



People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Larbi Tebessi University -Tebessa-
Faculty of Letters and Languages
Department of Letters and English Language



**Exploring EFL Students' and Teachers' Perceptions of
Learning Vocabulary in a Mobile-Assisted Language
Learning (MALL) Environment**

The Case of Third-Year LMD Students of English at Larbi Tebessi
University -Tebessa-

A Dissertation Submitted to the Department of Letters and English Language
In Partial Fulfillment of the Requirements for the Degree of Master in Language Sciences

Candidates:

Rim AYACHI

Meriem AYACHI

Supervisor:

Mrs. Basma BOUGOFFA

Board of Examiners

President: Mrs. Nadia BENKHDIR M.A.A at Larbi Tebessi University

Supervisor: Mrs. Basma BOUGOFFA M.A.B at Larbi Tebessi University

Examiner: Mrs. Zineb ABID M.A.B at Larbi Tebessi University

Academic year

2019-2020

Abstract

During the last two decades, the impact of technology on education became extremely noticed. The emergence of the concept ‘mobile learning’ was just a result of what technology had offered, ‘mobile devices’, and which are considered today the most and widely owned handheld devices known as ubiquitous, pervasive and ambient tools used for educational application as well. The overall purpose of this study is to explore EFL students’ and teachers’ perceptions of learning vocabulary in a MALL environment. The sample study consisted of 45 third-year LMD students of English and 10 EFL teachers at Larbi Tebessi University (Tebessa) during the academic year 2019/2020. To achieve the study aim, the descriptive-analytical method of research was adopted using two questionnaires administered online to both EFL students and teachers. The collected data from these questionnaires were analyzed quantitatively and qualitatively. The study findings indicated that third-year LMD students and teachers of English have high perceptions towards the use of mobile devices to learn English in general. Similarly, the findings presented a general agreement on the potential of MALL as a promising approach to learn vocabulary. Besides, they pointed out that third-year LMD students and teachers of English provided some effective strategies and suggestions to better improve vocabulary learning in a MALL environment at the university. Based on the findings, the study recommended the necessity of implementing MALL to enhance vocabulary learning in EFL contexts.

Keywords: mobile learning, mobile devices, vocabulary, mobile-assisted language learning, perceptions

Acknowledgments

First and foremost, praise and thanks to Allah, the Almighty, for giving us the strength to complete this dissertation.

We would like to express our genuine feelings and gratitude towards our supervisor Mrs. Basma BOUGOFFA who guided, helped, and supported us all along our journey to complete the present work. She read and corrected our drafts and advised us with an open heart. She has been a patient, supportive, and understanding supervisor.

We would also like to express our gratitude to the members of the jury, namely Mrs. Zineb ABID and Mrs. Nadia BENKHEDIR, who has kindly accepted to read and examine our work. Their insightful comments and invaluable opinions will certainly be of great assistance in improving it.

We humbly wish to extend our genuine thanks to all the students and teachers who have agreed to fill in our questionnaires and be part of our study. We are grateful to all who directly or indirectly have lent their helping hand in this research.

Dedication

“Praise be to Allah, who has guided us to this. Never could we have found guidance, had it not been for the guidance of Allah” .

We dedicate this research to our parents, who inspired us a lot to accomplish this work with their appreciative advice and prayers. Thank you for supporting us over the years.

‘Thank you’ is never sufficient for you.

To our beloved brothers, special dedication for their unceasing encouragement, support, and attention. To our dearest aunts Cherifa & Houda, who have believed in us, who were there, especially in the difficult times, we will never forget your generous support.

Special thanks and appreciation to my friends, Souha, Amira, and Huyem, for their help, contribution, and kindly sustenance whenever we need them.

This work is also dedicated to Azzeddine, Lotfi, and Ikram for their efforts in providing us with software programs and the necessary books to accomplish this research.

List of Abbreviations

CALL: Computer Assisted Language Learning

EFL: English as a Foreign Language

GTM: Grammar translation method

SPSS: International Business Machines Statistical Package for the Social Sciences

L1: First Language/Mother Tongue

L2: Second Language

LMD: License, Master, and Doctorat

M: Mean

MALL: Mobile Assisted Language Learning

M-Learning: Mobile Learning

PDAs: Personal Digital Assistants

SMS: Short Message Service

VLSs: Vocabulary Learning Strategies

List of Figures

Figure 01: Vocabulary is classified in relation to the four skills in listening and speaking (spoken vocabulary), reading, and writing (written vocabulary), as suggested by Pikulski & Templeton (2004).....	09
Figure 02: VLSs are divided into discovery and consolidation strategies in Schmitt's taxonomy (1997).....	10

List of Tables

Table 01: The Scales and Scores for the Items in Section Three of the Questionnaire.....	32
Table 02: The Students' Age.....	34
Table 03: The Student's Gender.....	35
Table 04: Mobile Devices Ownership.....	39
Table 05: Type of Mobile Devices Owned by Students.....	35
Table 06: The Students' Level of Vocabulary Knowledge.....	35
Table 07: Mobile Devices Usage for Learning in the Classroom.....	36
Table 08: Students' Views towards Teachers' Permission for Students Use Mobiles for Learning inside the Classroom.....	36
Table 09: Frequency of the Students' Use of Mobiles to Learn English.....	37
Table 10: Mobile Devices Usage Inside/Outside the Classroom.....	37
Table 11: Mobile Devices Usage to Improve the Students' English.....	38
Table 12: Language Skills and Areas that can be Improved Through the Use of Mobile Devices.....	38
Table 13: Frequencies, Percentages, Means and Standard Deviations of Vocabulary Learning Using Mobile Devices.....	40
Table 14: The Teachers' Age.....	45
Table 15: The Teachers' Gender.....	45
Table 16: The Teachers' Degree.....	46
Table 17: The Teachers' Teaching Experience.....	46
Table 18: Teachers' Uses of Mobile Devices as Assistant tools in the Classroom.....	47
Table 19: Teachers' Permission to their Students to Use Mobiles for Learning Purposes inside the Classroom.....	47

Table 20: Teachers Views towards the Frequency of Students' Use of Mobiles to Learn English.....	47
Table 21: Teachers' Views about Mobiles Devices Usage Inside/Outside the Classroom.....	48
Table 22: Teachers' Views towards Mobiles Usage to Improve the Students' English.....	48
Table 23: Language Skills and Areas that can be Improved Through the Use of Mobile Devices.....	49
Table 24: Frequencies, Percentages, Means and Standard Deviations of Vocabulary Learning Using Mobile Devices.....	50

Table of Contents

Abstract.....	ii
Acknowledgments.....	iii
Dedication.....	iv
List of Abbreviations and Symbols.....	v
List of Figures.....	vii
List of Tables.....	vii
Table of Contents.....	xi
 General Introduction	
1. Background of the Study.....	01
2. Statement of the Problem	02
3. Research Hypotheses and Assumptions	03
4. Aim of the Study.....	03
5. Research Methodology	03
6. Structure of the Study.....	04
Chapter One: An Overview of Vocabulary of Learning/Teaching and MALL.....	05
Introduction.....	05
Section One: Vocabulary Learning and Teaching.....	05
1.1.1. Definition of Vocabulary.....	06
1.1.2. Importance of Vocabulary.....	06
1.1.3. Vocabulary Knowledge.....	07
1.1.3.1. Form.....	07
1.1.3.2. Meaning.....	07
1.1.3.3. Mapping.....	08
1.1.4. Vocabulary Distinction	08

1.1.4.1. Receptive vocabulary.....	08
1.1.4.2. Productive vocabulary.....	08
1.1.5. Vocabulary Types in Relation to the Four Skills.....	08
1.1.6. Vocabulary Learning.....	09
1.1.6.1. Explicit and implicit vocabulary learning.....	10
1.1.6.2. Vocabulary learning strategies.....	10
1.1.7. Vocabulary Teaching.....	12
1.1.7.1. Vocabulary selection.....	12
1.1.7.2. Vocabulary presentation.....	13
1.1.7.3. Vocabulary teaching approaches and techniques.....	14
1.1.8. Vocabulary Testing.....	15
1.1.8.1. Reasons and principles for vocabulary testing.....	16
1.1.8.2. Examples of vocabulary-testing methods.....	16
Section Two: A Theoretical Framework for MALL.....	18
1.2.1 The Scope of Mobile Learning.....	19
1.2.1.1. Definition and beginnings of mobile learning.....	19
1.1.1.1. From computer-assisted language learning to mobile-assisted language learning.....	20
1.1.2. Types of Mobile Learning Devices.....	21
1.1.2.1. Mobile phones.....	21
1.1.2.2. Personal digital assistants.....	21
1.1.2.3. Podcasts.....	21
1.1.3. Accessibility and Mobility in Mobile Learning.....	22
1.1.3.1. Accessibility.....	22
1.1.3.2. Mobility.....	22

1.1.4. Mobile Learning and the Teacher-Student Relationship.....	23
1.1.5. Mobile Learning Applications as Supplementary Tools for Learning/Teaching.....	23
1.1.6. Theories of mobile learning.....	24
1.1.6.1. Behaviorism.....	24
1.1.6.2. Cognitive theory.....	25
1.1.6.3. Constructivism.....	25
1.1.6.4. Contextual learning theory.....	25
1.1.6.5. Situated learning theory.....	25
1.1.7. Advantages and Disadvantages of Mobile Learning.....	25
1.1.7.1. Advantages.....	25
1.1.7.2. Disadvantages.....	27
Conclusion.....	27
Chapter Two: Research Methodology, Data Analysis, Summary, and Conclusion...28	
Introduction.....	28
Section One: Research Methodology.....	28
2.1.1. Research Design	28
2.1.2. Sample and Setting.....	29
2.1.3. Data Gathering Tools.....	29
2.1.3.1. Description of the questionnaires.....	29
2.1.3.2. The Pilot phase.....	30
2.1.3.3. Administration of the questionnaire.....	31
2.1.4. Data Collection, Analysis /Procedures.....	32
Section Two: Data Analysis and Interpretation.....	33
2.1.5. Analysis of the Students' Questionnaire.....	33
2.1.6. Analysis of the Teachers' Questionnaire.....	45

2.1.7. Discussion of the Results.....	55
Section Three: Summary of the Results, Limitations, Implications and Recommendations	59
2.3.1 Summary of the Results.....	59
2.3.2 Limitations of the Study.....	60
2.3.3 Pedagogical Implications	60
2.3.4 Recommendations	61
Conclusion.....	62
General Conclusion.....	63
References	
Appendices	
Résumé	
الملخص	

General Introduction

1. Background of the Study

For English as a Foreign Language (EFL) learners, vocabulary is unreserved of crucial importance, and it is the foundation of language learning that needs to be developed. It is the core of the English language since the language skills' qualities are dependent on the quantity and the quality of the vocabulary mastered (Wilkins, 1972). During the last two decades, the impact of technology on education became extremely noticed, and the emergence of the concept of "mobile learning" (m-learning) was just a result of what technology had offered. The paradox that motivated researchers and pedagogues to encourage m-learning is that mobile tools are being applied for teaching and learning purposes but were not designed for the same purpose, and at the same time come to fit in educational goals.

As a matter of fact, mobile devices can help to enhance teaching and learning through exploring the new tools' capacities and their use in the process as well as improving access to learning resources and materials. While EFL students are meant to learn vocabulary through the old and traditional methods, pocket dictionary, for instance, mobile devices can provide fast and easy access to the dictionary through a variety of applications. Furthermore, what makes taking advantage of mobile devices possible is that students today are able to experience learning through the use of it wherever they happen to be. It is due to many reasons mobile devices can bring many benefits to e-learning (Kukulka-Hulme, 2009; Rodinadze & Zarbazoaia, 2012).

Many scholars shed light on the advantages behind using mobile devices and integrating mobile-assisted language learning (MALL) in educational contexts. It can be associated with improving mobility and portability, facilitating learning at anytime and anywhere, providing learners with fast and easy access to knowledge sources, and improving learning with creativity.

The focus of this research is not only to improve with literature, though also to contribute to teaching and learning by providing substantial evidence of MALL use in the Algerian EFL

classes as supplementary teaching material. For language learning, the MALL ability is contrasted with additional conventional resources such as homework assignments, textbooks, and dictionaries. Any positive proof for the effectiveness of MALL is an efficient supplement to traditional curricula that will allow EFL teachers to boost the learning of their students through mobile devices inside and outside the classroom.

2. Statement of the Problem

Vocabulary represents the backbone of any language. Even those with mastery of grammar might fail to communicate without extensive vocabulary knowledge, as stated by Wilkins (1972), “Without grammar very little can be conveyed, without vocabulary, nothing at all can be conveyed”. Therefore, enlarging English vocabulary is of great significance in English acquisition. However, EFL learners in Algeria are sadly struggling to choose the proper terminology; others have a shortage of English vocabulary, and they are trying to find the appropriate tools to get new vocabulary. EFL teachers always encourage students to hold a pocket dictionary either to check word meaning or to perceive new concepts, and this traditional approach becomes very unexciting and monotonous. In this respect, using different technology-based instructional materials such as MALL is one of the effective ways that can help learners and teachers learning and teaching vocabulary. Hence, the researcher believes in the importance of exploring the perceptions of EFL learners and teachers of learning vocabulary in a MALL environment. The study targets third-year Licence, Master, and Doctorate (LMD) students as well as teachers of English at Larbi Tebessi University, Tebessa (Algeria).

3. Research Questions and Hypotheses

The following research questions are proposed to achieve the purpose of the study:

1. How do third-year LMD students and teachers of English perceive the use of mobile devices to learn the English language in general at Larbi Tebessi University?

2. How do third-year LMD students and teachers of English perceive the use of mobile devices to enhance vocabulary learning at Larbi Tebessi University?
3. What do third-year students and teachers of English suggest to better improve vocabulary learning in a MALL environment at the university?

Hypotheses

Based on the research questions, the following hypotheses were put forward:

1. Third-year LMD students and teachers of English have high perceptions towards the use of mobile devices to learn English in general at Larbi Tebessi University.
2. Third-year LMD students and teachers of English have high perceptions towards the use of mobile devices to enhance vocabulary learning at Larbi Tebessi University.
3. Third-year LMD students and teachers of English provide important suggestions to better improve vocabulary learning in a MALL environment at the university.

4. Aims of the Study

The overall objective of the current study is to explore the Third -year LMD students' and teachers' of English perceptions of learning vocabulary in a MALL environment at Larbi Tebessi University. The study aims, in particular, to explore their perceptions towards the use of mobile devices to learn English in general and vocabulary in particular. Finally, it attempts to derive students' and teachers' suggestions to better improve vocabulary learning in a MALL environment at the university.

5. Research Methodology

The researchers followed the descriptive-analytical method of research due to its relevance to explore third-year LMD students' and teachers' perceptions of learning vocabulary in a MALL environment at Larbi Tebessi University. The researchers reviewed the related literature and suggested two questionnaires administered to third-year students and teachers. The target population is composed of a random sample of 45 students and 10 teachers of

English. Along with the Coronavirus spread, the direct contact with the chosen sample seemed to be impossible; therefore, the researchers shared the questionnaires online with the target population using Google Drive via Facebook and e-mails. The collected data from the two questionnaires were analyzed quantitatively and qualitatively. In view of that, the current study used a mixed-method approach.

6. Structure of the Dissertation

The current dissertation is divided into two chapters beginning with a “General Introduction”. The first chapter represents the theoretical part of the study, and it comprises two sections. Section one provides an overview of vocabulary learning and teaching, whereas Section Two is concerned with the review of the literature related to the MALL. The second chapter represents the practical part of the study, wherein a detailed description of data collection tools, analysis, and discussion of the results are presented. It includes three sections; the first section presents the research methodology followed in this study, the second section presents the data analysis and interpretation, and the third one provides a summary of the results, limitations, implications, and recommendations. Finally, the dissertation ends with a “General Conclusion”, which makes an overall account of the research and summarizes the main research findings.

