

# THE IMPACT OF MOBILE-ASSISTED LEARNING ON LEARNERS' LEXICAL COMPETENCE CASE STUDY OF THIRD YEAR STUDENTS AT BISKRA UNIVERSITY

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## Abstract:

Vocabulary knowledge is significant for students' language proficiency and academic achievement. It is the cornerstone of language proficiency since it is the key element that enables learners to respond to the four skills effectively. However, a large number of students in our setting struggle to express themselves when they are in need to produce a piece of writing or to communicate orally, either in class or elsewhere because their lexicon is not well developed. Considering this an educational issue, an action research had been undertaken for the sake of finding a treatment. Thus, this research work attempted to show the effects of Mobile-assisted Language Learning in enhancing students' lexical competence at Biskra University. For this purpose, 70 participants, 35 representing an experimental group and 35 a control group, were used in this quasi-experimental study in which Cambridge texts were exploited during a whole semester. Both the value of the independent t-test (1.98) for 68 degrees of freedom and the six interviewees' responses revealed the significance of the treatment. This can be one way of enriching students' vocabulary through a mean which is easily accessed as all the students possess mobiles and are motivated to use them in an educational setting.

**Key words:** mobile assisted learning, lexical competence, academic achievement, communication.

## ملخص:

معرفة المفردات مهمة للمتعلمين لإتقان اللغة والتحصيل الأكاديمي. تمثل المفردات الحجر الأساس في إتقان اللغة لأنها العنصر الرئيسي الذي يمكن المتعلمين من الاستجابة للمهارات الأربع على نحو فعال. ومع ذلك، فإن عددا كبيرا من الطلاب في محيطنا التعليمي، يعانون من مشكلة التعبير في حال الكتابة أو التواصل شفويا، سواء في الصف أو في مكان آخر لأن رصيدهم اللغوي ليس متطور بشكل جيد. باعتبار هذه المسألة تعليمية، تم إجراء بحث عملي من أجل التوصل الي الحل الأمثل. وهكذا، من خلال هذه الدراسة البحثية حاولنا إظهار آثار التعلم اللغوي بمساعدة الهاتف النقال في تعزيز كفاءة الطلاب اللغوية في جامعة بسكرة. لهذا الغرض، تم استخدام 70 مشاركا كعينة للبحث في هذه الدراسة الشبه تجريبية، يمثل 35 مجموعة تجريبية و 35 مجموعة تحكم، التي تم فيها استخدام نصوص كامبريدج خلال فصل دراسي كامل. أظهرت كلا من نتائج اختبار الدراسة و استجابات الطلبة الذين أجريت معهم المقابلة أهمية التجربة. يمكن أن يكون هذا أحد طرق إثراء المفردات عند الطلاب من خلال وسيلة يسهل الوصول إليها حيث أن جميع الطلاب يمتلكون الهواتف النقالة ودافع لاستخدامها في بيئة تعليمية.

الكلمات التعلم اللغوي , الهاتف النقال, التواصل

## Introduction

The development of different types of competence is necessary in second and foreign language learning to allow students to become proficient in the language used. This includes lexical competence without which nobody can express himself in an efficient manner and this will lead to failure in communication and also hinders successful academic achievement. Vocabulary knowledge is so complex that it demands a great deal of effort from both the teacher and learners to develop it. Meara (1996) proposed a global description of such knowledge by two dimensions: size and organization. By size, she means the number of words an individual seems to know and by organization she refers to how these words are related among them. Marconi (1997) believes that lexical competence comprises two distinct dimensions of knowledge. He assumes that to be able to use a word is in two ways: inferential and referential abilities are required. He refers to inferential knowledge as the ability to access a system of associations between that word and different words and other etymological expressions, while referential knowledge means the capacity to know how to outline words onto the present reality, or the capacity of both naming and application.

EFL students have to learn an enormous amount of vocabulary to be able to communicate appropriately. This represents challenges for them to remember so many words to be used in different situations. By the same token, teachers are faced by two challenges as to how to teach vocabulary and make students store it in the long memory to be used later on. Therefore, it is the teacher's duty to look for learning and teaching strategies to enable students to develop their lexical competence. In sum, a number of linguists gave different assumptions about vocabulary knowledge and practitioners tried different methods and techniques to help second and foreign language learners develop their lexical competence. For this purpose, several methods and techniques have been used, including explicit and implicit teaching in addition to a set of strategies in both teaching and learning vocabulary. As a teacher and researcher, considering the seriousness of this issue and believing that a well developed vocabulary is essential not only in standardized tests, but also in all what concerns academic life, I undertook this quasi-experimental research with the intention to

develop students lexical competence though mobiles using Cambridge texts as an authentic supporting material.

