be appropriately used by teachers to encourage students complete the assigned activities and work hard to improve their abilities.

4.6.2.2. Incentives

The use of incentives is another strategy that can be utilized to promote students extrinsic motivation in order to complete learning tasks when it acknowledges their performance. In fact, there are my forms of incentives such as special privileges, including,

- The use of special equipments like e-dictionaries for vocabulary or phonetics tasks.
- Providing alternative choices and let the student select. For instance, after introducing a PowerPoint presentation successfully, the teacher may give the student a privilege to choose either to consider the obtained grade as an exam mark or to add him two extra points to the exam grade.
- Offer extra time to complete activities. In this case, the teacher may provide the students with low computer literacy knowledge more time for carrying out tasks.

- ❖ Providing facilities e.g., in a listening activity, the teacher may give the students who encounter listening problems the opportunity to choose either to employ their personal computers and headphones or the big speakers used for the entire class.

Furthermore, rewards like teachers' special attention and assistance, recognition and personalised relationship with students are also considered as incentives (Dörnyei, 2001). However, in order for incentives to be powerful motivational tools, teachers need to

- ➢ Provide incentives for the accomplishment of activities that students are not familiar or have not had any experience with in an attempt to stimulate students and make those activities enjoyable.
- ➢ Offer incentives for the activities that students find complex and boring.
- ➢ Use incentives to show appreciation after the students have effectively completed the assigned activity.
- ➢ Make incentives meaningful to the students by giving them the opportunity to choose the offer.

Nonetheless, many educational psychologists stressed that the teacher motivational practices do not have to rely only on incentives (grades are also considered as incentives) because they direct the students' attention away from gaining knowledge to the outcome.

4.6.2.3. Positive Reinforcement

According to the behaviourists, students' motivation can be conditioned by environmental (external) stimuli. As a basic principle of Skinner's operant conditioning theory, positive reinforcement may be a resourceful motivational strategy when it is applied in the appropriate classroom environment.

When describing positive reinforcement for increased extrinsic motivation, Shindler stated that it entails the use of a variety of practices including, external rewards, approval, encouragement, positive feedback,

showing high expectations, recognition and the provision of alternative opportunities (2010). In this sense, these practices have double effects on students' motivation, i.e., though such forms of positive reinforcement are said to be extrinsic motivational strategies according to the behaviourists, they stimulate many intrinsic sources of motivation for other perspectives.

All the aforesaid types of positive reinforcement can be considered as supporting messages. Ultimately, to be more efficient and bring about valuable changes in students' extrinsic motivation, the teacher has to

- Use positive reinforcement forms for the sake of making students feel appreciated.
- Reinforce students' accomplishment of their own goals.
- Stimulate students in an authentic and spontaneous manner to show caring.
- Use a little quantity of positive reinforcement so that students will be interested in learning not in the reinforcement that can be earned, i.e., what the teacher thinks of them.

A synopsis of all the previously suggested extrinsic motivational strategies is presented in the following figure.

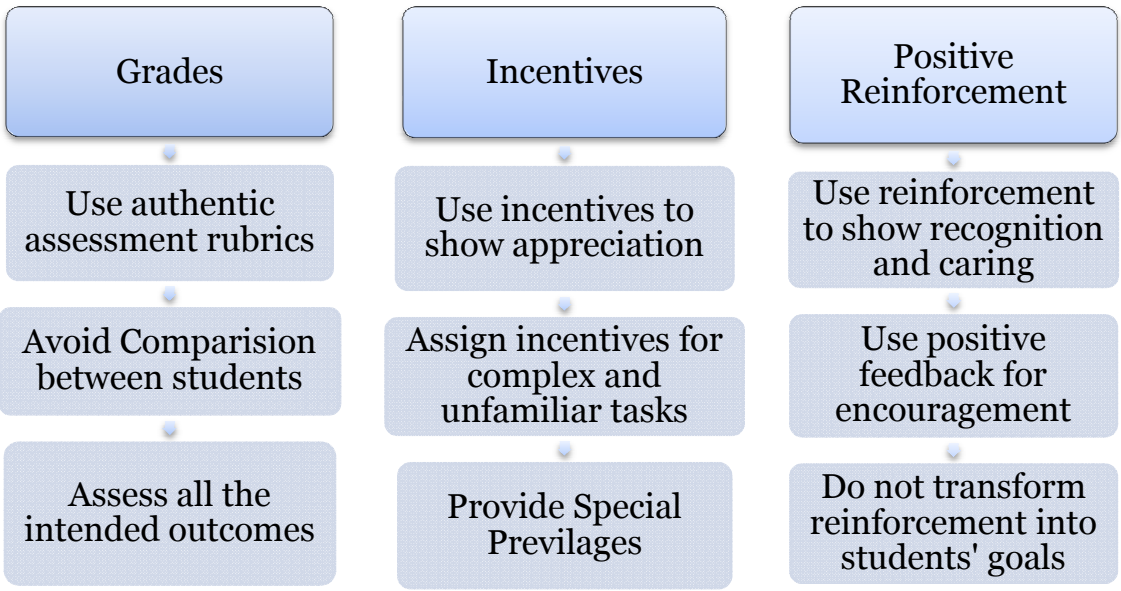


Figure: 4.6. Extrinsic Motivational Strategies

Finally it should be noted that all the proposed motivational strategies and the recommendations for their best use, are not always effective motivators, but rather suggestions that can be effective within one group of students and insufficient within another. This is particularly true if we consider the vast array of individual differences and variables in EFL classrooms, and how technology development puts forth many challenges for both teachers and students.

4.7. Conclusion

As far as this concluding chapter is concerned, the researcher has tried to, hopefully, introduce a set of suggestions that may help to improve EFL students motivation through CALL addressing the main problems identified in the preceding chapter, and to remedy the students psychological needs that are required for increased motivation.

Therefore, a number of recommendations were proposed first to administrations, including the provision of the necessary equipments, teachers' training, a technician, time scheduling and all what is needed for CALL to solve the problem of motivation in EFL classrooms. Afterwards, the investigator has suggested more teaching strategies related to the effective use of CALL.