Chapter One: An Overview of Vocabulary of Learning/Teaching and MALL

Introduction

Vocabulary is the central component of any language. Without extensive vocabulary knowledge, learners might experience the failure to communicate. Therefore, current technologies have led to significant teaching and learning improvements. Mobile devices are one of these technologies, which facilitate the needs of EFL learners and teachers. In other words, this educational approach focuses on teaching and learning languages through the implementation of technology within institutions.

Therefore, Chapter one is divided into two sections. Section one attempts to describe learning and teaching vocabulary in EFL classrooms. It opens with defining vocabulary and stresses its importance in language learning. Then, it sheds light on the issue of vocabulary knowledge, the distinction between receptive and productive vocabulary, followed by presenting vocabulary types related to the four language skills. Thereafter, it discusses different aspects, strategies, and techniques of vocabulary learning, vocabulary teaching, and vocabulary testing.

Section Two introduces the scope of mobile learning as it sheds light on the evolution of computer-assisted language learning to mobile-assisted language learning. Then it defines mobile-learning and shows its significance in language learning/teaching. It provides the main types of mobile devices and their recent uses within the educational system, as well as it presents accessibility and mobility in m-learning. The section, therefore, discusses the most prominent mobile learning theories. Finally, it ends with the major advantages and disadvantages of mobile learning.

Section One: Vocabulary Learning and Teaching

This section provides information about vocabulary and its components as it discusses different aspects related to vocabulary learning, teaching, and testing.

1.1.1 Definition of Vocabulary

The term vocabulary is widely discussed and defined by many scholars. Oxford Dictionary (2002) defined it as, “The total number of words that compose a language”. That means the knowledge of the maximum amount of words and its nature known by the person which combines language. Whereas, Schmitt (2010) referred to vocabulary as, “The potential knowledge that can be known about a word is rich and complex” (p. 5). That is to say; vocabulary is the person’s comprehension and the recognition of the word meaning.

Thornbury (1997) noted that vocabulary or lexis in English is frequently introduced and used interchangeably. Kamil & Hebert (2010, p. 3) stated that vocabulary is a collection of spoken and printed words that are grasped by someone in which those words are used in productive and receptive skills. Vossoughi (2009) identified that words are instruments for thoughts, for expressing ideas or feelings and emotions (p. 1).

From the definitions mentioned previously, it can be said that vocabulary is a collection of words used by speakers or writers to communicate effectively. Those words exist in any language.

1.1.2 Importance of Vocabulary

The importance of vocabulary is fundamental to English language teaching because, without sufficient vocabulary, learners cannot fully understand others or express their thoughts (Thornbury, 2002, p. 3). As Wilkins (1972) highlighted: “. . . without grammar, very little can be conveyed, without vocabulary, nothing can be conveyed” (pp. 111-112).

Thornbury (2002) addressed students who spend their time studying grammar, clarifying that their language will not be improved unless they learn more words and expressions; consequently, they can express almost everything with illustrations using vocabulary. The following statement was a declaration by Thornbury’s learner in answering the question of “how would you like to improve your English?”:

Oral is my weakness, and I cannot speak a fluent sentence in English. Sometimes I am lack of useful vocabularies to express my opinion. My problem is that I forget the words soon after I have looked in the dictionary (...). I have the feeling that I always use the same idiomatic expressions to express different sorts of things. (Thornbury, 2002, p. 13).

To sum up, the importance of vocabulary can be reflected when EFL learners can achieve great success in their classroom as well as in their social life. Learning English vocabulary does not only allow learners to communicate but also to use words, to think, and to express ideas and feelings.

1.1.3 Vocabulary Knowledge

Vocabulary knowledge for the second language (L2) learners is, however, considered as a critical tool since insufficient lexis slow down effective communication. Therefore, most of the researchers agree on the idea that word knowledge entails three main features. However, Barcroft (2016, pp. 6-9) asserted that the recognition of words involves three key components: form, meaning, and mapping.

1.1.3.1 Form. The form of a word or lexical phrase is its physical entity. Vocabulary can be both spoken and written. Knowing the form of words can enlarge the learner's vocabulary knowledge, which enables them to identify and classify words in addition to affixation, derivation, and compounding of words (Barcroft, 2016).

1.1.3.2 Meaning. The meaning of a word indicates all of the semantic meaning. For example, the word "candle" refers to the object that is made of wax and produces light. The purpose of terms also involves synonyms, antonyms, and homonyms (words that share the same form but different in meaning; wait/weight), Polysemy (a single word with multiple meaning). Apart from this, denotation and connotation are another aspect of what it means to know a word (Barcroft, 2016).

1.1.3.3 Mapping. It is an essential component of word knowledge; it is between the form and meaning of words. Mapping refers to how mental representations of both kind and meaning which are interrelated to one another. Besides, structure, purpose, and mapping are all considered to be integral parts of effective vocabulary learning (Barcroft, 2016).

1.1.4 Vocabulary Distinction

Learners need to recognize how to use the word correctly. They have to know about the meaning and form of the word used. That is why McCarthy (1990, pp. 44-45) made a distinction between receptive and productive vocabulary.

1.1.4.1 Receptive vocabulary. Receptive retrieval requires linking spoken or written inputs to the stored sound and phonological forms and their related meanings. Words seem to be connected with the syllabic shape and stress patterns of the general term, and this explains why hearers can decipher messages in their first language (L1), despite substantial background sounds (McCarthy, 1990).

1.1.4.2 Productive vocabulary. The opposite direction of receptive restoration includes active recuperation. Meanings have to be formalized; some forms are simple words and compounds; some are binomials, fixed collocations, and other multiple-word units. The cost-effectiveness of the recovery process offered by pre-assembled pieces of this kind was regarded as a valuable means by which L2 students can quickly and also very early learn a foreign language (McCarthy, 1990).

1.1.5 Types of Vocabulary in Relation to the Four Skills

As mentioned before, researchers classified vocabulary into productive and receptive. Montgomery (2007) proposed four types of vocabulary: listening and speaking (spoken vocabulary), reading, and writing (written vocabulary). Pikulski and Templeton. (2003) provided a distinction between these types, as illustrated in Figure 1.

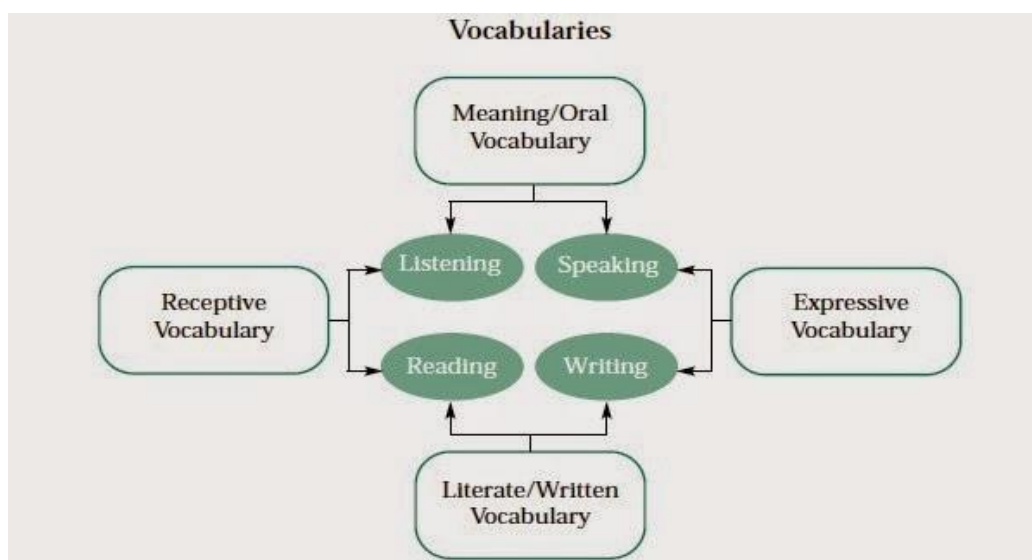


Figure 1. Vocabulary is classified in relation to the four skills in listening and speaking (spoken vocabulary), reading, and writing (written vocabulary), as suggested by Pikulski and Templeton (2004,p .2).

Listening vocabulary refers to the words that the person can hear and comprehend when listening to speech. However, most adults can recognize about 50.000 words. Speaking vocabulary refers to the words that an individual uses when speaking. Furthermore, people can use less than 50, 00 to 10,000 for all their conversations and instructions. Reading vocabulary refers to the words that the person understands when reading texts. It is the most significant type of vocabulary unless the person is a reader. The latter tend to use more words by reading than listening, and it depends on their mental lexicon. Writing vocabulary refers to words that an individual retrieves in the process of writing to express himself/herself. Regularly, it is easy to explain things orally better than writing by using facial expressions and gestures to get ideas (Montgomery, 2007).

1.1.6 Vocabulary Learning

Undoubtedly, learning vocabulary is an essential part of language mastery. However, it is not an easy task at all. The function of vocabulary learning is to find the difference between

recognizing and using a word. Learning vocabulary should be based on retaining words and use them successfully in the appropriate circumstance.

1.1.6.1 Explicit and implicit vocabulary learning. According to Schmitt (2000), explicit and implicit learning are two types of vocabulary learning. “Explicit learning focuses attention directly on the information to be learned” (Schmitt, 2000, p. 120). Explicit learning is the process in which the learner gives excessive attention to the information to be learned in order to make the possibility and the chance of higher acquisition. However, “Implicit learning can occur when one is using the language for communicative purposes” (Schmitt, 2000, p. 120), which means it is a process in which the learner focuses more on using the language than on learning. It takes place when the learner relies heavily on recognizing the message and obtaining the sense of a text that is sent instead of recognizing its vocabulary (focus on one particular word).

1.1.6.2 Vocabulary learning strategies. Schmitt (1997) explained that vocabulary learning strategies (VLSs) are a part of general learning strategies. He divided VLS into two significant classes; the discovery and the consolidation strategies, as illustrated in Figure 2 (These categories were stimulated by Oxfords’ (1990) list of the general language learning strategies yet incorporated some modifications).

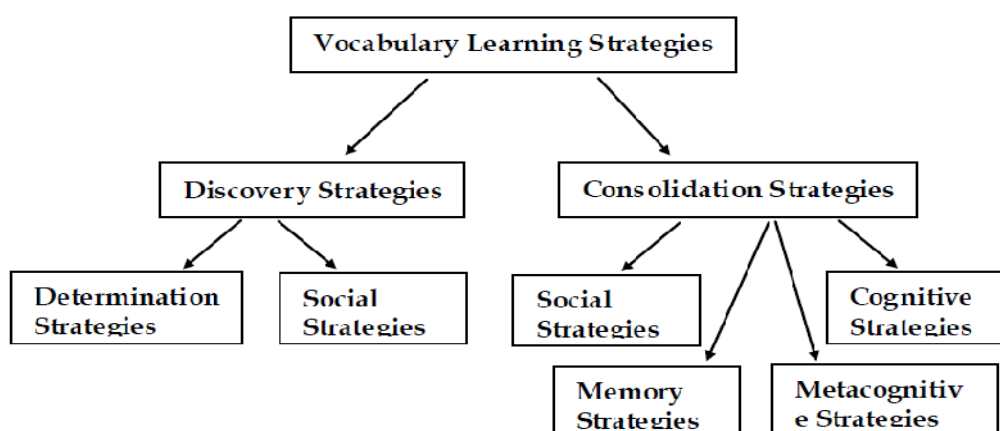


Figure 2. VLSs are divided into discovery and consolidation strategies in Schmitt’s taxonomy (1997).

According to Schmitt (1997), *Discovery strategies* are essential for identifying a word sense initially, which involves determination strategies and consolidation strategies:

- **Determination strategies**

Determination strategies comprise analyzing the unfamiliar words, its component forms, its related concept, and validate its equivalent meaning of L1 or check a dictionary to find out exactly its sense.

- **Social strategies**

In social strategies, teachers and learners look after cooperative working in order to get the right meaning of a word.

Consolidation strategies are targeted to maintain a word once it has been discovered. It comprises four sub-strategies (Schmitt, 1997):

- **Social strategies**

Social strategies adopt a way to explore a new meaning by asking someone who knows. Instructors are mostly in this situation and can be inquired to assist in different ways: to give the L1 translation if they recognize it, to give a synonym, to give an interpretation by paraphrase, to use the new word in a phrase, or any combination of all of the above.

- **Memory strategies** (traditionally known as mnemonics)

It involves the relationship between the word to be maintained and some recently learned knowledge, using forms of illustrations or clustering.

- **Cognitive strategies**

Cognitive strategies are identical to Memory Strategies, though, are not mainly focused on manipulative mental processing; they involve repetition and the use of mechanical actions to learn vocabulary. Writing and verbal repetition, writing frequently, or uttering a word repetitively are used strategies across several areas of the world.

- **Metacognitive strategies**

Strategies that are used by students to identify and assess their learning through a general description of the learning process. That is, they are commonly broad strategies associated with more effective learning. It is essential to reduce exposure to L2 in order to acquire it appropriately. If the L2 is English, the prevalence of English-language books, magazines, newspapers, and movies in most parts of the world is an almost endless resource.

1.1.7 Vocabulary Teaching

Teaching vocabulary is an important starting point in the process of teaching a second/foreign language. In regards to taking into account the situation in which the course is taking place, it is vital to determine which vocabulary will be selected for teaching and how it will be presented.

1.1.7.1 Vocabulary selection. Ur (2012) stated that the most integral factor for selecting which vocabulary items to teach must be its usefulness for learners. One useful measure of the effectiveness of an item is ‘frequency’, i.e., “How often a word or expression is used in conversation or writing” (p. 65) (often measured by the survey of a corpus). Ur has mentioned that there are numerous vocabulary lists grounded on frequency, such as the Oxford dictionary. The Good learning dictionaries will also show the frequency level of each headword, for example, Cambridge Advanced Learner’s Dictionary for academic students.

Text Study cannot, however, include all the vocabulary that students need. It is also necessary to comprise activities that simply concentrate on vocabulary expansion, such as ‘Word of the Day’ or ‘Expression of the Day’, where the teacher introduces new items. Alternatively, the students themselves ‘show and tell’ to figure out more about relevant items and inform the rest of the class.

From the learner’s perspective, the main element in acquiring L2 vocabulary, regardless of word frequency, is the word ‘learnability.’ It is also the simplicity or complexity with which

a particular term may be acquired. Two terms may have the same frequency, but one might be more complicated to learn than the other as a result of aspects relevant to the characteristics of the word, or other items relevant to it in the target language, or the L1 of the learner.

1.1.7.2 Vocabulary presentation. As Ur (2012) stated, once the teacher has selected the teaching items, he/she must get students to distinguish their form and understand their meaning strongly as interestingly as possible so that the students focus and take the items into short-term memory. Ur suggested some key practical principles (pp. 66-67):

- **Including both written and spoken forms** (both receptive and productive)

Mainly, the new items have to be transcribed on the board and said as they are written. Many learners consider it easier to understand new items through reading, others through listening, but with all of them having both written and spoken forms, the target item may become more unforgettable. Correspondingly, if students say and write down the item, they are more likely to remember it than if they only hear or see it, mainly when they write it down along with its meaning (Most commonly in the first form of L 1 translation).

- **Ensure understanding of the meaning**

Guessing the meaning of background terms may be ambiguous. However, students often assume the incorrect meaning even though they were looking for specific words in the dictionary. Both kinds of techniques can be used to reach meaning, but they need to be tested by the instructor. Instead, presenting a new element where the instructor can use images, gestures, and mimes and sometimes using translation, definition, or description providing examples or cues, on certain occasions, the most successful one is the translation with monolingual classrooms.