### **1. Mobile Assisted Language Learning**

The emergence and rapid improvement of educational technologies, such as mobile learning has gained a wide popularity among EFL teachers and learners. Ongoing change and development of mobile devices have attracted educators, scholars and EFL practitioners to benefit from these technologies in teaching and learning. Kukulska et al. (2004) asserted that mobile technology can support quick feedback or reinforcement, immersed experiences, situated learning and in an authentic context and other learning situations. Mobile learning enhances the mobility of individual learners and is easily accessible in mainly institutions which lack equipment such as laboratories or when classrooms are overcrowded as in our situation. Another study undertaken by me to develop learner listening comprehension (Chelli, 2016) proved successful and motivating as all the students were busy listening and doing the different tasks designed for them.

Considered as an extension of e-learning, mobile assisted language learning (MALL) learning is learner centered. Its continued evolution has resulted in changing approaches and theories of learning. An investigation of the MALL literature reveals that there are two main dominant approaches which are content- related and design related (GrÖlund and Viberg, 2012). However, the theories and approaches applied in MALL originate from various theories of learning, including behaviourism, audioligualism, collaborative learning, situational learning and constructivism. Using mobile phones in the EFL classroom involves students in a cooperative and a rich motivating environment, enabling them to interact and expand their knowledge in different fields, including the development of their vocabulary knowledge. Students who has grown up and lived with digital technology can use podcasts easily and efficiently on their cell phones to promote mobile learning. Moreover, the continuous use of authentic texts accessible through mobiles cannot only develop their vocabulary, but other competencies that can be researched later on.

### **2. Approaches and Strategies to Develop Lexical Competence**

In order to be proficient in any language, a set of competences are required among them, lexical competence defined as 'the ability to use words in appropriate and effective ways in verbal interaction'

(Garcia Velasco, 2007). This is based on Hymes (1972) who states that communicative competence not only comprises the ability to construct and interpret linguistic expressions, but also the ability to use these expressions in appropriate and effective ways according to the conventions of verbal interaction prevailing in a linguistic community. Henrikson (1999) proposed a more specific definition of lexical competence according to which it includes three dimensions deemed important to vocabulary knowledge. The first refers to partial precise knowledge which deals with breadth or size of vocabulary knowledge which is a long process during which the learner passes through several stages, moving from simple word recognition to a precise comprehension level. The second one, depth of knowledge refers to the quality of the learner's lexical competence. The third one, the receptive-productive dimension refers to the ability to understand a lexical item and then to produce it. This shows how complicated this process of developing lexical competence is, not only involving the memorization of words, but other complex levels.

Based on the need to develop this essential competence, methods and techniques have evolved, in parallel to learning and teaching theories to help learners develop their vocabulary knowledge believing that vocabulary acquisition is so important for language learners as argued by Thorn bury ( 2002, p.13) that 'if you spend most of your life studying grammar, you will not improve very much. You will see improvement if you learn more words and expressions. You can say very little with grammar, but you can say anything with words'. According to Nation, 1990 and Rubin and Thomson, 1994, there are two general ways according to which vocabulary is learnt: the direct learning vocabulary approach and the indirect learning approach. However, vocabulary learning has been narrowed to four main types: explicit, implicit, incidental and intentional. Direct or explicit vocabulary is defined as the conscious attention to learn new lexical items; implicit vocabulary learning refers to the unconscious, natural and simple process of learning vocabulary, which involves learning the meaning of words indirectly and is related to learning vocabulary in context. Incidental vocabulary learning refers to natural learning that can occur as a result of extensive reading and listening. This type of learning requires awareness and attention to learn new lexical items.

Alemi and Tayebi (2011) discussed the difference between implicit and explicit learning and incidental and intentional learning. According to them, implicit competence is incidentally acquired, is stored implicitly and is used automatically; incidental learning differs as it is implicit learning in that it is a behaviourist notion “with the meaning of a new word being acquired totally unconsciously as a result of abstraction from repeated exposures in a range of activated contexts. Explicit learning involves awareness at the time of learning, whereas intentional learning occurs deliberately attempting to commit new information to memory. Teachers need to be aware of these types of vocabulary learning ways to help students develop their lexical competence through the selection of various tasks with different learning objectives, combining all the previous approaches to reach better results.