As a final step, a number of strategies to promote EFL students' motivation through CALL was put forward dealing with both intrinsic and extrinsic types. Initially, the researcher has coped with the major psychological needs, including autonomy, competence, belongingness and success attributions, which should be fostered to fall into the intrinsic side of motivation based on the results analysed in the third chapter. Later on, some suggestions for the use of extrinsic reinforcing motivational tools such as grades, incentives and positive reinforcement were presented.

General Conclusion

General Conclusion

This research paper has given an account to the benefits of CALL in relation to the realisation of increased motivation at the level of second year under-graduation students. Psychological perspectives on the variable of motivation have been provided, among which have been those of Deci and Ryan, Maslow, Rogers and Atkinson. Indeed, all the overviewed perspectives have helped the researcher to come to an end that students are not only physical beings, but cognitive, social and emotional beings as well, and that means that their motivation is dependent on the four areas, i.e., teachers need to address the four areas to achieve higher rates of motivation.

Moreover, definitions related to the term of CALL have been also overviewed in addition to its history, role in the classroom, materials, benefits and success factors. In fact, throughout the literature review the investigator has tried to prove that students' motivation to lean is a vital ingredient to the achievement of foreign language acquisition, therefore, it has to be tackled by EFL teachers through the use of computer based materials.

The objective of this thesis is, thus, to investigate the use of CALL by EFL teachers in the University of Tlemcen to motivate students. After observing EFL students in series of lectures where CALL materials were used, it was obvious that the employment of this pedagogical tool was limited to only one teacher, the fact that made assessing its potentials on motivation restricted to only a group of forty (40) students. Though the teacher was using computer technology for teaching within two groups of first year students, the researcher has selected a group of second year randomly for the purpose of making generalizations. Nonetheless, it appeared later on that this group has already learned oral production through CALL which motivated the researcher more to rest on this group.

To better understand the motivational value of CALL, a case study has been designed to answer the research questions and test the proposed hypotheses. As research approaches, combinations of both quantitative and

qualitative methods for data collection and analysis have been selected. Furthermore, all the other procedures of the design of this research project, including the description of the studied setting and the sample population, in addition to the research instruments, the aim behind their use and a description of them are provided in the second chapter.

Along the third chapter which aimed at analysing and discussing the collected data, it appeared that the results obtained from both the questionnaire addressed to EFL students engaged in a sequence of lectures presented through computers and a series of longitudinal observations of the same informants indicated that their motivation to learn English has been enhanced to a certain extent from CALL activities, including listening practices and presenting topics using PowerPoint. The findings revealed that motivation internal dynamics (e.g., interest, curiosity, attention and willingness) are too dependent on the external conditions such as the availability of the appropriate CALL related equipments, teacher's technology knowledge and sessions scheduling. Typically, the interview results have corroborated the classroom observation and questionnaire upshots which indicated the efficacy of CALL in motivating students to learn EFL.

Furthermore, the obtained data have encouraged the investigator to generalize that CALL is a resourceful pedagogical method that is motivating for EFL students as computers are the mediums which they understand and prefer to learn with. In addition, it can be farther claimed that the more teachers and students are well trained to use computer devices the more CALL atmosphere will result in higher levels of students' motivation and, then, a successful acquisition of the foreign language.

Based on the interpretation of the main findings, the investigator has attempted to make a sort of contribution in the fourth chapter. In this sense, a number of recommendations for educational institutions to supply the appropriate conditions for the use of CALL was provided. Moreover, some

teaching strategies for the effective use of CALL in addition to motivational strategies to fall into both facets of motivation were suggested.

To conclude, the present study has been undertaken in an attempt to highlight the motivational benefits that may CALL bring about in EFL classes and, thus, encouraging teachers to rely on computer technology to diagnose students lack of motivation as they reported positive responses towards learning English through CALL about themselves. The results and the suggested recommendations are presumed to offer valuable insights to teachers and university administrators to better use computers for the sake of teaching English to Algerian students.

Nonetheless, this study has been conducted on only a limited number of participants who were supposed to be representative to all EFL students, additionally, this research did not investigate all the levels in the department of English but was concerned only with second year students the fact that affected the generalizability of the results. The lack of the internet access in the department of English language has made it impossible to assess the usefulness of asynchronous mediums of communication such as e-mail and synchronous tools like CMC (computer mediated communication) and videoconferencing. Therefore, this case study represents a prelude for further research which is required to better understand the motivational value of CALL in EFL classrooms.

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Appendices

Appendix 1

Rating Scale Number 1

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 04.12.2012; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 1st
4. Observed things: motivation related constructs/variables.
5. Lesson start: 10:09 am
6. Lesson end: 11:28

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity				✓	
Attention				✓	
Engagement				✓	
Autonomy			✓		
Enjoyment					✓
Stress	✓				
Confidence					✓
Willingness				✓	
Persistence				✓	
Enthusiasm				✓	

Rating Scale Number 2

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 11.12.2012; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.

3. Observation: 2nd
4. Objective: motivation related constructs.
5. Lesson start: 11:40 am
6. Lesson end: 13:02

Students	Extremely low	Low	Fair	High	Extremely high
Interests			✓		
Curiosity			✓		
Attention		✓			
Engagement			✓		
Autonomy			✓		
Enjoyment			✓		
Stress	✓				
Confidence				✓	
Willingness		✓			
Persistence				✓	
Enthusiasm			✓		

Rating Scale Number 3

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 15.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 3rd
4. Objective: motivation related constructs.
5. Lesson start: 10:09 am
6. Lesson end: 11:30

Students	Extremely low	Low	Fair	High	Extremely high
Interests					✓

Curiosity					✓
Attention				✓	
Engagement				✓	
Autonomy				✓	
Enjoyment					✓
Stress	✓				
Confidence				✓	
Willingness					✓
Persistence					✓
Enthusiasm					✓

Rating Scale Number 4

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 16.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 4th
4. Objective: motivation related constructs.
5. Lesson start: 11:37 am
6. Lesson end: 13:06

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity				✓	
Attention				✓	
Engagement				✓	
Autonomy					✓
Enjoyment				✓	
Stress	✓				