- **Optimize impact**

The more impact the instructor has on presenting new items, the more apt learners are to remember them. An unforgettable first presentation does not make review pointless.

However, it makes learning more accessible and smoother, for example, using mnemonic tools, especially the 'keywords' technique when students connect the target word with a picture or object having a matching word in their language.

1.1.7.3 Vocabulary teaching approaches and techniques. Bowman, Burkart, & Robson (1989, p. 38) summarizes teaching approaches and techniques as follows:

- **Grammar translation method (GTM)**

As the very name indicates, it is a foreign language teaching method that involves entirely formal teaching grammar. GTM is the most traditional method based on memorization. In this method, teachers ask their learners to translate texts into the mother language. One of the attainments of this approach, which is related to vocabulary, is bilingual dictionaries as reference tools for translation from the target language into the learner's native language.

- **Direct method and the audio-lingual method**

In the direct method and audio-lingual method, the teacher checks the willingness of the students to take the words out of context. For example, to infer the meaning, they will be asked to listen to one or two specific words from documented short sentences, such as conversations, dialogues, or short stories for a given amount of time. Greetings, demands, and comments in one-on-one tutoring situations are valuable materials.

- **Communicative approach**

It is defined as one of the essential features of language that is assistant for learners to develop their use of language in communicative settings. It came as a reaction to the traditional approaches, and it aims at the use of language in an authentic manner, like interpreting for someone who speaks English but does not know the local language. Such a task will motivate learners and permit them to express their use of English in actual life. Besides, it is the most recent and modern approach based on a learning-centered approach.

- **Total physical response**

This method helps the teacher to launch new vocabulary to students. It is especially useful for young learners. However, it is also instrumental in action sequences with adults; for instance, teaching directions allow students to perform physical actions. This last will enhance both their intellectual capacity and retention. Moreover, through its activities, the teacher breaks the traditional teaching routine.

- **The natural approach**

The natural approach is based on observations and interpretations; it focuses on how learners learn a new language in non-formal settings. For example, the teacher shows a picture to clarify the meaning as many teachers accumulate files of pictures specifically for this purpose”.

- **Competency-based approach**

It focuses on student’s skills and talents by involving them in real tasks and competencies (assessment tools) and works typically with independent study and with the teacher in the position of the facilitator. This approach helps students to see how much they are learning.

- **Silent way**

The silent way approach derives its name from the fact that the teacher remains silent in the classroom most of the time to encourage his/her students to perform/use language as much as possible. For example, the teacher asks his students to articulate critical terms or to repeat sentences from the words that the tutor or the students’ points.

- **Suggestopedia**

Suggestopedia techniques can be used to decrease the anxieties of learners and to enhance their capacity to use the target language, particularly vocabulary. It is advisable before exams to examine learner’s knowledge.

1.1.8 Vocabulary Testing

Without testing, there are no reliable means of knowing how productive the teaching process has been. Different elicitation techniques can be used while preparing for a test. Using the appropriate sort of question at the appropriate time can be extremely interested in providing a clear comprehension of the students' abilities. However, instructors need to be sure of the limitations of tasks or types of questions so they can use each one correctly.

1.1.8.1 Reasons and principles for vocabulary testing. There are many reasons for testing vocabulary, which are presented by the methodological field investigators and divided according to different criteria. Thornbury (2002, p. 129) stated that testing provides feedback, both for teachers and students. Besides, testing provides a useful *backwash effect*. Namely, if learners know they are going to be tested, they might consider learning vocabulary more seriously. In this aspect, testing motivates students to revise lexis in preparation for a test. It also provides an excuse for post-test review when a teacher checks the answers to the questions with students. Although tests are not very likable between students, they regularly should be considered since teachers need to measure their students' understanding. In general, testing helps to 'recycle' vocabulary as well as to enhance it.

Thornbury (2002, p. 130) pointed out that all aspects of word knowledge can be realized productively (in writing and speaking), and receptively (in reading and listening). Thus any vocabulary test should take into account the complex nature of word knowledge. Afterward, there are issues of *validity* (does the test evaluate what the instructor wants to evaluate?), of practicality (is it easy to conduct?), then of *backwash* (will the test have a beneficial effect on learning?). Another keyword is the test's *reliability*. For instance, will it provide the same outcomes for students of the same ability, or will it give constant results irrespective of who checks it?

1.1.8.2 Examples of vocabulary-testing methods. Harmer (2007) stated that whatever the aim of the test or exam, a significant factor in its achievement or failure as a tool measuring instrument will be classified according to the type of item. Ur (1996, pp. 71-73) enumerates eight techniques of checking vocabulary knowledge that it includes:

- **Multiple-choice questions**

This type of question is the most commonly used form for professionally advanced language tests. It is designed to assess learning at the level of memorization and understanding. Its basic pattern takes several forms, and answer choices include key or correct answers and incorrect responses

- **Matching formats**

A different common format used in the evaluation of vocabulary is matching. Matching questions are usually posed to the student with two columns of data. The task of the candidate is to match between the two columns. Items in the left-hand column are termed premises, and items in the right-hand column are called options.

- **Dictation**

Dictations check aural perception of lexical items and spelling only. However, Ur (1996, p. 72) notices that if learners recognize and write a word correctly, they presumably know what it means, as it is difficult to perceive, instead of spelling a lexical item, which is unknown. This activity is easy to carry out and to check. In dictation-translation, meaning and spell are checked only. However, the problem is that the mother tongue may be inaccurate and misleading.

- **Sentence completion or gap-fill items**

Sentence completion or gap-filling items assess the vocabulary output of the student. These items allow students to interpret the statement and then formulate the right or best answer.

Sentence Completion Items are easy to build. Learners are motivated to learn and understand the word they have tested, rather than just recognize it.

- **Open questions**

Here, the applicant has to answer specific questions after reading or listening, or as part of an oral interview. It could be used to check something. When the answer is open-ended, it may be more challenging and time-consuming to classify, and there will also be an element of subjectivity included in determining how 'complete' the answer is. However, it can often be a more precise test. Such types of questions are also useful when examining any of the four skills.

- **Cloze questions**

This type is wide-ranging since participants have to access the language components at the same time. It has as well been proved to be a reliable measure of overall language proficiency. Teachers must be cautious with several correct responses, and students need some training in this form of assignment.

- **Translation**

The translation is another choice to evaluate students' productive understanding of vocabulary items. In order to monitor how successfully this is prepared. The teacher must have sufficient functioning information of the L1 of learners.

- **True/false**

In the true-false technique, the candidate must determine whether the statement is right or wrong. Again, this item form is easy to mark, but guessing can lead to a lot of accurate answers. The simple way to avoid the problem is to have many items. This form of query is often used to evaluate listening and reading comprehension.

Section Two: A Theoretical Framework for MALL

Section two introduces the scope of mobile learning, as it provides the main types of mobile devices and their recent uses within the educational system, and the main issue of accessibility and

mobility in m-learning. This section also discusses mobile learning and the teacher-student relationship, m-learning applications as supplementary tools for learning/teaching, and m-learning theories. Finally, it stated the major advantages and disadvantages of m-learning.

1.2.1 The Scope of Mobile Learning

1.2.1.1. Definition and beginnings of mobile learning. The concept of mobile learning or m-learning is traced back to the 1960s science fiction. By 1968, Alan Kay offered a portable personal computer called the ‘*Dyna book for all children of all ages.*’ By the 80s, computers progressively became smaller, and *Apple* created its data assistant called ‘Newton’ in 1992 and upgraded several models during the 1990s. Professor Mike Sharples of the University of Nottingham started in the late 1990s with an active research program to explore mobile learning (Woodill, 2011, p. 9).

Woodill (2011) clarified that the ‘MOBI learn’ project was initially funded in Europe. With the sudden growth of personal computers in the late twentieth century and the explosion of mobile phone practice over ten years ago, researchers started to see a shift from the training classroom model with an instructor at the front of the room to a varied range of learning approaches throughout many different contexts (p. 11). Irby and Strong (2013, p. 82) defined mobile learning as an emerging educational phenomenon coming from the combination of E-learning and mobile technologies.

Kukulska-Hulme and Traxler (2005, p. 1) in their book “*Mobile Learning*” stated that mobile learning has a relationship with the learner mobility, in the sense that learners should have the ability to be involved in educational activities easily without any limitations. They added that learning outside a classroom or in various locations necessitates nothing more than the motivation to do so wherever the opportunity emerges from books, electronic resources, places, and people. Mobile learning, according to them, brings a new sense of learning. With its lightweight and small size, some devices can fit in a pocket or in the palm of one’s hand.

1.2.1.2 From computer-assisted language learning to mobile-assisted language learning. The term computer-assisted language learning (CALL) was introduced in language learning in the early 1980s (Chappelle, 2001). However, researchers have stated that CALL is a discipline-based mainly on instructional material and behavioral concepts of language learning. Even so, the discipline at that time changed significantly, with the combination of learning methods and technologies as the second interrelated different shift (Jarvis & Achilleos, 2013). The principle of language teaching has, therefore, been eliminated from what Stern (1983, p. 169) has shown in the audio-lingual method, linguistics, and second language acquisition to admit the importance of social constructivism.

Firman and Zia ul-Haq (2012) described CALL as bidirectional education and individualized learning. CALL materials are used in teaching to simplify the process of language learning. They assumed that CALL is a learner-centered accelerated learning material that enhances self-paced accelerating training (pp. 22-23). The term CALL at first was regarded as a support for teachers, which is derived from Computer-Accelerated Instruction.

The evolution of CALL is divided into three periods. According to Warshauer (1996, p. 1): Behaviorist CALL (1960s-1970s), Communicative CALL (1970s-1980s), and Integrative CALL (1999s). The Integrative CALL period is the most standing now. It is particularly web-based and facilitates the role of computers and the internet. The computer functions transfer to mobile devices as smartphones and tablets lead to the appearance of a new dimension in the scope of language learning and teaching, which is MALL. Korkmaz (2010, p. 14) stated that MALL is a new domain in language learning. It has no fixed definition yet. Even the definition of the “*mobility*” itself is a highly controversial issue.

Kukulka-Hulme and Shield (2008) highlighted that MALL varies from CALL in its use of personal, portable devices that facilitate new methods of learning, underlining stability or freedom of access and interaction across different contexts of use. Additionally, Mobile

learning appears to be a matter for learners rather than teachers. However, most learners will struggle without the teachers' direction and control. Until now, within MALL, there is slight published evidence of approaches that are not educated, but some indicators proved that it is a beginning to shift (p. 273).

1.2.2 Types of Mobile Learning Devices

Kukulska-Hulme & Traxler (2005), Chris (2008) & Chan et al. (2006) identified three main types of m-learning devices, which are mobile phones, personal digital assistants (PDAs), and podcasts. The types stated previously can serve both EFL learners and teachers by facilitating the process of teaching and learning.

1.2.2.1 Mobile phones. A mobile phone is the most handheld device that provides simple Personal Information Management tools, such as address books and calendars. In addition to more innovative phones include cameras and Bluetooth connectivity enabling information. Several phones have modems that can be used to link other devices such as laptops and PDAs to the Internet. Similarly, short messaging service (SMS) or Text-based service permits messages of up to 160 characters to be sent (Kukulska-Hulme & Traxler, 2005, p. 8).

1.2.2.2 Personal digital assistants (PDA). It was identified as a computer-based handheld device and integrated personal manager tools. PDA can also exchange information with a desktop Personal Computer easily. Such PDAs were firstly designed to act as electronic equivalents of diaries and private managers, although most of the operations can already perform text and image updates. On many models, users can display documents, write notes, do word searches, play games, record voices, listen to sound files, and take photographs of the same book.

1.2.2.3. Podcasts. Podcasting is a type of m-learning in which a device is often used to listen to or watch an audio or video broadcast. Broadcasts are available on the Internet automatically copied on to a handheld device when the student next connects it (for

synchronization). The term 'podcast' is a combination of the brand name of the most widespread player 'iPod' with 'broadcast' (Chris, 2008). Similarly, Chan et al. (2006) reported that podcasting could improve both face-to-face and virtual classroom learning through engaging learners in the material, then adding another model of learning. Also, it provides students with the chance to experience authentic forms of the language and get personal involvement to learn various skills

1.2.3 Accessibility and Mobility in Mobile Learning

M-learning is appropriate in that it is accessible from almost anyplace. After that, it further underlines the mobility of the learner; interacting with mobile tools to build learning supports and develops devices an integral part of the m-learning process.

1.2.3.1 Accessibility. Phipps et al. (2002) described the term 'Accessibility' as a progressively major factor in the development of learning and teaching and is the key to enhance education training within, participation, and diversity. That is, all individuals can have access to facilities and services depending on the type or degree of disability. The word 'Barrier Free' is often widely used and indicates that no accessibility barriers will exist for everyone. The challenges of accessibility should be recognized in the hopes of identifying a logical way to use mobile tools in the learning process.

Kukulka-Hulme (2009) has mentioned some reasons to openly support improved accessibility, namely with links to learning content and general knowledge anywhere, anytime. Moreover, mobile networking devices (message boards, text) inclusion (messaging and e-mail) create a collaborative mobile learning environment, plus the access of learning frameworks and support resources wherever, whenever (dictionaries, Electronic reference materials, and diaries).

1.2.3.2 Mobility. Mobile learning attracts one's attention not only to the fact of mobility but also to the effects of mobility, which may include new methods of dividing time

and traversing frontiers. Mobile learners can be involved in activities directly related to the changing location using appropriate technology. Besides, location-based learning traditionally covered placements, apprenticeships, physical activities, and various field studies (Kukulka, 2009).

1.2.4 Mobile Learning and the Teacher-Student Relationship

A new relationship between teachers and students was created in the digital world. Investigations by the *London School of Economics* (2003) have revealed that adolescents are traditionally the most skilled on the Internet, and this situation was presented as a long-lasting, generational difference transformation. Such a relationship mostly illustrates the difficulties faced by instructors who are steeped in traditional styles of provision. They are also faced with digital instruction and students, where they are now demanding education that meets their precise information rather than just receiving and remembering the wisdom of their elders, the tradition of thousands of years (Peters, 2007, pp. 118-121).

Fannon (2004) added that students were indeed better of thinking about learning using mobile phones, and almost (45%) are equipped to use the Internet as their only learning device. However, most of the teachers are recent 'migrants' to the digital world, cannot directly overcome the issues of creating learning via mobile phones. Such relationship and m-learning interpretations are not at all isolated. Nevertheless, the generalized use of m-learning is still a long way apart, and the application of m-learning demands a particular paradigm.

1.2.5 Mobile Learning Applications as Supplementary Tools for Learning/Teaching

The development of mobile and web2.0 technologies (social networking sites or social media sites) has opened up enormous opportunities for global educators. Therefore, there have been trails of MALL application since 2011. Peters (2009, p. 11) assumed that Web 2.0 provides remarkable chances for teachers to offer their learners with a grasp of collaborative problem-solving.

Several applications, such as translation tools and on-line dictionaries, support the student throughout enhancing his/her vocabulary as well as enable him/her to pick up new words quickly. Hence, the reason behind using this technology as an educational learning tool allows learners to create resources such as blogs or wiki. This process enables the tutor to integrate effortlessly into any project, so that supports the ability of the learner to work autonomously. Another reason is that learners are skilled in seeing at one time all the different and relevant project elements (the original assignment or another student's project).

SMS-based learning is another advanced application in the use of wireless technologies in education. Receiving SMS associates learning inside/outside of the classroom and encourage learners to benefit from their tutor's experiment with mobile technology. Game-based learning is linked to learning materials with physical environment features, Where the learning activities are enabled using the mobile technology that serves as a link between the real world of information and the visual world of the game. Thus m-learning games are useful for training other language skills (Miangah & Nezarat, 2012, p. 311).