In order to develop their vocabulary and therefore their lexical competence, learners use different strategies. Schmidt (2000) classified vocabulary strategies into two main classes: strategies used to discover a word’s meaning and strategies to consolidate a word once it has been learnt. Then, each class encompasses grouping and sub-categories including determination strategies, social strategies, memory strategies, cognitive strategies and metacognitive strategies. Learners depend on themselves to find words meaning through guessing from either the context or from the grammatical context and relying on external resources such as dictionaries. They can also use social strategies as interacting with their classmates or other expert people. Besides, they can relate new words with existing knowledge in their lexicon, or they can use cognitive strategies using techniques such as keeping vocabulary notebooks and repetitions. The last strategy involves from the learners planning, monitoring their learning and evaluating their progress. To be aware of the different strategies enables both teachers and learners to be conscious of how learning is taking place. This facilitates it by the reliance on suitable strategies to each situation.

## **2. Method**

This research study is both quantitative and qualitative in that it relied on a quasi-experimental design including two intact groups tested before and after the treatment, which consisted of helping student develop their lexical competence through the use of mobiles and Cambridge authentic texts and tasks. In addition to this, a semi-

structured interview was conducted with a random sample from the same participants in order to supplement the findings obtained from the experiment.

### 3. Participants

The Department of Foreign Languages, Section of English consists of a population of about 1600 students grouped in five graduation levels from the first year to the master level. Third year population was chosen, specifically as most of them would end their studies with a BA degree, allowing them to teach in middle school. So, I was motivated as a researcher to see the effect of the treatment on a sample of 35 participant, an intact group already existing at the department, and was under my charge, so convenience sampling was the most suitable in that situation.

In addition to the experimental group, another one, taught by another teacher, was used as a control group (n=35). Another reason for such an experiment was to help and motivate those participants to rely on themselves through accessible techniques to develop their linguistic competence necessary for their future studies and careers. Moreover, a semi-structured interview was conducted with 6 participants from the experimental group in order the supplement the findings obtained from the experiment.

### 4. Data Gathering Tools

This research work relied on two main tools: pre-post tests and a semi-structured interview, which are quantitative and qualitative respectively. The triangulation method is considered as a powerful technique that allows the validation of the obtained data through more than one method. The tests were also both selected from Cambridge tasks to ensure validity.

### 5. Procedure

The experiment included some texts selected from some units from Cambridge, taking into account students topics of interest, to improve their vocabulary knowledge. First, the e- book was given to the participants, who were asked to download it in their mobiles. The lessons were based on both explicit and implicit vocabulary teaching. In each session, some Cambridge texts were exploited to make students infer meaning from those authentic readings, followed by consolidation through a variety of tasks designed by the researcher or chosen from the ones suggested with those texts. Each of them was asked to create a

journal in which he/she noted down remarks about his/her improvement. In addition to class activities, they were also asked to do others as homework. Each session ended with a conference with the teacher during which the participants talked freely about their strengths and weaknesses, the thing which helped the research to design the tasks for the next session.

## 6. Research Questions

The present study was an attempt to answer the following questions related to the topic of investigation.

1. Do third year students face problems in vocabulary knowledge?
2. Does the use of Mobile Assisted Learning help learners develop their lexical competence?
2. Does the use of Cambridge texts help learners develop their lexical competence?

## 7. Hypothesis

There will be a significant development in learners' lexical competence after their exposure to Cambridge texts through mobiles.

## 8. Analysis and Interpretation of the Results

Both quantitative and qualitative results will be presented respectively. First, statistical analysis and interpretation of the results obtained from descriptive and inferential statistics will be presented followed by those of the semi- structure interview.