Confidence					✓
Willingness				✓	
Persistence			✓		
Enthusiasm			✓		

Rating Scale Number 5

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 22.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 5th
4. Objective: motivation related constructs.
5. Lesson start: 10:10 am
6. Lesson end: 11:36

Students	Extremely low	Low	Fair	High	Extremely high
Interests		✓			
Curiosity		✓			
Attention			✓		
Engagement	✓				
Autonomy		✓			
Enjoyment	✓				
Stress				✓	
Confidence		✓			
Willingness			✓		
Persistence			✓		
Enthusiasm		✓			

Rating Scale Number 6

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 23.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 6th
4. Objective: motivation related constructs.
5. Lesson start: 11:39 am
6. Lesson end: 13:00

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity				✓	
Attention				✓	
Engagement				✓	
Autonomy			✓		
Enjoyment					✓
Stress		✓			
Confidence					✓
Willingness				✓	
Persistence				✓	
Enthusiasm				✓	

Rating Scale Number 7

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 29.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 7th
4. Objective: motivation related constructs.

5. Lesson start: 10:06 am
6. Lesson end: 11:32

Students	Extremely low	Low	Fair	High	Extremely high
Interests					✓
Curiosity				✓	
Attention					✓
Engagement				✓	
Autonomy				✓	
Enjoyment					✓
Stress	✓				
Confidence				✓	
Willingness				✓	
Persistence				✓	
Enthusiasm				✓	

Rating Scale Number 8

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 30.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 8th
4. Objective: motivation related constructs.
5. Lesson start: 11:45 am
6. Lesson end: 13:05

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity				✓	
Attention				✓	

Engagement				✓	
Autonomy			✓		
Enjoyment			✓		
Stress			✓		
Confidence		✓			
Willingness				✓	
Persistence			✓		
Enthusiasm			✓		

Rating Scale Number 9

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 05.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 9th
4. Objective: motivation related constructs.
5. Lesson start: 10:15 am
6. Lesson end: 11:35

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity					✓
Attention				✓	
Engagement				✓	
Autonomy					✓
Enjoyment				✓	
Stress	✓				
Confidence					✓
Willingness					✓

Persistence				✓	
Enthusiasm					✓

Rating Scale Number 10

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 06.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 10th
4. Objective: motivation related constructs.
5. Lesson start: 11:40 am
6. Lesson end: 13:00

Students	Extremely low	Low	Fair	High	Extremely high
Interests		✓			
Curiosity		✓			
Attention			✓		
Engagement		✓			
Autonomy	✓				
Enjoyment	✓				
Stress				✓	
Confidence		✓			
Willingness			✓		
Persistence			✓		
Enthusiasm			✓		

Rating Scale Number 11

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 12.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 11th
4. Objective: motivation related constructs.
5. Lesson start: 10:12 am
6. Lesson end: 11:40

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity				✓	
Attention				✓	
Engagement					✓
Autonomy				✓	
Enjoyment					✓
Stress	✓				
Confidence				✓	
Willingness				✓	
Persistence				✓	
Enthusiasm				✓	

Rating Scale Number 12

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 13.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 12th
4. Objective: motivation related constructs.
5. Lesson start: 11:30 am
6. Lesson end: 13:00

Students	Extremely low	Low	Fair	High	Extremely high
Interests					✓
Curiosity				✓	
Attention					✓
Engagement					✓
Autonomy				✓	
Enjoyment					✓
Stress	✓				
Confidence				✓	
Willingness				✓	
Persistence					✓
Enthusiasm					✓

Rating Scale Number 13

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 09.04.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 13th
4. Objective: motivation related constructs.
5. Lesson start: 10:09 am
6. Lesson end: 11:25

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity			✓		
Attention				✓	
Engagement				✓	
Autonomy			✓		

Enjoyment			✓		
Stress	✓				
Confidence				✓	
Willingness				✓	
Persistence			✓		
Enthusiasm				✓	

Rating Scale Number 14

General Information

1. Observer: Yaiche Wahida
2. Setting: 11:30 am; 10.04.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 14th
4. Objective: motivation related constructs.
5. Lesson start: 11:36 am
6. Lesson end: 13:06

Students	Extremely low	Low	Fair	High	Extremely high
Interests				✓	
Curiosity			✓		
Attention				✓	
Engagement				✓	
Autonomy			✓		
Enjoyment			✓		
Stress	✓				
Confidence				✓	
Willingness				✓	
Persistence				✓	
Enthusiasm				✓	

Rating Scale Number 15

General Information

1. Observer: Yaiche Wahida
2. Setting: 10:00 am; 16.04.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory.
3. Observation: 15th
4. Objective: motivation related constructs.
5. Lesson start: 10:06 am
6. Lesson end: 11:36

Students	Extremely low	Low	Fair	High	Extremely high
Interests					✓
Curiosity				✓	
Attention					✓
Engagement				✓	
Autonomy				✓	
Enjoyment				✓	
Stress	✓				
Confidence					✓
Willingness				✓	
Persistence				✓	
Enthusiasm					✓

Appendix 2

Reflective and Descriptive Field Notes

Observation Number 1

- Setting: 10:00 AM; 04.12.2012; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Twenty nine (29) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

✓ The classroom is clean, the tables and chairs are well arranged.
✓ There is a problem in the light. It has been stopped several times.
✓ Some instructions are provided by the teacher before the listening activity.
✓ The activity entails the use of headphones to listen to a piece of recorded speech, then writing it using Microsoft Word.
✓ The students have to send the written version to the teacher for correction.
✓ Though it's a new activity, the students are still active.
✓ Many students failed to complete the task.
✓ The teacher has explained the activity for about seven times.
✓ The teacher does not blame late comers.
✓ The teacher is always smiling.
✓ The students are not stressed but they are relaxed.
✓ There are no discipline problems.