1.2.6 Mobile Learning Theories

Scholars and software developers have a broader understanding of mobile learning from an educational perspective. Smith and Ragan (2005), Good and Broofy (1999), Bruner (1966), Naismith et al. (2004), and Brown et al. (1998) identified that extant mobile learning theories make use of the following: Behaviourism, Cognitive Theory, Constructivism, Contextual Learning Theory, and Situated Learning Theory.

1.2.6.1 Behaviourism. Smith and Regan (2005) stated that learning occurred when learners showed that the appropriate reinforcement of an association between a particular response and stimuli. This principle is used through the provided content to mobile devices as stimuli and the students' practice, answers to quizzes, feedback, and content delivery by text message.

1.2.6.2 Cognitive theory. According to the cognitive theory, learning is the acquisition or restoration of the cognitive structures through which individuals process and store information. This information can be stored in mind through the use of Multimedia theory (text, video, audio, animation, images, SMS, MMS, e-Mail, and podcasting) (Good & Brophy, 1990).

1.2.6.3 Constructivism. Bruner (1966) claimed that social constructivism stresses the idea in which learning occurs better through social interaction, collaboration, and co-instruction of knowledge. Mobile devices are beneficial tools; they permit learners to recognize or build knowledge, then share this knowledge. That is, students, construct new ideas or concepts based on their current and prior experience.

1.2.6.4 Contextual learning theory. M-learning is a contextual theory based on the technology available in smartphones like; multimedia museum, gallery, pre-class podcasts, films, e-books, and podcasting. This contextual theory refers to gather information from the environment and to provide a measure of what is presently going on around the user and the device (Naismith et al., 2004).

1.2.6.5 Situated learning theory. This notion is associated with the concept that m-learning and situated learning theory are interrelated via the use of social networking means from smartphones that may support creating authentic language contexts by which new knowledge can be conveyed. For instance, the learner can have plenty of chances to simulate the environment (Brown et al., 1998).

1.2.7 Advantages and Disadvantages of Mobile Learning

Even though mobile technology seems to be a perfect tool for all features of education to benefit from, it also has some negative aspects.

1.2.7.1 Advantages. Smartphones with more powerful software and applications are becoming more prevalent. Rodinadze and Zarbazoia (2012) take into account the following advantages. Mobile technologies provide EFL teachers with endless opportunities for

multimedia, software, applications, and instruments that form more exciting interactive classes. Smartphones can involve students' interaction during the learning process. Another mobile learning property is digital ink (graphic design), which is a very remarkable development in software technology that enables both EFL teachers and learners to accomplish tasks. Consequently, they can pass grades and assignment updates on-line, instead of grade-book of paper.

Recently, technology opens the doors for better distance learning programs for users, permitting access to the same education as the privileged for those in less-favored regions. Since this technology makes information available from almost anywhere with a smartphone, it can be flexible for lectures, so that learners who do not have full schedules can continue to learn on-line and complete assignments at their specific time. Besides, Virtual education allows learners to obtain academic certifications or graduate degrees by encouraging people with full-time jobs. Similarly, new technology for multimedia presentation helps both instructors and learners to manage, display, and transmit data in innovative ways.

Electronic Libraries using a digital database make resources available for students to search anywhere via an Internet connection. Students may find, receive, and send information quickly, saving time and paper by using a digital filing system. Moreover, mobile technologies improve the learning experience and support students to join an ever larger team via the use of mobile applications.

The educational applications of mobile devices motivate more students to participate in class and raising their level of understanding. Furthermore, it offers a choice for teacher-student interaction. Images, drills, games, and listening activities can be performed during English lessons. Sung, Chang and Yang (2015), in their experimentations, demonstrated that through incorporating mobile devices into teaching and learning processes, learning outcomes of the learners had been enhanced. They concluded that the use of mobile devices for mixed-language

skills or vocabulary had created a higher learning impact than single skills such as reading and writing for L2 learners who use mobile devices also achieve better results.

1.2.7.2 Disadvantages. Although mobile learning services share similar benefits, it has some disadvantages. The screen size barriers, reading difficulties on small screens, storage systems, and multimedia limits. Also, visual impairment learners may find a problem with the handheld device due to the display size or clarity (Kukulka –Hulum & Traxler, 2005). However, most of the mobile devices are not planned for academic purposes. That is, it is hard for the learners to use them for the assignment to be carried out by the teachers (This is relatively due to the initial design of such devices) (Miangah & Nezarat, 2012).

Other studies have challenged the concept of m-learning, which reveals that the use of mobile devices in learning vocabulary is not feasible. Stockwell (2008) explained that students found the research takes a long time to complete on mobile devices. Thus, some of them favored using their portable computer to do their work, furthermore, to the keypad problems and the cost of Internet access. Similarly, Fisher et al. (2009), in their studies, showed slight improvements in English vocabulary for all three conditions among Japanese students. The students found that the paper book more comfortable to use and annotate. However, a few students have used the additional features of the adaptive device.

Conclusion

The evolution and advancement of mobile technologies have revolutionized how teaching and learning processes are promoted at the university level. Thus, many researchers tried to estimate the value of vocabulary teaching and learning through the use of mobile educational devices that should stand on a massive pedagogical foundation from a development point of view. Besides, it is noted in this Chapter that vocabulary is a broad notion, and without suitable support, students' vocabulary will be incomplete when communicating in a foreign language. Accordingly, the teacher's part is to direct learners to the right learning techniques.

Chapter Two: Research Methodology, Data Analysis, Summary, and Conclusion

Introduction

This chapter represents the practical aspect of the present study. It offers a thorough explanation of the research method that is followed, as it provides the results obtained from the analysis with explanation and discussion. The current chapter is divided into three sections; Section One is devoted to present an overall description of the research methodology used in this study, Section Two is devoted to the analysis and interpretation of the students' and teachers' questionnaires. Section Three presents the limitations of the study, pedagogical implementations that can be generated, and further recommendations that can be set for future research.

Section One: Research Methodology

This section illustrates the research method that is followed, the tools that are used in the study, and the data collection/analysis procedures that are applied.

2.1.1 Research Design

A decision must be taken on what design should be followed, based on the research questions raised (Walliman, 2011). Therefore, the researchers adopted the descriptive-analytical method of research due to its relevance to explore third-year LMD students' and teachers' perceptions of learning vocabulary in a MALL environment. The researchers used two questionnaires ending with open-ended questions as the main research tools; the first one was administered to the students and the other one to the teachers.

The data obtained from the two questionnaires were quantitatively analyzed, and that of the open-ended questions were analyzed qualitatively. In view of that, the current study used a mixed-method approach. As Lodico, Spaulding, and Voegtle (2006, p. 17) claimed that: "Mixed method research collects both quantitative and qualitative data because these researchers believe that a combination of approaches results in a complete understanding of

educational problems”. This can be a means to eliminate biases that might result from relying exclusively on one data collection method to test the validity of the findings and construct the major strength of this research design.

2.1.2 Sample and Setting

“Sampling is the process of selecting a few respondents (a sample) from a bigger group (the sampling population) to become the basis for estimating the prevalence of information of interest” (Kumar, 2011). It is an essential process in the research method as it identifies the population from which the researcher obtains information to perform his/her analysis. The target population is composed of a random sample of third-year LMD students of English and their teachers at Larbi Tebessi University during the academic year 2019/2020. The researchers then pulled a sample population of 45 students and 10 teachers. Two questionnaires were designed and used as the main research tools. They were distributed online to the whole population using Google Drive via the students’ Facebook group page and the teachers’ e-mails.

2.1.3 Data Gathering Tools

2.1.3.1 Description of the questionnaires. To achieve the purpose of this research, two questionnaires were used to probe into third-year LMD students’ and teachers’ perceptions of learning vocabulary in a MALL environment. According to Paul et al. (2005), a questionnaire must be clear and coherent for the survey respondent. Also, the questions must be developed using simple language and avoiding confusing questions to gain precise measurable information from the respondent. It is likely to comprise different types of questions in the same questionnaire design: rating scales, closed questions, yes/no questions, multiple-choice questions, etc.

The students’ questionnaire begins with a set of demographic questions under Section One, aiming to provide background information regarding the students’ age, gender, mobile (type) holding, and vocabulary knowledge rating. This is followed by a total number of 25

randomly-ordered questions of different types, including closed questions, yes/no questions, multiple-choice questions, rating scales, and an open-ended question at the end of the questionnaire. These questions are grouped under Section Two and Three. Section Two contains five questions related to the students' perceptions of mobile devices and learning English in general. Section Three includes 14 items targeting the students' perceptions of mobiles and vocabulary learning. For a thorough description of this Section, a five-point Likert scale format, ranging from 1 to 5, is used to reflect both students' level of agreement or disagreement with the list of items.

Similarly, the teachers' questionnaire opens with demographic questions under Section One, which aims to provide background information about their gender, degree (s) held, and years of teaching experience. Section Two includes six questions related to the teachers' perceptions of mobile devices and learning English in general. Section Three, with 14 items, aims to explore the teachers' perceptions of mobile devices and vocabulary learning.

A qualitative part consisting of one open-ended question under Section Four is added at the end of each questionnaire. It tries to gain insights into the students' and teachers' suggestions for better-improving vocabulary learning in a MALL environment. Generally, open-ended questions are great for getting authentic feedback because they give people a chance to describe what they are experiencing in their own voice.

2.1.3.2 The Pilot phase. A pilot study is “A small-scale version or trial run in preparation for a major study” (Polit & Beck, 2010, p. 563). Piloting the questionnaire is very important for researchers to concentrate on the smallest information because the least variations in the content of the inquiries can influence the answer pattern. The fundamental purpose of the pilot process is to provide researchers with input and insights about how the instrument works and how it achieves needed goals. Based on data collected, investigators can modify the final version to ensure its effectiveness by changing, editing, and confirming.

The initial version of the students' questionnaire (as shown in Appendix A) was piloted before use in this investigation to validate the efficiency and guarantee the achievement of the research project. It was piloted with 25 % (15 students) of the target population; students who participated in the pilot study were chosen randomly from the same Facebook group page. The pilot study sample received the questionnaire online with Google Drive, and it took from them about 15 minutes to be answered. Few participants found difficulties with some terms (such as mobile-assisted learning language). Accordingly, brief explanations were added between brackets (as in items 12 and 15), and some examples were given (as in item 14) to clarify the statements. Based on the students' comments and feedback, the questionnaire was revised and modified, and therefore the final version of the questionnaire was ready for use (as presented in Appendix B).

Hence, the researchers performed a pilot study to check the validity of the structured questionnaire (students' questionnaire) on a sample with the same features as the target respondents in this study. In this research, the reliability was measured using Cronbach's Alpha Index using statistical analysis software for the internal reliability of the system. The alpha coefficient should be a value equal to or higher than 0.70. The value is 0.115 for the items (25) in this study, 'a' is .115 ($a > 0.70$), which testifies that it is acceptable internal consistency reliability.

There was no pilot study for the teachers' questionnaire since its questions and items were similar to the students' questionnaire, and if they were clear for the students, they would be clear enough for the teachers (as presented in Appendix C).

2.1.3.3 Administration of the questionnaires. After re-editing the final version of the students' questionnaire, the researchers distributed it to the target population online using Google Drive via Facebook. The teachers' questionnaire was sent via e-mails using Google form online questionnaire. This was done by June 19th, 2020. After that, the researchers started

getting responses that lasted about five days before reaching a sample that was quite satisfying. Therefore, a total number of 55 valid responses (45 students + 10 teachers) were collected, and data was then ready for analysis.

2.1.4 Data Collection/Analysis Procedures

The data gathered was analyzed quantitatively and qualitatively. The background information in Section One of both questionnaires was analyzed through descriptive statistics, and the data in Section Two was analyzed using the following statistics: frequency and percentage. The data in Section Three was analyzed according to the five-point scales ranging from *strongly disagree* to *strongly agree*, i.e., from 1 to 5 in respect, as presented in Table 1. So each student and each teacher received a score when giving their responses toward each question item. Afterward, the scores for each item were added together to show their overall score. After the total scores for each student and teacher were added up, statistics were made to describe and analyze data. The following calculations: frequencies (F), percentages (%), mean scores (M), and standard deviations (Std), were carried out using Statistical Packages for Social Sciences (SPSS 20 software).

Table 1

The Scales and Scores for the Items in Section Three of the Questionnaire

Scale	Score
Strongly disagree (SD)	1
Disagree (D)	2
Neutral (N)	3
Agree (A)	4
Strongly agree (SA)	5

The mean value ranges provide information to interpret whether the responses obviously occur in one category or the other. The types of the Likert-scale items and the range of mean values are presented below:

4.51 to 5.00 = *Strongly agree*, 3.51 to 4.50 = *Agree*, 2.51 to 3.50 = *Neutral*, 1.51 to 2.50 = *Disagree*, 1.00 to 1.50 = *Strongly Disagree*.

For analyzing the data provided by the open-ended question at the end of each questionnaire, qualitative techniques were used. Since the sample was not too large, it was easier for the researchers to conduct the study manually by checking at what all the respondents replied to the same question. As a final process, the researchers collected the results of the questionnaires for summarizing the results of the whole study.

All in all, the background information about the research design, participants, and data gathering tools are given in this section. How the questionnaires were constructed, piloted, and applied is also presented. Additionally, the data collection procedures and a summary of the data analysis are discussed. The next section deals with the analysis and interpretation of the results obtained from the two questionnaires.

Section Two: Data Analysis and Interpretation

This section begins with analyzing the collected data from the students' questionnaire then from the teachers' one in terms of the following aspects: the students' and teachers' perceptions of using mobile devices to learn English in general and to learn vocabulary in particular, the students' and the teachers' suggestions for better-improving vocabulary learning in a MALL environment. The section discusses and interprets the overall results of the study in light of the research questions and hypotheses.

2.2.1 Analysis of the Students' Questionnaire

This questionnaire is used to explore third-year LMD students' perceptions of learning vocabulary in a MALL environment. The researchers used both quantitative methods using the following statistics: frequency, percentage, mean and standard deviation to analyze the collected data results from the students' questionnaire and qualitative techniques to analyze the

collected data results from the open-ended questions at the end of the questionnaire. Tables were also used to clarify and present these data.

- **Section One: Background Information**

It is very important to constitute a wide picture about the background of the participants.

The following Tables 2, 3, 4, 5, and 6 highlight the personal information data.

Q01: Age

Table 2

The Students' Age

Age	18-24	25-30	30-35	+35	Total
Participants	28	14	1	2	45
Percentage	62.20%	31.10%	2.30%	4.40%	100%

Table 2 shows that the majority of the participants 62.20% are between 18 and 24 years old, which is the average university age of third-year LMD students. 31.10% of the students are between the age of 25 and 30. Moreover, the students over 35 years old represent 4.40% of the total population. The remaining students are between 30 and 35 years old, with 02.30%.

Q02: Gender

Table 3

The Student's Gender

	Female	Male	Total
Participants	35	10	45
Percentage	77.8%	22.2%	100%

Table 3 indicates that the majority of the respondents are females with 77.8%, while males formulate only 22.2% of the total population. In this respect, female students consistently represent the majority in the department of English.

Table 4

Mobile Devices Ownership

	Yes	No	Total
Participants	45	00	45
Percentages %	100%	0%	100%

Table 4 indicates that mobile devices are well spread among students. All the students asserted that they have a mobile device, at least one.

-If 'yes', what type of mobile devices do you have?

Table 5

Type of Mobile Devices Owned by Students

	Smartphone	Basic phone	Tab computer	Mp3/Mp4	Total
Participants	29	2	13	1	45
Percentage	64.40%	4.40%	28.90%	2.20%	100%

Table 5 designates that the highest percentage goes for Smart-phone with 64.40% then comes the tablet computer with 28.90%, followed by the basic phone in third place with 4.40%. and the least percentage refers to Mp3/ Mp4 with 2.20%.