### 8.1. Pre-Test Descriptive Statistics Experimental and Control Groups

Score	Experimental group		Control group	
	Frequency	Percentage	Frequency	percentage
0-5	9	25.71%	12	34.29%
6-10	18	51.43%	17	48.57%
11- 15	7	20%	6	17.14%
16-20	1	2.86%	00	00%
Total	35	100%	35	100%
Mean	4.35		4.21	
Sd Deviation	3.5		2.4	

**Table 1: Pre-test Descriptive Statistics Experimental and Control Groups**

Table 1 below displays the results recorded for both the experimental and control groups before the experiment. The purpose of the pre-test was to know the amount of vocabulary known by the participants indicating their level. It can be observed from the pre-test results that the highest percentage recorded concerns the scores between 6 and 10. This reveals a level less than the average, confirming that the participants are in need to develop their vocabulary and also shows that both groups have a similar vocabulary knowledge concentrated in the second level.

### 8.2. Post-test Descriptive Statistics of the Control and Experimental Groups

Score	Experimental group		Control group	
Rank	Frequency	Percentage	Frequency	percentage
0-5	1	2.86	3	8.57
6-10	9	25.71	23	65.71
11- 15	17	48.57	8	22.86
16-20	8	22.86	1	2.86
Total	35	100%	35	100%
Mean	6.75		4.78	
Sd Deviation	2.31		3.25	

**Table 2: Post-test Descriptive Statistics of the Control and Experimental Groups**

The post-test results of the experimental group with those of the control group as show in table 2 show that the highest percentage 48.57% of the experimental group participants developed their vocabulary knowledge ( from 11 to 15) compared to only 22.86 obtained by those of the control group. In addition, 22.86% from the first group got between 16 and 20 while no participant from the second was able to reach those scores. This reveals the success of the treatment.

### 8.3. Hypothesis Testing

After the calculation of the mean, the variance and standard variation manually, testing the hypothesis was performed with the following formula for independent t-test:

$$t_{N_1 + N_2 - 2} = \frac{(X_1 - X_2)\sqrt{(N_1 + N_2 - 2)N_1 N_2}}{\sqrt{[(N_1)S_1^2 + N_2 S_2^2](N_1 + N_2)}}$$

The overall results recorded are displayed in the table below:

**Table 3: Overall Statistical Results**

	Vocabulary			T-test	df	p-value
Group	number	Mean	St deviation	2.45	68	0.05
Experimental	35	6.75	2.31			
control	35	4.78	3.25			
Difference		1.97	-0.94			

As the observed value of the t- test (2.45) is greater than the critical value for 68 degrees of freedom ( 1. ), the null hypothesis is rejected in favour of the alternative hypothesis. This means that the treatment, which consisted of the use of mobile assisted learning supported by Cambridge texts, had positive effects on learners' lexical competence if compared with those of the control group.

#### 8.4. Interview Analysis

After the results obtained from statistical analysis, the semi-structured interview, conducted with six students from the same experimental sample, was transcribed and thematic content analysis was used including coding the whole transcription, labeling the themes found in it and defining them. According to the results, the interviewees expressed their satisfaction of the use of mobiles in an educational setting, dealing with authentic texts which enabled them to develop their lexical competence without which it is difficult to express themselves both orally and in a written form in the modules which require writing. All of them were motivated to acquire more phrasal verbs and found the activities in the material they were provided with very rich in vocabulary and in this kind of lexical words. Moreover, they reported that they had enjoyed the relaxing and motivating class atmosphere as it is learner centered and also enabled them to interact with their class mates. Furthermore, the respondents showed willingness to continue using Cambridge texts alone; this proves that this study not only gave them the opportunity to develop their vocabulary, but also encouraged them to be autonomous learners.

### **Conclusion and Implications**

The results obtained in this study revealed significant effects of the use of Cambridge text through mobiles in developing students' lexical competence. Not only did they benefit from developing their lexical competence, but the boost grew larger as that tool also enhanced their critical thinking through the different tasks during which students became more motivated to develop their lexical competence. Moreover, this encouraged them to be autonomous relying on their individual abilities and cooperation with all the group thanks to the meta-cognitive skills they gained enabling them to reflect on their linguistic abilities and willing to improve them. The most positive thing in this study is that the use of mobile assisted learning seemed to encourage reflective attitude allied to the willingness to learn, and in this way learners can develop intellectual responsibility, necessary for the individual's growth and leading to success in the knowledge society. The current study carries educational implications in that the findings provide teachers with additional vocabulary learning tools, mobiles and Cambridge audio-books, that are easily accessible in class; this can solve the problem of lack of language laboratories in our institution and can also engage students in gaining strategies enabling them to rely on themselves in developing not only lexical competence, but also other kinds of competences.

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