Observation Number 2

- Setting: 11:30 AM; 11.12.2012; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Thirty five (35) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ The students today seem tired.
- ✓ Some students are discussing other topics that are not related to the subject matter.
- ✓ The teacher is walking around in an attempt to make the students avoid these external topics.
- ✓ The teacher is discussing the subject matter with all the students; she is trying to capture all the students' interests by looking at all the students.
- ✓ The students are not stressed
- ✓ The students faced many problems during the listening activities.
- ✓ Five computers do not work, so three and four students are grouped in front of one computer.
- ✓ There is no ridicule when students make mistakes.
- ✓ 6 students out of 35 are not really interested in the lecture due to their lack of technical knowledge.
- ✓ The teacher is unable to solve some hardware problems.
- ✓ There are no discipline problems.

Observation Number 3

- Setting: 10:00 AM; 15.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Thirty three (33) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ The students seem very active today
- ✓ The teacher uses the students' first names while greeting students.
- ✓ The first five minutes are specified to identify the problems students face throughout the oral production sessions.
- ✓ Late comers are always welcomed.
- ✓ Problems are diagnosed by the teacher with pleasure.
- ✓ The students are encouraged to express the problems they face with the computer.
- ✓ Not all the students' questions are answered.
- ✓ Today the hardware problems are very few.

- ✓ The teachers' actions are very stimulating.
- ✓ The students are very active; most of them have completed the task successfully.
- ✓ There are three students who need a great amount of assistance; their lack of computer literacy skills is preventing them from engaging in learning.
- ✓ The teacher underlines the mistaken words in the written version and let the students discover their mistakes.
- ✓ The students make use of e-dictionaries once asked about how to pronounce some words provide synonyms for them.
- ✓ Both the teacher and the students are satisfied.

Observation Number 4

- Setting: 11:30 AM; 16.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Thirty eight (38) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ Very few students look very bored and tired.
- ✓ Another activity was included today.
- ✓ It is a programmed activity in a form of quiz, but before the teacher has given many instructions to the students.
- ✓ The students find the activity very enjoyable.
- ✓ It is an easy task since many students have completed it.
- ✓ The students are required to answer closed questions and fill in gapped texts.
- ✓ The students have received many forms of feedback after each response which stimulated them a lot to carry out the activity.
- ✓ The students are very relaxed.
- ✓ The teacher walks around to check if students are working or if they need more help.
- ✓ After checking the students' responses the teacher has provided an incredible quantity of feedback to each student.

✓ By the end of the session the students were expressing their tiredness explicitly to the teacher who decided to stop the session which denotes the good relationship that merges between the teacher and her students.

Observation Number 5

- Setting: 10:00 AM; 22.01.2012; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Forty (40) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

✓ There are forty students today and the computers are insufficient; two computers do not work.
✓ There is a problem in the light as well.
✓ The teacher proposed the use of the two big speakers available in the studied setting instead of the headphones.
✓ After listening to the speech the students has to answer some questions instead of writing what they have heard.
✓ The answers should be written using Microsoft Word and the teacher will check one by one.
✓ Most of the students did not understand what the teacher said because of the noise.
✓ The hardware problems are many and the teacher is unable to solve them.
✓ The sound quality of the big speakers is different from the headphones and the students are grumbling because they can neither hear clearly nor play the speech several times as they used to do.
✓ The students are too dependent on their teacher.
✓ The students are very stressed and the teacher too.
✓ Some students preferred to use their copybooks to answer the questions because they do not have access to computers.

Observation Number 6

- Setting: 11:30 AM; 23.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Twenty five (25) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

✓ There are many absences today.
✓ Listening to a long speech then writing some of its parts and completing an activity in a form of quiz are today's activities.
✓ The students have become familiar with the hardware and software used thus less questions are asked.
✓ Once informed about today's activities the students directly switched on their computers.
✓ Before starting today's assigned activities, some words are transcribed by students using their e-dictionaries; in addition, many of them have tried their articulation.
✓ Some students have proposed other difficult words for articulation.
✓ The students have used their personal computers to listen to the recording and complete the activity successfully.
✓ The teacher was acting as a tutor today.
✓ Three groups of two students were arranged to use one computer due to the lack of the necessary number of computers.
✓ There are no discipline problems.
✓ The teacher is trying to help the entire class.

Observation Number 7

- Setting: 10:00 AM; 29.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Thirty four (34) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

✓ The students seem very energetic and active today.

- ✓ The teacher is as usual smiling, discussing and exchanging ideas with students.
- ✓ Late comers are always welcomed.
- ✓ The teacher is most on the time calling students using their first names.
- ✓ The students are interested in the learning material.
- ✓ The classroom atmosphere is considerably stress-free.
- ✓ There is always a problem of technology knowledge on the part of some students which cause some obstacles to the teacher who has to finish the lecture, thus; assistance is not always possible.
- ✓ The majority of students have completed their activities independently and successfully with little guidance.
- ✓ There a feeling of mutual respect between the teacher and his students.
- ✓ Until this session neither disruptions nor disciplinary problems were identified.
- ✓ The students are informed that this is their last listening session.

Observation Number 8

- Setting: 11:30 AM; 30.01.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Twenty six (26) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ Today's session is specified to give only instructions concerning the creation of oral presentations using PowerPoint.
- ✓ The main steps are given to the students.
- ✓ Starting with the opening that should be attractive, the teacher has given many examples.
- ✓ The teacher told the students that the slides should contain only ideas in short sentences, then of course a closing that summarizes their topic.
- ✓ Moreover, the teacher has warned the students that the presentation should be oral, thus, they are required to speak not read.
- ✓ The students are listening with great attention.
- ✓ They are asking many questions.

- ✓ The teacher told them to open the PowerPoint software available in their computers to give them instructions.
- ✓ Some students look afraid.
- ✓ The teacher is asking students to express the unclear facts they face.
- ✓ The teacher is very active today.
- ✓ The students who are technologically illiterate are lost; the teacher cannot re-explain the entire process because of the time.
- ✓ The other students who are approximately twenty two (22) are very enthusiastic and trying to create presentations and include pictures as well.