Q04: How do you rate your knowledge of vocabulary in English?

Table 6

The Students' Level of Vocabulary Knowledge

	Very good	Good	Average	Poor	Total
Participants	10	26	9	0	45
Percentages	22.20%	57.80%	20%	0	100%

Table 6 shows that most of the respondents have a good level of English vocabulary knowledge, with 57.80%, while 22.20% of them have a very good level. 20% of the respondents have an average level, and none of them have a poor level.

- **Section Two: Mobile Devices and learning English in General**

This section aims to answer the first research question: **How do third-year LMD students and teachers of English perceive the use of mobile devices to learn English in general?** from the students' perspectives.

Q05: Do you use mobile devices to assist your learning in the classroom?

Table 7

Mobile Devices Usage for Learning in the Classroom

	Yes	No	Total
Participants	33	12	45
Percentage	73.30%	26.70%	100%

Table 7 demonstrates that the majority of the participants support using smartphones in the classroom with 73.30%, which indicates the highest value. However, only 26.70% of respondents do not support the idea of using mobiles in the classroom.

Q06: Do your teachers allow you to use mobile devices for learning purposes inside the classroom?

Table 8

Students' Views towards Teachers' Permission for Students to Use Mobiles for Learning inside the Classroom

	Yes	No	Total
Participants	40	5	45
Percentage	88.9%	11.1%	100%

Table 8 illustrates that the majority of the students said ‘yes’ with 88.90%, which means that their teachers allow them to use their mobile devices inside the classroom for learning purposes. By contrast, only 11.10% of the students declared that their teachers do not allow them to use their mobiles inside the classrooms.

Q07: How often do you use mobile devices to learn English?

Table 9

Frequency of the Students’ Use of Mobiles to Learn English

	Never	Rarely	Sometimes	Usually	Always	Total
Participants	2	1	16	11	15	45
Percentage	4.4%	2.2%	35.6%	24.4%	33.3%	100%

Table 9 shows that 35.60% of the third-year participants declare that they sometimes use their mobile devices to learn English. About 33.30% of them assume that they always do so, while 24.40% of them said they use mobiles usually. Merely 4.40% and 2.20% of the whole population state that they never use such tools, and only 2.20% assert that they rarely use their mobiles to learn English.

Q08: Where do you think students should use mobile devices to learn English?

Table 10

Mobile Devices Usage Inside/Outside the Classroom

	Only inside the classroom where the teacher guides them	At home & in class	Only at home	Total
Participants	6	33	6	45
Percentage	13.30	73.30%	13.30%	100%

Table 10 demonstrates that 73.30% of the participants confirmed that they use mobile devices both inside and outside the classroom. Surprisingly, the participants' reaction is equally divided between using them just outside the classroom and only inside the classroom (anytime, anywhere) within the teachers' guidance with 13.30 %.

Q09: Do you think that mobile devices help students to improve their English?

Table 11

Mobile Devices Usage to Improve the Students' English

	Yes	No	Total
Participants	39	6	45
Percentage	86%	13.30%	100%

Table 11 illustrates that the highest percentage of students, 86% believe that using mobiles would help them to improve their English. By contrast, only 13.30% of them think that mobile devices ineffective tools to improve their English.

Q10: If yes, please say which language skills or areas they help you to improve.

Table 12

Language Skills and Areas that can be Improved Through the Use of Mobile Devices

	All four skills	Writing skills	Only speaking	Only listening	Unanswered	Total
Participants	25	5	4	3	8	45
Percentage	55.5%	11.11%	8.8%	6.66%	17.7%	100%

Table 12 indicates that not all the participants had answered the question. 55.5% of the participants assisted that all four skills can be enhanced through the use of mobile devices. 11.5% of them assumed that writing skills would be improved more by using mobile devices.

However, 8.8% of them declared that only their speaking skills could be enhanced. Only 6.66% of the respondents argued that only listening skills could be improved through mobile devices, while 17.70% of them did not answer the question at all. The following clarifications are obtained from the respondents' feedback: *“Using mobiles helps me improve all the four skills. It enables me to read many documents, articles, and books”, “I like such devices because they are very technical, especially that it provides me with easy and fast access to my digital dictionary. Regarding vocabulary skills, I do watch many videos related to my course, which virtually help me improve my writing and reading skills”. “As an android user app, I can use it every day to acquire English vocabulary and improve my listening skills with pronunciation exercises. I can also read and watch TED conversations with subtitles through it. Intuitively, I will learn new vocabulary through these exercises”. “ I find Kindle application the most classic Book reading application that people use. It is intuitive and quick to become acquainted with also E-Books can be purchased via a smartphone; it offers a good range of free eBooks as well. The applications synchronize the device library and bookmarks so that the reader can move between devices without asking where to stop”.*

- **Section Three: Mobile Devices and Vocabulary Learning**

This section aims to answer the second research question: **How do third-year LMD students and teachers of English perceive the use of mobile devices to enhance vocabulary learning?** from the students' perspectives.

Table 13

Frequencies, Percentages, Means and Standard Deviations of Vocabulary Learning Using Mobile Devices

No.	Item	R	F	%	M	Std
1	I think that mobile devices help me to improve my vocabulary acquisition and retention.	SD D N A SA	0 0 0 19 26	0% 0% 0% 42.2% 57.8%	4.57	0.99 40
2	I think that mobile devices help me to improve my vocabulary skills (word formation, word families, spelling, ...)	SD D N A SA	0 1 11 21 12	0% 2.2% 24.4% 46.7% 26.7%	3.97	0.78
3	I prefer learning vocabulary using mobile devices rather than using printed materials.	SD D N A SA	0 1 7 25 12	0% 2.2% 15.5% 55.6% 26.7%	4.06	0.71
4	I find learning vocabulary using mobile devices interesting and motivating because they integrate all forms of media, print, audio, video, and animation.	SD D N A SA	0 1 10 22 12	0% 2.2% 22.2% 48.9% 26.7%	4	0.76
5	Using mobile devices makes it easy for me to learn and actively use newly learned vocabulary via a variety of applications (electronic dictionaries, short stories, educational games, thesaurus, translator, ...)	SD D N A SA	0 5 5 19 16	0% 11.1% 11.1% 42.2% 35.6%	4.02	0.96
6	I think that using mobile devices provides a wider range of vocabulary activities as well as effective and frequent feedback.	SD D N A SA	1 1 4 8 1	2.2% 2.2% 8.9% 40% 46.7%	4.26	0.88
7	I think that using mobile devices to test my vocabulary knowledge is less-stressful.	SD D N A SA	2 1 5 21 16	4.40% 2.20% 11.1% 46.7% 35.6%	4.06	0.98
8	I think that mobile applications used for communication help me to learn and use vocabulary better in my daily conversations.	SD D N A SA	0 3 7 13 22	0% 6.70% 15.6% 28.9% 48.9%	4.20	0.94
9	I think that EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary.	SD D N A SA	0 2 5 26 12	0% 4.4% 11.1% 57.8% 26.7%	4.06	0.75
Total					4.13	0.86

10	I think that using mobile devices in learning vocabulary is boring.	SD	13	28.9%	2.04	0.95
		D	23	51.1%		
		N	3	06.7%		
		A	6	13.3%		
		SA	0	0%		
11	I think that using mobile devices in learning vocabulary is a waste of time.	SD	0	0%	3.62	0.61
		D	3	6.7%		
		N	11	24.4%		
		A	31	68.9%		
		SA	0	0%		
12	I think that using mobile devices in learning vocabulary is demanding and exhausting.	SD	0	0%	3.60	0.72
		D	6	13.3%		
		N	6	13.3%		
		A	33	73.3%		
		SA	0	0%		
13	I lack knowledge on how to use mobile devices effectively in learning vocabulary.	SD	3	6.7%	2.73	0.75
		D	10	22.2%		
		N	29	64.4%		
		A	2	4.4%		
		SA	1	2.2%		
14	High cost/slow internet connectivity is a major problem I face in using mobile devices in learning vocabulary.	SD	1	2.2%	4.52	1.02
		D	2	4.4%		
		N	6	13.3%		
		A	10	22.2%		
		S.A	26	57.8%		
Total					3.30	0.81
Total mean					3.71	0.83

Note. The mean value ranges. SD: 4.51-5.00, A: 3.51-4.50, N: 2.51-3.50, D: 1.51-2.50, SD: 1.00-1.50.

As can be seen in Table 13, the participants' responses indicate a strong agreement regarding item no. 1 "*I think that mobile devices help me to improve my vocabulary acquisition and retention*" as the mean score is 4.57 at a standard deviation of 0.99. The table further demonstrates that the majority of the students agreed with item no. 2 "*I think that mobile devices help me to improve my vocabulary skills (word formation, word families, spelling, ...)*" with 46.6% and 26.7% respectively. The mean score reaches 3.97 at a standard deviation of 0.78. Furthermore, the results present that students' responses indicated an agreement about item no. 3 "*I find learning vocabulary using mobile devices interesting and motivating; they integrate all forms of media, print, audio, video, and animation*", with a percentage of 55.6%. The mean

score reaches 4.06 at a standard deviation of 0.71. Regarding item no. 4 *“I think that using mobile devices provides a wider range of vocabulary activities as well as effective and frequent feedback”*. Most of the students either agreed or strongly agreed with a total percentage of 70.08%. The mean score is 4.00 at a standard deviation of 0.76.

Moreover, the students' responses designate agreement about the items no. 5, 6, 7, 8 and 9 related to: *“Using mobile devices makes it easy for me to learn and actively use newly learned vocabulary via a variety of applications (electronic dictionaries, short stories, educational games, thesaurus, translator, ...)”*, *“I think that using mobile devices provides a wider range of vocabulary activities as well as effective and frequent feedback”*, *“I think that using mobile devices to test my vocabulary knowledge is less-stressful”*, *“I think that mobile applications used for communication help me to learn and use vocabulary better in my daily conversations”* and *“I think that EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary”*. The mean scores are 4.02, 4.26, 4.06, 4.20, and 4.06 at a standard deviation of 0.96, 0.88, 0.98, 0.94, and 0.75 respectively.

In general, the total mean for the aforementioned nine items is 4.13 at a standard deviation of 0.86, demonstrating that the students' responses indicated agreement on the issue that using mobile devices enhances vocabulary learning.

With regard to items no. 10, the results achieved present that the participants completely disagree that *“using mobile devices in learning vocabulary is boring”*, with a total percentage of 80%. The mean score is 2.04 at a standard deviation of 0.95. Concerning item no 11, the results obtained present that the participants ultimately agreed that using mobile devices in learning vocabulary has some disadvantages, as 68.9% of them thought that *“it is a waste of time”*. The mean score is 3.62 at a standard deviation of 0.61.

Concerning item no.12, most of the students with 73.3% agreed that *“using mobile devices in learning vocabulary is demanding and exhausting”*. The mean score reaches 3.60

at a standard deviation of 0.72. Surprisingly, the students' responses indicate neutrality about item no. 13 *"I lack knowledge on how to use mobile devices effectively in learning vocabulary"*. The mean score is 2.73 at a standard deviation of 0.75. The results obtained from item 14 further indicate that most of the students with 57.8% strongly agreed with the fact that *"High cost/slow internet connectivity is a major problem they face in using mobile devices in learning vocabulary"*. The mean score reaches 4.52 at a standard deviation of 1.02.

The total mean for the last five items is 3.30 at a standard deviation of 0.81, demonstrating that the students' responses indicated neutrality on the issue that using mobile devices to enhance vocabulary learning has some limitations.

Overall, the last total mean 3.71 was calculated out of the three other totals at a standard deviation of 0.83. It shows that the general tendency of the participants' perceptions indicates agreement towards the use of mobile devices to enhance vocabulary learning, although it has some limitations. In other words, third-year LMD students have high perceptions about using mobile devices for vocabulary learning.

- **Section Four: Suggestions**

Q25: What would you suggest to improve vocabulary learning in a MALL environment at the university?

This section would help to answer the third research question, **"What do third-year LMD students and teachers of English suggest to better improve vocabulary learning in a MALL environment at the university?"** from the students' perspectives. Analysis of the open-ended question under this section following the qualitative techniques would definitely result in a richer and more in-depth account of the students' suggestions to better improve vocabulary learning in a MALL environment at Larbi Tebessi University. Fortunately, all the students (100%) responded to this question.

Approximately almost all the students' responses have the same attitude arguing that using m-learning can facilitate and develop a new approach of learning via its features and applications such as "*Elevate*" for building vocabulary. One of the students claimed that mobile devices are easy to use, especially if they are linked to the Internet. In the same vein, another student suggested that the administration should solve problems related to internet connectivity and slow speed.

One of the respondents pointed out that it is essential to consider mobiles as official supplementary teaching tools, especially in Oral Expression and Comprehension classes, where the students offered the opportunity to listen and watch native speakers practicing the language in authentic contexts. Also, another respondent mentioned that those mobile devices should be used in all modules from time to time as they create a comfortable and motivating atmosphere for learners.

Furthermore, there was a focus on the teachers' encouragement to their students to use mobile applications to develop their language skills in general and vocabulary in particular. Moreover, there was a great emphasis on the teachers to be able to adapt their teaching styles and techniques to the MALL. Unexpectedly, it was recommended that the students should be provided with training sessions on how to use mobile devices effectively in learning vocabulary as they lacked the knowledge to do so.

On the contrary, some respondents asserted that smartphones should not be used in the classroom as they considered conventional tools as the best strategy for teaching. They claimed that the learner would be unintentionally slave to the social network rather than using them for academic purposes. Finally, it was suggested to avoid the use of mobiles as they can be a means of distraction for both teachers and learners inside the classroom.

2.2.2 Analysis of the Teachers' Questionnaire

In this part of the teachers' questionnaire, the researchers used the same analysis procedures that are used within students' questionnaire; Section One and Two were analyzed using frequency and percentage, and Section Three were analyzed via IBM SPSS.

- **Section One: Background Information**

The personal information was related to the teacher's age, gender, degree (s) held, and years of teaching experience. The following Tables 14, 15, 16, and 17 highlighted this information.

Q 01: Age

Table 14

The Teachers' Age

Age	25-30	31-35	36-40	+40	Total
Participants	1	6	2	1	10
Percentage	10%	60%	20%	10	100%

In this sample, the teachers' ages vary between 25 and +40 years old. Table 14 shows that the majority of the total teachers' sample age is ranging from 31 to 35 years old with 60%. Merely 20% of the participants' age is ranging from 35 to 40 years old. 10% for those between 25 to 30 and +40 years old.

Q 02: Gender

Table 15

The Teachers' Gender

	Female	Male	Total
Participants	9	1	10
Percentage	90%	10%	100%

Table 15 reveals that the widely held of the third-year English department teachers were females with 90%. However, only 10% of them were males. Females teachers consistently represent the overwhelming majority in the department of the English language due to their interests in teaching foreign languages more than males.

Q 03: Degree (s) held

Table 16

The Teachers' Degree

	Magister/Master	PhD	Total
Participants	8	2	10
Percentage	80%	20%	100%

Table 16 shows that the majority of third-year teachers of English have a Master/Magister degree with 80%, whereas 20% of them have a PhD degree.

Q 04: Teaching Experience

Table 17

The Teachers' Teaching Experience

Teaching experience	1year	2years	7years	8years	9years	10years	13years	Total
Participants	1	2	1	1	3	1	1	10
Percentage	10%	20%	10%	10%	30%	10%	10%	100%

Table 17 indicates that there were novice as well as experienced teachers (between 1 year and 13 years of teaching experience).

- **Section Two: Mobile Devices and Learning English in General**

This section aims to answer the first research question, “**How do third-year LMD students and teachers of English perceive the use of mobile devices to learn English in general?**” from the teachers’ perspectives.

Q 05: Do you use mobile devices to assist your teaching practices in the classroom?

Table 18

Teachers' Uses of Mobile Devices as Assistant tools in the Classroom

	Yes	No	Total
Participants	6	4	10
Percentage	60%	40%	100%

Table 18 displays that most of the participants, with 60% use mobiles to support their teaching practices in the classroom. By contrast, only 40% refused such using devices.

Q 06: Do teachers allow their students to use their mobile devices for learning purposes inside the classroom?

Table 19

Teachers' Permission to their Students to Use Mobiles for Learning Purposes

	Yes	No	Total
Participants	6	4	10
Percentage	60%	40%	100%

Table 19 shows that a large number of teachers with 60% allowed their students to use mobiles for learning purposes inside the classroom. However, only 40% reject the idea.

Q07: How often do you think students should use mobile devices to learn English?

Table20

Teachers Views towards the Frequency of Students' Use of Mobiles to Learn English

	Never	Rarely	Sometimes	Usually	Total
Participants	1	2	5	2	10
Percentages	10%	20%	50%	20%	100%

Table 20 shows that half of the teachers 50% believe that students should sometimes use mobile devices to support their learning of English. 20% of them assumed that students should usually do so while the other 20% of them thought that they should rarely use mobiles to learn English. Only 10% of the whole sample thought that students must never learn English through mobile devices.

Q 08: Where do you think students should use mobiles to learn English?

Table 21

Teachers' Views about Mobiles Devices Usage Inside/Outside the Classroom

	Only inside the classroom where the teacher guides them	At home & in class	Only at home	Total
Participants	0	6	4	10
Percentage	0%	60%	40%	100%

Based on Table 21, the majority of teachers with 60% believe that students should use their mobiles at home and in the classroom to learn English. 40% of them consider that learners have to learn English using their mobiles only at home, while none of them thought that students should use their mobiles only inside the classroom under the teacher's guidance.

Q 09: Do you think that mobile devices help students to improve their English?

Table 22

Teachers' Views towards Mobiles Usage to Improve the Students' English

	Yes	No	Total
Participants	10	0	10
Percentage	100%	0%	100%

Table 22 displays that all teachers with 100% believe that mobile devices can help students to improve their English. Noticeably all informants decided that the implementation of technical tools is favored as an educational resource.

Q 10: If yes, please say which language skill or area they help to improve.

Table 23

Language Skills and Areas that can be Improved Through the Use of Mobile Devices

	The four skills	Listening and pronunciation skills	Unanswered	Total
Participants	6	2	2	10
Percentage	60%	20%	20%	100%

Based on the respondents' answers, Table 13 shows that the majority of teachers with 60% assumed that all four skills could be enhanced through the use of mobile devices. The following interpretations are obtained from the respondents' feedback: *"it is appropriate to integrate m-learning in teaching and learning, due to the students' standard of available resources and to their attitudes towards the use of various technological instruments to practice the four skills"*. They added: *"Using mobile devices can help to improve the four skills listening, speaking, reading, and writing"*. However, only 20% of them considered that using mobile devices can only improve/enhance listening and pronunciation skills. *"I think that the use of mobile devices can enhance listening skills as it strengthens their pronunciation skills"*. Unfortunately, 20% of the teachers did not respond to the question.

- **Section Three: Mobile Devices and Vocabulary Learning**

This section targets to answer the second research question: **How do third-year LMD students and teachers of English perceive the use of mobile devices to enhance vocabulary learning?** from the teachers' perspectives.

Table 24

Frequencies, Percentages, Means and Standard Deviations of Vocabulary Learning Using Mobile Devices

No.	Item	R	F	%	M	Std
11	I think that mobile devices help to improve students' vocabulary acquisition and retention.	SD D N A SA	0 0 2 5 3	0% 0% 20% 50% 30%	4.50	0.52 50
12	I think that mobile devices help to improve students' vocabulary skills (word formation, word families, spelling, ...)	SD D N A SA	0 1 1 6 2	0% 10% 10% 60% 20%	4.20	0.87
13	I prefer learning/teaching vocabulary using mobile devices rather than using printed materials.	SD D N A SA	3 6 1 0 0	30% 50% 20% 0% 0%	2.90	1.19
14	I find learning/teaching vocabulary using mobile devices interesting and motivating because they integrate all forms of media, print, audio, video, and animation.	SD D N A SA	0 0 2 6 2	0% 0% 20% 60% 20%	4.20	0.63
15	Using mobile devices makes it easy for students to learn and actively use newly learned vocabulary via a variety of applications (electronic dictionaries, short stories, educational games, thesaurus, translator, ...)	SD D N A SA	1 1 1 6 1	10% 10% 10% 60% 10%	3.90	0.87
16	I think that using mobile devices provides a wider range of vocabulary activities as well as effective and frequent feedback.	SD D N A SA	0 1 1 6 2	0% 10% 10% 60% 20%	4.10	0.87
17	I think that using mobile devices to test students' vocabulary knowledge is less-stressful.	SD D N A SA	0 0 2 6 4	0% 0% 20% 60% 20%	4.40	0.51
18	I think that mobile applications used for communication help students to learn and use vocabulary better in their daily conversations.	SD D N A SA	0 2 2 5 2	0% 20% 10% 50% 20%	3.90	0.73
19	I think that EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary.	SD D N A SA	0 2 0 6 4	0% 20% 0% 60% 20%	4.40	0.51
Total					4.05	0.74
20	I think that using mobile devices in learning vocabulary is boring.	SD D N A SA	1 6 1 2 0	10% 60% 10% 20% 0%	2.20	0.63

21	I think that using mobile devices in learning vocabulary is a waste of time.	SD D N A SA	1 2 2 6 2	10% 20% 20% 30% 20%	1.90	0.87
22	I think that using mobile devices in learning vocabulary is demanding and exhausting.	SD D N A S.A	0 6 3 1 0	0% 60% 30% 10% 0%	3.00	0.66
23	I lack knowledge on how to use mobile devices effectively in learning vocabulary	SD D N A SA	0 3 1 4 2	0% 30% 10% 40% 20%	3.60	0.69
24	High cost/slow internet connectivity is a major problem I face in using mobile devices in learning vocabulary.	SD D N A SA	0 2 1 5 2	0% 20% 10% 50% 20%	3.80	1.03
Total					2.90	0.77
Total mean					3.63	0.75

Note. The mean value ranges. SD: 4.51-5.00, A: 3.51-4.50, N: 2.51-3.50, D: 1.51-2.50, SD: 1.00-1.50.

As can be seen in Table 24, the participants' responses show a strong agreement towards item no. 11 *"I think that mobile devices help to improve students' vocabulary acquisition and retention"*. The mean reaches 4.50 at a standard deviation of 0.52. The table further presents that the teachers agreed with items no. 12, 14, 15, 16, 17, 18 and 19 related to: *"I think that mobile devices help to improve students' vocabulary skills (word formation, word families, spelling, ...)"*, *"I find learning/teaching vocabulary using mobile devices interesting and motivating because they integrate all forms of media, print, audio, video, and animation, Using mobile devices makes it easy for students to learn and actively use newly learned vocabulary via a variety of applications (electronic dictionaries, short stories, educational games, thesaurus, translator, ...)"*, *"I think that using mobile devices provides a wider range of*

vocabulary activities as well as effective and frequent feedback”, *“I think that using mobile devices to test students’ vocabulary knowledge is less-stressful”*, *“I think that mobile applications used for communication help students to learn and use vocabulary better in their daily conversations”*, and *“I think that EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary”*. The mean scores are 4.20, 4.20, 3.90, 4.10, 4.40, 3.90, and 4.40 at a standard deviation of 0.87, 0.63, 0.87, 0.87, 0.51, 0.73, and 0.51 respectively.

Moreover, the teachers’ responses indicate neutrality towards item no. 13 stated as *“I prefer learning/teaching vocabulary using mobile devices rather than using printed materials”*. The mean is 2.90 at a standard deviation of 1.19.

Generally, the total mean for the abovementioned nine items is 4.05 at a standard deviation of 0.74, indicating that the teachers’ responses point out an agreement view on using mobile devices to improve their students’ vocabulary learning.

Concerning items no. 23 and 24, the findings designate that the participants ultimately agreed that using mobile devices in learning vocabulary has some limitations, as 60% of them thought that *“I lack knowledge on how to use mobile devices effectively in learning vocabulary”*. However, 70% assumed that *“High cost/slow internet connectivity is a major problem I face in using mobile devices in learning vocabulary»*. The mean scores are 3.60 and 3.80 at a standard deviation of 0.69 and 1.03 respectively.

Remarkably, the teachers’ responses indicated neutrality about item no. 22 related to *“I think that using mobile devices in learning vocabulary is demanding and exhausting”*. The mean score is 3.00 at a standard deviation of 0.66.

With respect to items no. 20 and 21, the outcomes attained present that the participants absolutely disagreed that *“using mobile devices in learning vocabulary is boring”*, and *“I think that using mobile devices in learning vocabulary is a waste of time”* with a total percentage of

70% for both, the mean scores are 2.20 and 1.90 at a standard deviation of 0.63 and 0.87 in respect.

The total mean for the last five items is 2.90 at a standard deviation of 0.77, demonstrating that the teachers' responses indicated neutrality on the issue that using mobile devices to enhance vocabulary learning has some limitations.

Overall, the last total means 3.63 was calculated out of the other two totals at a standard deviation of 0.75. It shows that the common tendency of the participants' perceptions indicated agreement towards the use of mobile devices to enhance vocabulary learning, though it has some limitations. In other words, teachers have high perceptions towards the use of mobile devices to enhance vocabulary learning.

- **Section Four: Suggestions**

Q 25: What would you suggest to better improve vocabulary learning in a MALL environment at the university?

This section would help to answer the third research question, “**What do third-year LMD students and teachers of English suggest to better improve vocabulary learning in a MALL environment at the university?**” from the teachers' viewpoints. Using qualitative techniques, the researchers analyzed the open-ended question in this section, which would result in a detailed explanation of the teachers' suggestions to better improve vocabulary learning in a MALL environment at Larbi Tebessi University. Luckily, most of the teachers with 80% responded to this question.

Nearly all the teachers' responses have the same attitude. They stated that using m-learning can facilitate and develop a new approach to learning via its features and applications. By stating for example, “*The choice of applications, topics, and vocabulary items should be suitable for the student's native culture, age, and level in the foreign language*”. Additionally, they said that “*the target vocabulary needs to approximate the conversations that students*

indulge daily, especially at the onset of learning; otherwise, teaching them specialized vocabulary might not sound attractive to the majority of students”.

Two of the participants emphasized their point of view based on their teaching experience. They claimed: *“Monitor students sources of information on the mobile device because they still tend to resort to mother tongue for understanding the target vocabulary, and some even end up considering the source as an absolute-truth provider, which is fatal to their critical thinking”* and *“One of my very good students unreasonably refuted any kind of argumentation that I wanted to engage her into, over misinformation in the field of subordinating Vs. Coordinating conjunctions, simply because her source (on her mobile phone) said otherwise. She unconsciously refused to believe that online sources could be misleading or, at least, oversimplified”.*

Moreover, many teachers supported the integration of mobile devices to reinforce the teaching and learning of vocabulary inside the classroom by saying, *“Educational organizations and decision-makers should provide EFL teachers with ICT skills required for the implementation of MALL”.* They added, *“MALL training should be submitted to students as well as teachers to provide more knowledge on how to use mobile devices effectively in learning/teaching vocabulary”.* Additionally, they asserted that *“practical MALL workshops can be held in which teachers develop and design MALL activities and tasks without forgetting to raise awareness on the use of technology in general in language learning/teaching”.*

By contrast, some participants focused on Internet-based problems. They stated that affording free access to the net for the learners where the teacher can guide them on how to use the mobile applications effectively. Accordingly, m-learning limitations should be controlled and solved, besides students/teachers should be able to adapt their learning/teaching styles and techniques to m-learning.

2.2.3 Discussion of the Results

The overall aim of the current study is to explore third-year LMD students' and teachers' perceptions of learning vocabulary in a MALL environment at Larbi Tebessi University. To achieve this aim, the researcher developed two questionnaires administered to third-year LMD students of English. The suggested sections of these questionnaires address the following dimensions in light of the research questions: mobile devices and learning English in general, mobile devices and vocabulary learning, and further suggestions to better improve vocabulary learning in a MALL environment at the university.

The descriptive analysis of Section One of the students' questionnaire gave a complete picture of the students' background information. It is obvious that most third-year LMD students aged between 18 and 24 years old, as there is a slight dominance of female students with 71.04% indicating that females are more interested in studying foreign languages than males. Also, all the students have mobile devices, exactly smartphones. Moreover, most of them with 57.8 % consider themselves as having a good level of English vocabulary knowledge.

When it comes to the teachers' questionnaire, the descriptive analysis of Section One gave a wide picture about the teachers' background information, and it is clear that most of the teacher participants aged between 31 to 35 years old, followed by those whose age is ranging between 35 to 40 years old. Furthermore, female teachers consistently represent the overwhelming majority in the department of English due to their interests in teaching foreign languages more than males. Also, most of them have a Master/Magister degree, and their career at the university lasts from one year to thirteen years of teaching experience. However, apart from the more or less homogeneous graduates, the teachers' sample in age, academic degree/grade, and teaching experience are substantially different.

The first research question aimed to explore third-year LMD students' and teachers' perceptions towards the use of mobile devices to learn English in general. To achieve this aim,

statistical analyses using frequency and percentage of the questions in Section Two of both questionnaires accordingly are required. The results achieved from this analysis revealed that there is a close relationship between teaching and learning through the use of m-learning. Both students and teachers are well aware of the value of m-learning in the learning/teaching process in general. Moreover, they favored its use since it facilitates the process of language learning and teaching. Besides, they approved that high-tech tools of mobiles were most needed in classrooms, as they help students to develop their language skills through an enjoyable atmosphere.

These findings are supporting the claim of Kukulska-Hulme and Traxler (2005), Chris (2008), and Chan et al. (2006). Particularly, such learners would like to see various technological tools used for motivation since they can adjust it in virtual environments and display it on a monitor and exchange data online. It provides them with a collaborative platform so that they can build knowledge (Bruner, 1966). For brainstorming ideas and documenting their work with text and images (Good & Brophy, 1990). Also, they prefer the use of mobiles to assist their learning of the English language as they expand and improve the use of new learning opportunities (Peters, 2007). Teachers also claimed that m-learning makes lectures more attractive, based on different ways in which lectures are interpreted using digital tools in teaching.

Accordingly, the first hypothesis, which claims that third-year LMD learners and teachers of English have high perceptions towards the use of mobile devices to learn English, in general, is confirmed. On the other hand, few respondents from both sides neglected the use of mobiles, mainly inside the classroom, for the reason that they may lack the usability of such technology (Fannon, 2004), or they prefer the traditional teaching/learning methods (Kukulska-Hulum, 2009). Also, students may use mobile applications quite apart from or use several different applications for other purposes rather than for educational needs. Possibly due to the

one-finger data entry feature, their limited screen sizes, and keyboarding problems. These features make mobile devices insufficient resources to develop other skills, such as writing (Kukulka-Hulum & Traxler, 2005).

With regard to the second research question, “How do third-year LMD students and teachers of English perceive the use of mobile devices to enhance vocabulary learning?”, the data collected from Section Three of the two questionnaires showed that the common tendency of the participants’ perceptions indicated agreement towards the use of mobile devices to enhance vocabulary learning, though it has some limitations. In other words, the participants have high perceptions towards the integration and implementation of MALL for vocabulary development.