Observation Number 9

- Setting: 10:00 AM; 05.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Thirty seven (37) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ The students' performance includes two talks presented by students in a form of PowerPoint presentation using the data show.
- ✓ The first presentation was introduced by one student but the other one by a group of three students.
- ✓ The students started with greeting the audience, calling for attention then introducing themselves and their topics.
- ✓ Each presentation has lasted for 15 to 20 minutes followed by a discussion.
- ✓ Some students are using their computers during the presentation.
- ✓ The students are attracted by the little audio-visual stimulation provided in the presentation.
- ✓ The two presentations were evaluated by the teacher as acceptable since they were the first experience of the students.
- ✓ The students who were presenting seem very relaxed.
- ✓ The teacher encourages the other students to speak and express their ideas even with mistakes.
- ✓ The teacher let the students correct their mistakes by themselves.

- ✓ The teacher jokes with the students.
- ✓ The teacher explains facts and asks for the students opinions
- ✓ Sometimes all the students speak at the same time.
- ✓ Finally the teacher urged the students to avoid their classmates' mistakes in their presentations.

Observation Number 10

- Setting: 11:30 AM; 06.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Twenty eight (28) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ Another two groups have passed for presenting their topics using the data show.
- ✓ While the students are presenting the topic, the others are listening at the beginning but they lost their interest after few minutes due to the nature of the presentations which were neither organized nor attractive.
- ✓ There are only texts in the presentation except some slides which contained pictures.
- ✓ The two presentations have taken half an hour because the teacher has stopped them.
- ✓ The students who are presenting are very stressed and totally dependent on their teachers to guide their presentations.
- ✓ The other students did not pay any attention to their classmates' presentation.
- ✓ The teacher is unsatisfied and the other students look very bored especially when the teacher asked them to complete another activity after the presentations.
- ✓ Before the activity the teacher has explained the entire process of creating a PowerPoint presentation again for the other students.
- ✓ The students directly moved to complete a listening activity after the teacher's repeated instructions.
- ✓ There are many technical problems, the teacher cannot solve them all and the students are not able to complete the activity.

✓ The poor state of the computers has obliged the teacher to stop such activities and deal only with oral presentations

Observation Number 11

- Setting: 10:00 AM; 12.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Forty (40) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

✓ There are many students today and late comers are not blamed at all.
✓ The teacher greet the students using their first names, e.g., "Hi, Youcef", "Good morning, Asma", "Welcome, Mohammed".
✓ The students seem active and energetic.
✓ Another student has passed for presenting a topic using the data show.
✓ While the student is presenting the topic, the others are listening except few students who were looking for facts using e-dictionaries.
✓ There are no texts in the presentation except some titles.
✓ The presentation is made up of pictures and figures. It is full of sounds and colors.
✓ Today's presentation is very attractive and enjoyable, and the other students are really interested.
✓ After the presentation has finished, a long discussion between the students themselves and with their teacher has been noticed.
✓ The teacher is always smiling and encouraging the students to speak with pleasure.
✓ All the opinions and impressions are taken into consideration and discussed.
✓ It appeared throughout the discussion that the teacher and the students are very connected to each other.
✓ New words are checked using e-dictionaries and their articulation is tested as well.
✓ The classroom atmosphere is very comfortable where mutual respect and belongingness are major features.

Observation Number 12

- Setting: 11:30 AM; 13.03.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Thirty (30) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

✓ Two presentations are programmed for this session.
✓ There are many late comers today.
✓ The teacher is always smiling and greeting the students.
✓ The first presentation was judged by the teacher as very acceptable.
✓ Immediate feedback is constantly provided by the teacher.
✓ Along the discussion the students raised many issues and the teacher was always encouraging the students to express their ideas without fear.
✓ The teacher pronounces the mistaken words with high pitch so that the students will be able to discover the mistake and correct it by themselves.
✓ The second presentation was considered by the teacher as perfect.
✓ The teacher did not make any comparison between the students performance during the presentations.
✓ She evaluates the work only without comparing the presentation with the previous ones.
✓ It seems through the presentations that the students who presented today really master the use of all the computer components (Software/Hardware).
✓ After the presentations the teacher has discussed some external topics with the students.

Observation Number 13

- Setting: 10:00 AM; 09.04.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Forty (40) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ All the students are present today.
- ✓ They are at time as well.
- ✓ The students are very active, after they have taken their places; they directly switched on their computers.
- ✓ Three presentations are programmed for this session.
- ✓ The teacher is waiting and the first group is trying to prepare the Hardware materials needed for the presentation.
- ✓ The teacher has interfered many times to solve many Hardware problems.
- ✓ The topic was not attractive so the students were not really interested.
- ✓ The discussion did not take too much time.
- ✓ The second presentation is full of audio-visual stimulations and new words for the students.
- ✓ After the presentation has finished, the teacher asked the students to check the new words.
- ✓ A long discussion full of opinions, impressions and debates has been noticed after this presentation.
- ✓ The teacher always encourages the students to speak and asks those who were not listening to give their impressions, opinions and even questions if they have in a non-threatening way.
- ✓ Such a way attracted their attention and encouraged them to take part in the discussion.
- ✓ By the end of the session the students seem very tired.
- ✓ Because of time the third presentation was postponed to the next session.

Observation Number 14

- Setting: 11:30 AM; 10.04.201; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Twenty nine (29) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ Late comers are many and those who came seemed very tired.
- ✓ Two oral presentations are programmed for this session.

- ✓ The first group to present the topic is late and the teacher is waiting.
- ✓ The teacher asked the second group to prepare themselves instead.
- ✓ The second group faces many problems with the computer and the data show.
- ✓ The teacher is helping them.
- ✓ The other students are waiting but they lost their interest, they are discussing external topics.
- ✓ After the Hardware problems are solved by the teacher, the presentation has started.
- ✓ The way of presenting the topic and the visual stimulations provided in the presentation have attracted the students a lot.
- ✓ They are listening to the students with great attention.
- ✓ After the presentation a rich discussion full of view points, impressions, questions and new vocabulary items has been noticed.
- ✓ Some students ask the teacher to help them find the e-dictionary in their computer.
- ✓ The teacher cannot check all the students' computers, thus, she decided guide them orally.
- ✓ After the discussion, the second group has prepared the hardware and is waiting the teacher to ask them to start presenting their topic.
- ✓ The topic is attractive but the slides contain long texts.
- ✓ The teacher asked them to stop reading from the slides.
- ✓ After completing the presentation, the discussion was too short in which the teacher gave some instructions and advices.