In regards, the results designated that both respondents are aware of the possible advantages and benefits of implementing MALL for learning/teaching vocabulary, and this supports Bruner’s (1966), Rodinadze and Zarbazoa’s (2012) claims. One of the main affordances of MALL would be that it helps students to enhance their vocabulary retention. Most of them have stated that mobile learning promotes learning in a real-world sense and provides a comfortable atmosphere for teaching and learning. They also assumed that m-learning had preferable versatility and usability features that could improve learner autonomy and performance for its potential (Naismith et al., 2004). Besides, it allows them to share information at any time and wherever (Kukulka-Hulum, 2005).

Currently, many teachers rely on the use of computers and internet services to arrange their lectures and to facilitate their teaching process as well. Some instructors choose a laptop and data show to present lectures in the classroom. Hence, the use of linguistic workshops and audio-visual materials was also recommended mostly by those who are involved in teaching vocabulary skills, mainly speaking and listening skills. Some learners further have their mobile tools that can be adapted for educational purposes. For example, smartphones and tablets are

commonly used for e-book use and online dictionary. The results are corresponding with previous studies that showed teachers' positive attitudes toward mobile learning (Kukulskahulme & Traxler, 2005; Chris, 2008; Chan et al., 2006).

Many students believed that mobile devices in education lead to breaking down some of the drawbacks and formalities of vocabulary learning, which enable them to focus more on their studies for extended periods and make it easy for them to gain information and transmit information outside the classroom. Thus, the second research hypothesis, which claims that third-year LMD students and teachers of English have high perceptions towards the use of mobile devices to enhance vocabulary learning, is proved.

The findings also showed that most students are more motivated to use m-learning as they agreed that it possesses a beneficial impact and that they use and improve their range of vocabulary learning. Nevertheless, teaching/learning with traditional methods has not been neglected by both teachers and students. Teachers assumed that today the use of mobile devices is necessary, but it cannot replace conventional traditional teaching: they believed that this technology would never replace teachers (Fisher et al., 2009).

In light of the third research question, that seeks to derive third-year LMD students' and teachers' of English suggestions to better improve vocabulary learning in a MALL environment at the university. The qualitative analysis is of the open-ended question in Section Four of the questionnaire revealed that both of them are knowledgeable about those suggestions and strategies. Most students confirm that m-learning helps them improve their language skills in general and listening and speaking in particular through an exciting and practical process. The interactive tool promotes contact between learners and their teachers in an effective manner. Teachers' views on m-learning were distinct. Nevertheless, all of them argued that MALL plays a significant role in developing language skills, mainly listening and speaking when instructors take charge of its usage. It is a modern and creative method of teaching,

providing a more suitable environment for both students and teachers, as well as encouraging learners to develop vocabulary learning rapidly. Given that, all these suggestions answered the last research question and confirmed the last hypothesis. In addition, if any factor would affect the decision to teach with or without technology, the respondents chose to focus on technology for their teaching, provided that the positive aspects of technology outweigh their negative aspects (Sung, Chang & Yang, 2015).

In conclusion, as shown by this research, third-year LMD teachers of English at Larbi Tebessi University agreed on the significance of using mobile devices in order to motivate third-year students. All teachers confirmed that today students are fascinated with innovative use inside and outside the classroom. The use of such technology should, therefore, become the correct and effective method to be used in classrooms. Instructors must encourage their students to develop their vocabulary skills. Teachers and students, after all, need intensive training on the use of MALL to prevent issues while using it.

Section Three: Summary of the Results, Limitations, Implications and Recommendations

As a final step in this chapter, the results of the study are summarized as well as the limitations are presented. The pedagogical implications that need to be acknowledged and addressed are proposed, and relevant recommendations are offered.

2.3.1 Summary of the Results

Based on the analysis of the data, the results of the analysis, the discussion, and interpretations of these results, the following conclusions were reached:

- Third-year LMD students and teachers of English highly perceive the use of mobile devices for learning English in general.
- The general tendency of the participants' perceptions indicates agreement towards the use of mobile devices to enhance vocabulary learning.

- Third-year LMD teachers and learners of English are aware of how to better improve vocabulary learning in a MALL environment at the university and suggest some effective strategies to do so.
- The integration of MALL has immense advantages. It enables students to access reliable information anywhere and anytime besides it helps teachers to assist their learners in the classroom to develop their language skills and engage their attention and motivation.

2.3.2 Limitations of the Study

Despite that the limitations are part of any research work and have a direct influence on the findings of any study, the researchers hope that this work will still shed some light on the context of MALL. The limitations of the current study are:

1. The global pandemic COVID-19 prevented the researchers from administering their questionnaires face-to-face with the target population and getting a large sample size.
2. Only 45 third- year LMD students and 10 teachers of English at Larbi Tebessi University participated in the study by responding to the two questionnaires. These numbers are not large enough to typically present third-year LMD students' and teachers' perceptions. The reason behind this shortage is that many students refused to take part in this study.
3. The researchers intended to have an interview with the teachers so that to get qualitative results and, therefore, to triangulate by gathering data using both quantitative and qualitative dimensions of data collection.

2.3.3 Pedagogical Implications

The outcomes of this study have significant implications for educational leaders and decision-makers to reconsider MALL for the Algerian universities and integrate it into language learning syllabuses to create active learning environments inside the classroom, develop

students' language skills, and engage their attention and motivation as well. Moreover, They have to focus on the pedagogical use of mobile devices for vocabulary learning in-depth.

Furthermore, these findings hold pedagogical implications for English language teachers since they show a positive attitude towards using m-learning to develop language learning in general and vocabulary learning in particular. Also, knowing students' views and opinions would help teachers evaluate the teaching-learning process. Yilmaz-Soylu states that "The degree of learners' expectations, satisfaction, opinions or views on courses has played an important role in evaluating the effectiveness of learning processes" (2008, p. 27). Moreover, "When students perceive their experience as enjoyable, satisfying, and personally fulfilling, they tend to interact more, which results in enhanced learning" (Esani, 2010, p. 187).

2.3.4 Recommendations

The following recommendations are forwarded:

- **Recommendations for students**

1. EFL learners are advised to use mobile applications to develop their communicative abilities for the reason that the mastery of the target language is based primarily on authentic language and much use of English.
2. EFL learners should be aware of using multimedia stores from reliable sources or a list provided by their teachers in order to practice and train their receptive skills.
3. EFL Learners should be encouraged to use different m-learning applications as educational tools such as; E-dictionaries, novels, short stories, translation tools, and recording tools.
4. EFL learners may design a virtual group or club in order to practice tasks and activities and share information with all members.

5. EFL learners should make a balance between the conventional approach and modern technologies interchangeably to make the learning process more successful.

- **Recommendations for teachers**

1. EFL teachers should support the integration of (MALL) as an effective supplementary tool in the classroom.
2. EFL teacher should motivate their learners to use mobile applications inside and outside the classroom.
3. EFL teachers should integrate a sufficient number of m-learning with motivational vocabulary tasks such as puzzles, educational games, and word guessing games.
4. EFL Teachers must choose the appropriate mobile activity regardless of students' needs, interests, and levels.
5. EFL teachers should be aware of the use of mobile devices inside the classroom by giving the right instructions in order to ensure success.

Conclusion

In this chapter, the results obtained from the two questionnaires were analyzed, discussed, and interpreted, referring to the research questions and hypotheses. Hence, it is clear that the researchers confirmed the three research hypotheses concluding that third-year LMD students and teachers of English have high perceptions towards the use of mobile devices to learn English in general and to enhance vocabulary learning in particular. Moreover, they provide important suggestions to better improve vocabulary learning in a MALL environment at the university.

General Conclusion

The current study was interested in the use of mobile devices in EFL learning/teaching vocabulary. It aimed to explore third-year LMD students' and EFL teachers' perceptions of learning vocabulary in a MALL environment at Larbi Tebessi University (Tebessa). The study aimed, in particular, to explore their perceptions towards the use of mobile devices to learn English in general and vocabulary in particular and to derive their suggestions to better improve vocabulary learning in a MALL environment at the university.

In order to achieve these aims, the researcher reviewed the related literature and suggested two questionnaires to be used as the main research tools. These questionnaires were administered online to both EFL students and teachers. The study sample consisted of 45 third-year LMD students of English and 10 EFL teachers. Each questionnaire is divided into four sections in light of the research questions of the study. The first section of the questionnaire provides background information of the participants. Whereas, the second and the third sections deal with mobile devices and English learning, and mobile devices and vocabulary learning in respect. The last section, including one open-ended question, tries to gain insights into the students' and teachers' suggestions for better-improving vocabulary learning in a MALL environment. The collected data from the two questionnaires were analyzed quantitatively, and that of the open-ended questions were qualitatively analyzed.

The current dissertation is organized along two chapters beginning with a General Introduction. The first chapter consisting of two sections, provides a theoretical background of the two research variables; vocabulary and MALL. The second chapter represents the practical part of the study, wherein a detailed description of data collection tools, analysis, and discussion of the results are presented. It includes three sections; the first section presents the research methodology followed in this study, the second section presents the data analysis and interpretation, and the third one provides a summary of the results, limitations, implications, and

recommendations. Finally, the dissertation ends with a General Conclusion, which makes an overall account of the research and summarizes the main research findings.

Based on the analysis of the data, the results achieved from the analysis, discussion, and interpretations of these results, the following conclusions were reached:

- Third-year LMD students and teachers of English highly perceive the use of mobile devices for learning English in general.
- The general tendency of the participants' perceptions indicates agreement towards the use of mobile devices to enhance vocabulary learning.
- Third-year LMD teachers and learners of English are aware of how to better improve vocabulary learning in a MALL environment at the university and suggest some effective strategies to do so.
- The integration of MALL has unlimited advantages. It enables students to access reliable information anywhere and anytime, as well as for the teachers as it helps them to assist their learners in the classroom to develop their language skills and engage their attention and motivation.

Consequently, it is clear that the researchers confirmed the three research hypotheses of the study.

To sum up, this study remains valuable for both EFL students and teachers as it concluded that the use of mobile tools would increase L2 vocabulary learning and teaching, and it is, therefore, a versatile tool for students if it is used efficiently and productively. For doing that, this study remains just a trial and not a conclusive one, as future research should follow this study. As always, when making decisions, "two heads are better than one" (McGrath, 2002, p. 52)

References

- Barcroft, J. (2016). *Vocabulary in language teaching* (1st ed.). New York: Routledge.
- Bowman, B., Burkart, G., & Robson, B. (1989). *TEFL/TESL, Teaching English as a Foreign or Second Language*. Washington, DC (1990 K Street, NW - 8th floor, Washington 20526): Peace Corps, Information Collection and Exchange
- Brown, J., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42. doi: 10.3102/0013189x018001032.
- Bruner, J. S. (1966). *Toward a theory of instruction*. Cambridge, MA: Harvard University Press.
- Chan, A., Lee, M., & McLoughlin, C. (2006). Promoting engagement and motivation for distance learners through podcasting. Budapest, Hungary: *European Distance and E-Learning Network*,(8).1, 2-4
- Chapelle, C. (2001). *Computer applications in second language acquisition*. Cambridge: Cambridge University Press.
- Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education (5th ed.)*. Routledge Falmer, London.
- Evans, C. (2008). The effectiveness of M-Learning in the form of podcast revision lectures in higher education. *Computers & Education*, 50(2), 491-498. doi:110.1016/j.compedu.
- Esani, M. (2010). Moving from face-to-face to online teaching. *Clinical laboratory science: journal of the American Society for Medical Technology*,23(3) doi: 10.29074/ascls.23.3.187.
- Fannon, K. (2004). Connectedness: Learner perspectives on learning futures. Australian Flexible Learning Network: Flex e-News Newsletter. Retrieved from: http://www.flexiblelearning.net.au/leaders/flleaders/fl104/papers/reviewessay_aquino.pdf

- Firman, F., & UIHaq, M. (2012). Improving the students' speaking accuracy through "LSE 9.0 Software Version". *Exposure: Jurnal Pendidikan Bahasa Dan Sastra I NGGRIS*, 1(2), 166. doi: 10.26618/ejpb.v1i2.777.
- Fisher, T., Sharples, M., Pemberton, R., Ogata, H., Uosaki, N., & Edmonds, P. (2012). Incidental second language vocabulary learning from reading novels. *International Journal of Mobile and Blended Learning*, 4(4), 47-61. doi: 10.4018/jmbl.2012100104.
- Good, T. L., & Brophy, J. E. (1990). *Educational Psychology: A Realistic Approach* (4th ed.). White Plains, NY: Longman Publishing Company.
- Harmer, J. (2007). *The practice of English Language Teaching* (4th ed.). Harlow: Pearson Education.
- Hiebert, E. H., & Kamil, M. L. (2010). *Teaching and learning vocabulary: Bringing research to practice*. (1st ed.). New York: Routledge.
- Irby, T.L. & Strong, R. (2013). Agricultural education students' acceptance and Self-efficacy of mobile technology in classrooms. *NACTA Journal*, 57(1), 82-87.
- Jarvis, H., & Achilleos, M. (2013). From Computer-assisted language learning to Mobile assisted language learning. *The Electronic of English as Second Language*, 16(4),1-2.
- Korkmaz, H. (2010). *The Effectiveness of Mobile Assisted Language Learning*. Master thesis: BGLKENT University.
- Kukulska-Hulme, A. (2009). *Will mobile learning change language learning?.* *ReCALL*. 21(2):157–65. doi:10.1017/S0958344009000202.
- Kukulska-Hulme, A., & Shield, L. (2008). An Overview of mobile-assisted language learning: From Content Delivery to Supported Collaboration and Interaction. *ReCALL*, 20(3), 271-289. doi: 10.1017/s0958344008000335
- Kukulska-Hulme, A., & Traxler, J. (Eds.). (2005). *Mobile learning: A handbook for educators and T200 trainers*. Psychology Press.

- Kumar, R. (2011). *Research methodology (3 ed): A step-by-step guide for beginners*. Saga: London.
- Lodico, M., Voegtle, K., & Spaulding, D. (2006). *Methods in educational research*. San Francisco, CA: Jossey-Bass.
- McCarthy, M. (1990). *Language teaching vocabulary: A Scheme for teacher education*. Oxford: Oxford University Press.
- McGrath, I. (2002). *Materials evaluation and design for language teaching*. Edinburgh: Edinburgh University Press.
- Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning. *International Journal of Distributed and Parallel Systems*, 3(1), 309-319. doi:10.5121/ijdps.2012.3126.
- Montgomery, J. K. (2007). *The Bridge of vocabulary: Evidence-based activities for academic success*. USA: NCS Pearson, Inc.
- Naismith, L., Sharples, M., Vavoula, G., & Lonsdale, P. (2004). Literature review in Mobile technologies, learning, and learning (Report No11. Bristol: Future lab). Scientific Research Publishing Inc. Retrieved from: <https://www.scirp.org/>
- Vocabulary. (2002). In Oxford Dictionary (10th ed.). Oxford University Press.
- Paul, P., Chris. B., Scott, C. (2005). *Questionnaire design: Asking questions with a purpose*. System. Agri-Life Extension: The Texas A&M University System.
- Peters, K. (2007). M-learning: positioning educators for a Mobile, connected future. *The International Review of Research in Open and Distributed Learning*, 8(2). Athabasca University Press. Retrieved from <https://www.learntechlib.org/p/49352/>.
- Peters, L. (2009). *Global Education: Using technology to bring the world to your students* (1sted.). International Society for Technology in Education. Washington.