Observation Number 15

- Setting: 10:00 AM; 16.04.2013; Tlemcen University; Department of Foreign Languages; English Section; Computer Laboratory, 1:30-hour observation conducted by Yaiche Wahida.
- Participants: Forty (40) 2nd year university students.
- Observed things: teacher's classroom management, students' actions during sessions, in addition environmental conditions.
- Observations:

- ✓ All the students are at time.
- ✓ They look very active and energetic today.

- ✓ Before starting the presentations, the teacher has discussed some personal topics with the students who were very attracted.
- ✓ The first group has prepared the Hardware successfully without the teacher's help.
- ✓ The way the topic is introduced has attracted the teacher and other students who expressed a high level of curiosity to listen to the rest of the presentation.
- ✓ During the presentation the students are using their computers to look for facts or words.
- ✓ The teacher with a smiling face is really satisfied.
- ✓ After the presentation has finished, an enjoyable discussion between the students themselves has been noticed.
- ✓ The teacher is only guiding and managing the discussion.
- ✓ The presentation was evaluated by the teacher as perfect.
- ✓ Feedback is always provided by the teacher.
- ✓ The second group to present did not face any problems while preparing the Hardware.
- ✓ The teacher and the students are listening with great attention.
- ✓ The classroom atmosphere is supportive and enjoyable.
- ✓ After completing the presentation, the students asked for their peers' and teacher's questions and comments.
- ✓ The students raised many debates and the teacher is guiding the discussion.
- ✓ New idiomatic expressions are explained and new words are pronounced.

Appendix 3

Questionnaire

Dear informant,

For the sake of exploring EFL students' motivation in CALL (Computer Assisted Language Learning) environment, the present questionnaire was designed. Would you please answer the following questions by putting a tick on the appropriate answer or expressing your comments where necessary.

Thanks for your collaboration

Part one:

Age: .....

Sex: Male ☐ Female ☐

Part two:

1. Do you like using technology in class?
   Yes ☐ No ☐
2. Do you have an advanced knowledge in using technology?
   - Not at all
   - Very little
   - A little
   - A lot
   - A very great deal
3. Do you learn the language better when the teacher uses technology in lessons?
   Yes ☐ No ☐
4. Does the use of technology sustain your interests in learning English?
   - Not at all
   - Very little
   - A little

- A lot
- A very great deal

5. Learning English through technology enhances your task enjoyment
    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly agree
6. Learning English language assisted by computer is
    - A waste of time
    - Boring
    - Unnecessary
    - Effective
7. Computer programs energize you to engage in the learning process
    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly agree
8. Does CALL help you to direct your own learning (i.e., to be autonomous student)?
    - Not at all
    - Very little
    - A little
    - A lot
    - A very great deal
9. Feedback provided by the computer stimulates you to complete learning tasks
    - Strongly disagree
    - Disagree
    - Neutral

- Agree
- Strongly agree

10. What programs do you use on your computer while the teacher is presenting the lecture?

.....

.....

11. What difficulties do you encounter while learning through CALL?

.....

.....

12. How often do you call for help?
    - Always
    - Often
    - Sometimes
    - Rarely
    - Never
13. How does your teacher help you to overcome obstacles?

.....

.....

14. How would you describe your relationship with the teacher?

.....

.....

15. How would you describe the atmosphere of your class while learning through CALL?

.....

.....

Appendix 4

Teacher's Interview

Dear teacher,

This interview seeks to collect information about the role of CALL to motivating second year students to learn English. It is, also, an attempt to know what might be the conditions required for CALL to achieve its intended outcome. Thus, you are kindly invited to answer the following questions sincerely for they are significant for the success of this work.

****

1. For how long have you been teaching English?
2. For how long have you been teaching English through technology?
3. Have you received a special training to teach English through the technological devices you are using now?
4. Why do you use technology in teaching?
5. As being an English teacher, do you think that students are generally motivated to learn the language through computers?
6. According to you, do students lack the necessary technological skills to learn the language through computers?
7. What strategies you usually use to engage those students more in the learning process?
8. Rather than students lack of technical skills, have you ever come across other difficulties when teaching the language through computers?
9. Do these difficulties constitute a handicap for CALL motivational role?
10. If you are asked to summarize the process of teaching English through computers, what would you say?

Thank you for your collaboration

Summary

As a dependent psychological variable, motivation plays a significant role in promoting foreign language learning. Thus, various methods are employed for the sake of motivating EFL students. Computer Assisted Language Learning (CALL) is one of the most innovative methods that can be used to enhance students' motivation in the area of language education. This research work aims at providing information about the usefulness of CALL in solving the problem of motivation in EFL classrooms taking as a reference the case of second year undergraduate students at the University of Tlemcen. It also attempts to elicit the main CALL success factors as well as the difficulties encountered by the students and the teacher in CALL laboratories.

Key words: Computer-Assisted Language Learning, Motivation, Learning.

Résumé

La motivation joue un rôle très important comme un variable psychologique dépendant dans la promotion de l'apprentissage de la langue. Ainsi des différentes méthodes sont appliquées pour bien motiver les étudiants d'anglais comme une langue étranger. Computer Assisted Language Learning (CALL) est une des méthodes les plus innovantes qui peuvent être utilisés pour augmenter la motivation des étudiants dans le domaine de l'enseignement des langues. Cette recherche vise à fournir des informations sur l'utilité du CALL afin de résoudre le problème de la motivation dans les classes d'anglais en prenant comme référence le cas des étudiants de deuxième année à l'Université de Tlemcen. Elle vise aussi à obtenir les facteurs principaux de la réussite de CALL, ainsi que les difficultés rencontrées par les étudiants et l'enseignant dans les laboratoires de CALL.

Mots Clés : Apprentissage de Langue assisté par ordinateur, Motivation, Apprentissage

ملخص

يعتبر الحافز واحدًا من أهم المتغيرات النفسية التي لها دور أساسي في تعلم اللغة الأجنبية، ولًهدا طرق مختلفة يتم توظيفها بغية تحفيز طلاب اللغة الإنجليزية الأجانب. تعلم اللغة بمساعدة الحاسوب هو من احدث الطرق التي يمكن اعتمادها لتعزيز دافع الدراسة في مجال اللغة الأجنبية. و عليه فإن هدا البحث يهدف إلى توفير معلومات حول مدى جدوى الحاسوب في حل مشكل الحافز في فصول الإنجليزية كلغة أجنبية متخذا حالة طلاب المرحلة الجامعية الثانية كمرجع. بالإضافة إلى دلك يحاول هدا العمل استخلاص أهم عوامل نجاح الحاسوب فضلا عن الصعوبات التي يواجهها المدرس و الطلبة على حد سواء في مختبرات تعليم اللغة بواسطة الحاسوب.

الكلمات المفتاحية: تعلم اللغة بمساعدة الحاسوب, الحافز, تعلم اللغة.

Summary of the Thesis

Learning in educational psychology can be defined as a relatively permanent change in mental processing, emotional functioning, and/or behaviour as a result of experience. It is the lifelong, dynamic process by which individuals acquire new knowledge or skills and alter their thoughts, feelings, attitudes and actions. Despite the significance of learning to each individual's development, functioning and well being, willingness or desire to learn varies from one individual to another. This individual difference is commonly referred to as motivation.

In fact, motivation involves the factors that energize, stimulate, direct and sustain, or inhibit the behaviour towards learning a particular task. In the EFL classroom, motivation is an observable and measurable psychological variable that not only do students bring to the classroom but also teachers can implement, enhance and promote through the use of a number of strategies. Indeed, motivating students to learn is said to be a complex problem that has been investigated in innumerable studies. Recently, it is specifically proposed that computer technology can be used to enhance students' motivation in the area of language education to promote learning and reinforce students to perform in a particular way.

The fact of using computers to solve the problem of motivation in EFL classrooms stimulated the researcher to investigate the usefulness of CALL in higher education as a means to promote motivation of second year undergraduate students at the University of Tlemcen.

Based on the analysis of the significant role of motivation in learning English as a foreign language and the benefits of CALL resources in foreign language labs, the main objective sets out to this research work is to assess the impact of CALL on students' motivation in EFL learning labs focusing on the question of how may CALL integration in EFL classrooms contribute to students' motivation?

The aforementioned problematic leads the researcher to ask some research questions which are listed as follows:

1. What are the potential advantages of using technology in EFL classrooms?
2. What is the role of CALL to improving EFL students' motivation?
3. Does CALL require a particular classroom management to increase students' motivation?

These research questions yield to the following hypotheses:

1. Technology can be used to make language learning more effective, enjoyable and motivating as it is the medium that nowadays' students understand and like to use.
2. As a supporter of individualized learning, CALL plays a vital role in providing students with energy, self direction (autonomy) and engagement which motivate them to learn.
3. Effective CALL requires from teachers to create a particular learning atmosphere where techniques, resources and tools are set out to meet the needs of students and to be reflective about the conditions that stimulates their desires for learning.

In order to probe the potential advantages of CALL on motivation, the researcher has opted for a certain methodology to discover answers to the research questions and test the raised hypotheses. An exploratory type of case study was chosen to investigate systematically a randomly selected

sample of forty (40) LMD2 EFL students and one (1) teacher using a mixed-methods approach which includes the joint use of both quantitative and qualitative approaches for the sake of collecting complementary data. In fact, three research instruments have been utilised in order to triangulate the results including classroom observation conducted by the researcher in the studied setting, a questionnaire administered to students attentively designed to address motivation related constructs and an interview prepared for the teacher to find out about her opinions, evaluations and expectations from CALL use in the EFL context.

According to Wilson and McLean, the questionnaire is a useful research instrument used for collecting survey information, providing structured and numerical data, being able to be administered without the presence of the researcher, and often being comparatively straightforward to analyze (Cohen, Manion and Morrison 317). In this vein, Brown (2001) defined questionnaires as

> Any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting them among existing answers. (qtd. in Mackey and Gass 92)

The questionnaire which is administered to the students aims at providing a reliable and valid index of the various motivational characteristics which the researcher wishes to investigate in CALL labs. It consists of two parts. The first part includes three questions to obtain some personal information about the participants, and the second part, with 15 questions, aims at getting information about the participants' using computers in different

scopes as well as finding out about their interests, desires, drives, view points and attitudes towards the use of the computer in learning English.

> Questionnaires allow researchers to gather information that learners are able to report about themselves, such as their beliefs and motivations about learning or their reactions to learning and classroom instruction and activities—information that is typically not available from production data alone. ibid: 93

Certainly, the type of questions designed for the questionnaire will be dependent on the research questions being addressed in the study and for the sake of testing the suggested hypotheses.

In addition, the case study is usually associated with a longitudinal approach, in which observation of the phenomenon under investigation is made for a period of time (Mackey and Gass 171). In this vein, Mason noted that observation usually refers to

> Methods of generating data which involve the researcher immersing [him or herself] in a research setting, and systematically observing dimensions of that setting, interactions, relationships, actions, events, and so on, within it. (qtd. in Mackey and Gass 175).

Accordingly, the data obtained through observations are said to be eye-catching since they provide the researcher with the opportunity to gather 'live' data from 'live' situations (Cohen, Manion and Morrison 305). While collecting data through observation, the researcher aim to provide careful descriptions of learners' behaviours, attitudes, desires, actions and activities in the classroom without influencing the events in which the learner is

engaged (non-participant observer). The data will be gathered using a combination of structured and unstructured observations. In a highly structured observation, a rating scale prepared in advance is useful to emphasize certain points.

Whereas in an unstructured observation, the researcher may rely on note taking, this involves the researcher's impressions, intuitions and perceptions. Nonetheless, the unstructured observation will be used due to the fact that the researcher may ignore some points which may be interesting for the research work or the learners may perform some actions which are not considered in the rating scale. Over time and repeated observations, the researcher is supposed to achieve a deeper understanding of the participants' motivation in their EFL context of learning.The obtained information were treated using both quantitative and qualitative techniques.

Analyzing the collected data is an important part of any research project. Holding this view and depending on the nature of the research instruments, the investigator will analyze the obtained data using a mismatch of two approaches.