- Pikulski, J.J., & Templeton, S. (2004). *Teaching and developing vocabulary: Key to Long Term Reading Success*: Houghton Mifflin Company.
- Phipps, L., Sutherland, A. and Seale, J. (2002) *Access All Areas: Disability, Technology and Learning*. Retrieved from:
https://www.researchgate.net/publication/250797661_Access_All_Areas_disability_technology_and_learning
- Polit, D., & Beck, C. (2010). *Essentials of nursing research* (7th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Rodinadze, S., & Zarbazoia, K. (2012). The advantages of information technology in teaching English language. *Frontiers of Language and Teaching*, 3(5), 271-275.
- Schmitt, N. (1997). *Vocabulary learning strategies*. In D. N. Schmitt, & M. McCarthy (Eds.), *Vocabulary: Description, acquisition, and pedagogy*. Cambridge: Cambridge University Press.
- Schmitt, N. (2010). *Researching vocabulary* (1st ed.). Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.
- Schmitt, N., & Schmitt, D. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.
- Smith, P. L., & Ragan, T. J. (2005). *Instructional design* (3rd ed.). Hoboken, NJ: Wiley.
- Stern, H. (1983). *Fundamental concept of language teaching*. Oxford: Oxford University Press.
- Stockwell, G. (2008). Vocabulary on the move: investigating an intelligent Mobile phone-based vocabulary tutor. *Computer Assisted Language Learning*, 20(4), 365-383.
- Sung, Y. T., Chang, K. E., & Yang, J. M. (2015). How effective are Mobile devices for language learning? a meta-analysis. *Educational Research Review*, 3(16), 68-84
- Thornbury, S. (1997). *About language*. C U P.
- Thornbury, S. (2002). *How to teach vocabulary*. Longman: Pearson Education.

- Ur, P. (2012). *A course in language teaching* (2ed.). Cambridge: Cambridge University Press.
- Vossoughi, H. (2009). Using word-search-puzzle game for improving vocabulary knowledge of Iranian EFL learners. *Journal of Teaching English as a Foreign Language and Literature of Islamic*. Azad University.
- Walliman, N. (2011). *Research methods*. London: Routledge.
- Warschauer, M. (1996) "Computer-assisted language learning: an introduction". In Fotos S. (ed.) *Multimedia language teaching, Tokyo: Logos International: 3-20*.
- Wilkins, D. A. (1972). *Linguistics in language teaching*. Australia: Edward Arnold.
- Woodill, G. (2011). *The mobile learning edge: Tools and technologies for developing your teams*. New York: McGraw Hill Professional.
- Yilmaz-Soylu, B. A. (2008). Development of a scale on learners' views on blended learning Implementation process. *Internet and Higher Education*, 11(1), 26-32
doi: [10.1016/j.iheduc.2007.12.006](https://doi.org/10.1016/j.iheduc.2007.12.006).

Appendices

Appendix A: The Initial Version of the Students' Questionnaire

- The Students' Online Questionnaire Link

shorturl.at/lnCEV

- The Students' Written Questionnaire Form

Dear students,

This questionnaire is part of a Master's degree thesis that is entitled "Exploring EFL Teachers' and Students' Perception of Learning Vocabulary in a Mobile-Assisted Language Learning (MALL) Environment.

You are kindly required to answer the following questions as objectively as possible.

Thank you for your cooperation.

Section One: General Information

1. Gender

a. Male b. Female

2. Age

a. 18-24 b. 25-30 c. 30-35

3. How do you rate your knowledge of vocabulary in English?

a. Very good b. Good c. Average d. poor

Section Two: Mobile Devices and learning English

4. Do you have a:

a. Smartphone b. Simple mobile c. Tablet computer

5. Do you think that mobiles help you to improve your English?

a. Yes b. No

6. If yes, please say which skill or language area they help you to improve your English?

.....

Section Three: Mobile Devices and Vocabulary Learning

- Using the following agreement scale, please provide your point of view with regard to every statement (only one answer is required for every statement).

The Statements	SD	D	N	A	SA
7. Using mobile applications helps you to improve your English Vocabulary Knowledge.					
8. Learning vocabulary would be more effective if you use mobile devices as an educational tool.					
9. Using mobile devices to learn vocabulary knowledge is more fun and less stressful.					
10. Your course performance will improve if you use mobile devices as an educational tool.					
11. Learning vocabulary using mobile applications is more effective than traditional learning.					
12. Learning vocabulary using mobile applications is more motivating than traditional learning.					
13. You can accomplish your tasks more quickly if you use mobile devices as an educational tool.					
14. The use of mobile devices as an educational tool would increase the student's confidence.					
15. Interacting with such devices helps you remember your English vocabulary better.					
16. Because of their portability and practicality, EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary.					
17. Would you like the mobile devices to be implemented (applied) in future courses?					

Section Four: Further Suggestions

Please, add any comments or suggestions on the role of mobiles in enhancing students'

Vocabulary Knowledge.....

Thank you very much for taking the time to share your views.

Appendix B: The Final Version of the Students' Questionnaire

- **The Students' Online Questionnaire Link**

shorturl.at/gwCEU.

- **The Students' Written Questionnaire Form**

Dear students,

This questionnaire aims at exploring EFL teachers' and students' perceptions of learning vocabulary in a Mobile-Assisted Language Learning (MALL) environment. You are kindly requested to answer the questions by either using a tick (✓) in the appropriate box (es) or by making a full statement(s) whenever necessary. You are also asked to answer the final open-ended question at the end of the questionnaire and return to us as soon as possible.

Your objective and truthful answers will help us get a realistic assessment of this study.

Note that "MALL is known as anywhere approach that makes learning occur anytime and anywhere due to the use of mobile devices such as tablet PCs, smart-phone, and mobile phones (kukulka-Hulme and Traxler, 2005)

AYACHI RIM & AYACHI MERIEM

Master 2 students, Language Sciences, Department of English

Larbi Tebessi University, Tebessa

Date: 17/06/2020

Section One: Personal Information

1. Age

a. 18-24

b. 25-30

c. 30-35

2. Gender

a. Male

b. Female

3. Do you have a mobile device?

a. Yes

b.

- If 'yes', what type of mobile devices do you have?

a. Smartphone

b. Basic-phone (Only for calling and sending text messages)

c. Tablet Computer

d. MP3/MP4 Players

e. Others

Please specify

4. How do you rate your knowledge of vocabulary in English?

a) Poor

b) Average

c) Good

d) Very good

Section Two: Mobile Devices and learning English in General

5. Do you use mobile devices to assist your learning in the classroom?

Yes

No

6. Do your teachers allow you to use mobiles for learning purposes inside the classroom?

Yes

No

7. How often do you use mobile devices to learn English?

a. Never

b. Rarely

c. Sometimes

d. Usually

e. Always

8. Where do you use mobile devices to learn English?

a. Only inside the classroom where the teacher guides them

b. Only at home

c. At home and in class

9. Do you think that mobile devices help you to improve your English?

Yes

No

10. If yes, please say which language skill or area they help to improve.

.....

Section Three: Mobile Devices and Vocabulary Learning

- Using the following agreement scale, please provide your point of view with regard to every statement (only one answer is required for every statement).

N	Statements	Response (R)				
		SD	D	N	A	SA
11	I think that mobile devices help me to improve my vocabulary acquisition and retention.					
12	I think that mobile devices help me to improve my vocabulary skills (word formation, word families, spelling...)					
13	I prefer learning vocabulary using mobile devices rather than using printed materials.					
14	I find learning vocabulary using mobile devices interesting and motivating because they integrate all forms of media, print, audio, video, and animation.					
15	Using mobile devices makes it easy for me to learn and actively use newly learned vocabulary via a variety of applications (electronic dictionaries, short stories, educational games, thesaurus, translator, ...)					
16	I think that using mobile devices provides a wider range of vocabulary activities as well as effective and frequent feedback.					
17	I think that using mobile devices to my vocabulary knowledge is less-stressful.					

18	I think that mobile applications used for communication help me to learn and use vocabulary better in my daily conversations.					
19	I think that EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary.					
20	I think that using mobile devices in learning vocabulary is boring.					
21	I think that using mobile devices in learning vocabulary is a waste of time.					
22	I think that using mobile devices in learning vocabulary is demanding and exhausting.					
23	I lack knowledge on how to use mobile devices effectively in learning vocabulary.					
24	High cost/slow internet connectivity is a major problem I face in using mobile devices in learning vocabulary.					

Section Four: Further Suggestions

25. What would you suggest to better improve vocabulary learning in a MALL environment at the university?

.....

.....

Thank you for your cooperation

Appendix C: Teachers Questionnaire

- **The Teachers' Online Questionnaire Link**

shorturl.at/jqQV2

- **The Teachers' Written Questionnaire Form**

Dear teacher,

This questionnaire aims at exploring EFL teachers' and students' perceptions of learning vocabulary in a Mobile-Assisted Language Learning (MALL) environment. You are kindly requested to answer the questions by either using a tick (✓) in the appropriate box (es) or by making a full statement(s) whenever necessary.

Your objective and truthful answers will help us get a realistic assessment of this study.

AYACHI RIM & AYACHI MERIEM

Master 2 students, Language Sciences, Department of English

Larbi Tebessi University, Tebessa

Date: 17/06/2020

Section one: Personal Information

1. Age

21-24 25-30 31-35 36-40 +40

2. Gender

a) Male

b) Female

3. Degree(s) held:

a) BA (License)

b) MA (Master/Magister)

c) PhD (Doctorate)

4. Years of teaching experience

..... years.

Section Two: Mobile Devices and Learning English in General

5. Do you use mobile devices to assist your teaching practices in the classroom? Yes/No

6. Do you allow your students to use their mobile devices for learning purposes inside the

classroom? Yes No

7. How often do you think students should use mobile devices to learn English?

A) Never b) Rarely c) Sometimes d) Usually e) Always

8. Where do you think students should use mobile devices to learn English?

- a. Only inside the classroom where the teacher guides them
- b. Only at home c. At home and in class

9. Do you think that mobile devices help students to improve their English? Yes/No

-If yes, please say which language skill or area they help to improve.

.....

Section Three: Mobile Devices and Vocabulary Learning

- Using the following agreement scale, please provide your point of view with regard to every statement (only one answer is required for every statement).

N	Statements	Response				
		SD	D	N	A	SA
11	I think that mobile devices help to improve students' vocabulary acquisition and retention.					
12	I think that mobile devices help to improve students' vocabulary skills (word formation, word families, spelling...)					
13	I prefer learning/teaching vocabulary using mobile devices rather than using printed materials.					
14	I find learning/teaching vocabulary using mobile devices interesting and motivating because they integrate all forms of media, print, audio, video, and animation.					

15	Using mobile devices makes it easy for students to learn and actively use newly learned vocabulary via a variety of applications (electronic dictionaries, short stories, educational games, thesaurus, translator, ...)					
16	I think that using mobile devices provides a wider range of vocabulary activities as well as effective and frequent feedback.					
17	I think that using mobile devices to test students' vocabulary knowledge is less-stressful.					
18	I think that mobile applications used for communication help students to learn and use vocabulary better in their daily conversations.					
19	I think that EFL teachers should encourage the use of mobile devices inside the classroom to teach vocabulary.					
20	I think that using mobile devices in learning vocabulary is boring.					
21	I think that using mobile devices in learning vocabulary is a waste of time.					
22	I think that using mobile devices in learning vocabulary is demanding and exhausting.					
23	I lack knowledge on how to use mobile devices effectively in learning vocabulary.					
24	High cost/slow internet connectivity is a major problem I face in using mobile devices in learning vocabulary.					

Section Four: Further Suggestions

25. What would you suggest to better improve vocabulary learning in a MALL environment at the university?

.....

Thank you for your cooperation

Résumé

Au cours des deux dernières décennies, l'impact de la technologie sur l'éducation est devenu extrêmement remarqué. L'émergence du concept "apprentissage mobile" était juste le résultat de ce que la technologie avait offert, "les appareils mobiles", que tout le monde possède aujourd'hui, considérés comme des outils omniprésents, et ambiants utilisés pour les applications éducatives. L'objectif général de cette recherche est d'explorer les perceptions des étudiants et des enseignants d'ALE sur l'apprentissage du vocabulaire dans un environnement MALL à l'Université Larbi Tébessa. Les participants cibles de cette étude étaient 45 étudiants LMD de troisième année Anglais et dix professeurs d'ALE au cours de l'année universitaire 2019/2020. Pour atteindre ces objectifs, la méthode de recherche descriptive-analytique a été adoptée à l'aide de deux questionnaires administrés en ligne aux étudiants et aux enseignants d'ALE. Les données collectées à partir de ces questionnaires ont été analysées quantitativement et qualitativement. Les résultats de cette étude ont indiqué des perceptions élevées des participants à l'égard de l'utilisation d'appareils mobiles pour l'apprentissage de l'anglais en général. De même, ils ont montré un accord général sur le potentiel de MALL en tant qu'approche prometteuse pour apprendre le vocabulaire, et ils suggèrent des stratégies efficaces pour mieux améliorer l'apprentissage du vocabulaire dans un environnement MALL à l'université. En outre, l'étude a proposé des recommandations et des suggestions sur la manière de mettre en œuvre MALL et d'éliminer les obstacles potentiels à la mise en œuvre de MALL dans les contextes ALE.

Mots clés: apprentissage mobile, appareils mobiles, vocabulaire, apprentissage des langues assisté par mobile (MALL), perceptions

المخلص

خلال العقدين الماضيين ، أصبح جليا للجميع مدى التأثير الكبير للتكنولوجيا على المناهج التعليمية. حيث كان للتكنولوجيا الفضل الأكبر في بروز مفهوم "التعلم بالمحمول" وذلك عبر ابتكار "الاجهزة المحمولة" والتي أضحت اليوم أكثر الأجهزة اليدوية انتشارًا وشعبية وأكثرها استخداما في عملية التعليم ، وتهدف هذه الدراسة للبحث في تطلعات الطلبة واساتذة اللغة الإنجليزية " كلغة أجنبية " (EFL) بغرض تدريس المفردات اللغوية في بيئة تعتمد على تعلم اللغات بمساعدة الاجهزة المحمولة بجامعة العربي التبسي. وقد شملت هذه الدراسة 45 طالبًا من طلبة السنة الثالثة تخصص لغة إنجليزية نظام " ل م د " إلى جانب عشرة أساتذة للغة الإنجليزية (كلغة أجنبية) وذلك خلال العام الدراسي 2020/2019 ، وبغرض تحقيق هذه الأهداف ، قمنا في هذا البحث باعتماد المنهج الوصفي التحليلي من خلال إجراء إستبانيين عبر الإنترنت شارك فيهما كل من طلبة وأساتذة اللغة الإنجليزية كلغة أجنبية . وبعد جمع البيانات ، قمنا بعمل تحليل كمي ونوعي لها ، حيث أشارت نتائج هذه الدراسة إلى وجود تصورات عالية لدى المشاركين من أجل الإستعانة بالهواتف المحمولة بغرض تعلم اللغة الإنجليزية بشكل عام . وعلى غرار ذلك ، فقد أجمعوا على كفاءة تعلم اللغة عبر الهاتف المحمول كنهج واعد في عملية تعلم المفردات اللغوية ، كما قاموا بوضع إقتراحات لبعض الإستراتيجيات الفعالة بهدف تحسين عملية تعلم المفردات بشكل أفضل أثناء اعتماد هذا النهج في الجامعة . وعلاوة على ذلك ، فقد تضمنت الدراسة مقترحات وتوصيات حول كيفية إعتد الأجهزة المحمولة في عملية تعليم اللغات إضافة إلى طرق تخطي العوائق المحتملة أثناء تطبيق هذه العملية في سياق تعلم اللغة الإنجليزية كلغة أجنبية

الكلمات المفتاحية : التعلم باستعمال النقال ، الاجهزة المحمولة ، المفردات ، تعلم اللغة بمساعدة الأجهزة

المحمولة، التصورات