First, a quantitative approach based on Exploratory Data Analysis (EDA) is required where the researcher relies on descriptive statistics i.e., percentages, mean (average), charts and graphs.

Second, the qualitative approach will present a natural holistic picture of the phenomenon being studied. This picture accounts for and explains the data; in short, it makes sense of data in terms of the researcher's interpretations, the participants' definitions of the situation and noting pattern.

To sum up, both quantitative and qualitative analysis should provide information concerning the studied phenomenon, including logical analysis and inductive formulations so that the analysis of the collected data is linked to the research hypothesis.

Aiming at assessing the motivational value of CALL in the EFL context, this research work is an attempt to, hopefully, provide valuable data in four main chapters. Chapter one deals with the literature related both to the notions of motivation as a complex psychological trait and CALL as a modern pedagogical approach. Definitions and theories of the two concepts have been provided and the links joining them have been established as well.

Chapter two sheds light on the data collection procedures undertaken to answer the research questions and test the hypotheses. This will include the research design, i.e., case study, the research approach (a combination of qualitative and quantitative methods), instruments of data collection (classroom observation, students' questionnaire and teacher's interview), sampling, and data analysis techniques.

The third chapter is devoted to the presentation of the collected data. This includes the analysis, discussion and interpretation of the results obtained from every data collection method. In addition, the whole results are discussed under one section where some conclusions are drawn.

In the final chapter, some advices about how to motivate students in CALL environment were proposed and recommendations about how to

establish a successful CALL classroom have been suggested to higher education administrators and teachers.

Because this research work explores motivation and its related psychological issues in a learning environment where computer devices are used to deliver instructed materials, it is expected to provide the readers with valuable and evident data based on classroom observation, questionnaire and interview. A better understanding of these psychological issues, facing EFL teachers, is thought to offer a better procedure to cope with these obstacles during sessions. Moreover, some suggestions and recommendations have been provided for teachers to create a successful CALL classroom. Consequently, EFL teachers who opt to teach English through CALL to motivate students can benefit from this study to introduce language items using different CALL materials and create a supportable learning atmosphere to overcome students' psychological problems.

This research paper has given an account to the benefits of CALL in relation to the realisation of increased motivation at the level of second year under-graduation students. Psychological perspectives on the variable of motivation have been provided, among which have been those of Deci and Ryan, Maslow, Rogers and Atkinson. Indeed, all the overviewed perspectives have helped the researcher to come to an end that students are not only physical beings, but cognitive, social and emotional beings as well, and that means that their motivation is dependent on the four areas, i.e., teachers need to address the four areas to achieve higher rates of motivation.

Moreover, definitions related to the term of CALL have been also overviewed in addition to its history, role in the classroom, materials, benefits and success factors. In fact, throughout the literature review the

investigator has tried to prove that students' motivation to lean is a vital ingredient to the achievement of foreign language acquisition, therefore, it has to be tackled by EFL teachers through the use of computer based materials.

The objective of this thesis is, thus, to investigate the use of CALL by EFL teachers in the University of Tlemcen to motivate students. After observing EFL students in series of lectures where CALL materials were used, it was obvious that the employment of this pedagogical tool was limited to only one teacher, the fact that made assessing its potentials on motivation restricted to only a group of forty (40) students. Though the teacher was using computer technology for teaching within two groups of first year students, the researcher has selected a group of second year randomly for the purpose of making generalizations. Nonetheless, it appeared later on that this group has already learned oral production through CALL which motivated the researcher more to rest on this group.

To better understand the motivational value of CALL, a case study has been designed to answer the research questions and test the proposed hypotheses. As research approaches, combinations of both quantitative and qualitative methods for data collection and analysis have been selected. Furthermore, all the other procedures of the design of this research project, including the description of the studied setting and the sample population, in addition to the research instruments, the aim behind their use and a description of them are provided in the second chapter.

Along the third chapter which aimed at analysing and discussing the collected data, it appeared that the results obtained from both the questionnaire addressed to EFL students engaged in a sequence of lectures

presented through computers and a series of longitudinal observations of the same informants indicated that their motivation to learn English has been enhanced to a certain extent from CALL activities, including listening practices and presenting topics using PowerPoint. The findings revealed that motivation internal dynamics (e.g., interest, curiosity, attention and willingness) are too dependent on the external conditions such as the availability of the appropriate CALL related equipments, teacher's technology knowledge and sessions scheduling. Typically, the interview results have corroborated the classroom observation and questionnaire upshots which indicated the efficacy of CALL in motivating students to learn EFL.

Furthermore, the obtained data have encouraged the investigator to generalize that CALL is a resourceful pedagogical method that is motivating for EFL students as computers are the mediums which they understand and prefer to learn with. In addition, it can be farther claimed that the more teachers and students are well trained to use computer devices the more CALL atmosphere will result in higher levels of students' motivation and, then, a successful acquisition of the foreign language.

Based on the interpretation of the main findings, the investigator has attempted to make a sort of contribution in the fourth chapter. In this sense, a number of recommendations for educational institutions to supply the appropriate conditions for the use of CALL was provided. Moreover, some teaching strategies for the effective use of CALL in addition to motivational strategies to fall into both facets of motivation were suggested.

To conclude, the present study has been undertaken in an attempt to highlight the motivational benefits that may CALL bring about in EFL

classes and, thus, encouraging teachers to rely on computer technology to diagnose students lack of motivation as they reported positive responses towards learning English through CALL about themselves. The results and the suggested recommendations are presumed to offer valuable insights to teachers and university administrators to better use computers for the sake of teaching English to Algerian students.

Nonetheless, this study has been conducted on only a limited number of participants who were supposed to be representative to all EFL students, additionally, this research did not investigate all the levels in the department of English but was concerned only with second year students the fact that affected the generalizability of the results. The lack of the internet access in the department of English language has made it impossible to assess the usefulness of asynchronous mediums of communication such as e-mail and synchronous tools like CMC (computer mediated communication) and videoconferencing. Therefore, this case study represents a prelude for further research which is required to better understand the motivational value of CALL in EFL classrooms.