

**The Effectiveness of a Mobile Learning Strategy via
'WhatsApp in Developing EFL Prospective Teachers
Reading and Writing Skills**

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Blind Reviewed Journal

المستخلص

تهدف الدراسة الحالية إلى تنمية مهارات القراءة والكتابة باللغة الإنجليزية لدى الطلاب المعلمين. واشتملت مجموعه الدراسة على ٣٠ طالبا من طلاب الفرقة الثالثة قسم اللغة الانجليزية بكلية التربية جامعه المنوفيه ، خلال الفصل الدراسي الثاني للعام الدراسي ٢٠١٨-٢٠١٩ ، وتتكون العينة من مجموعه واحده (٣٠) طالبا. ولقد قام الباحث بإعداد قائمه مهارات مدمجه لمهارات القراءة والكتابة ومقياس مزدوج لمهارات القراءة والكتابة و إختبار لقياس مهارات القراءة والكتابة تم تطبيقه قبليا على مجموعه الدراسة . وبعد التدريس لمجموعة الدراسه باستخدام استراتيجيه التعلم المنقل القائم علي استخدام الواتس اب في تدريس مهارات القراءة والكتابة .تم تطبيق الاختبار بعديا على مجموعه الدراسة ولقد أظهرت النتائج ان استخدام التعلم المنقل القائم علي استخدام الواتس اب له تأثير ايجابي علي تنمية مهارات القراءة والكتابة لدي الطلاب المعلمين في الفرقة الثالثة بكلية التربية ، ولقد جاءت النتائج مؤكده ومدعمه للفروض. وهذا يعكس اثر الاستراتيجيه علي تنمية مهارات القراءة والكتابة لدى افراد مجموعه الدراسه ويجذب انتباه المعلمين وواضعي المناهج لاهمية. استراتيجيه التعلم المنقل القائم علي استخدام الواتس اب.

Abstract

The aim of this study is to investigate the effectiveness of the mobile learning strategy via WhatsApp in developing EFL reading and writing skills among third -year prospective teachers. The participants included (30) third -year prospective teachers at English department at the Faculty of Education, Menoufia University. They are assigned to one study group. To reach the goal of the study, the researcher prepared an integrated reading - writing skills checklist, an integrated reading –writing skills pre-test, an integrated reading–writing skills post-test, and an integrated reading –writing skills rubric. The mobile learning strategy via WhatsApp is designed to develop EFL reading skills and writing skills among third -year Prospective teachers at the Faculty of Education. Results show that mobile learning strategy via WhatsApp emphasized it is effective in improving third year prospective teachers’ reading and writing skills. Thus, the suggested app is effective in developing EFL reading and writing skills among third year prospective teachers.

Keywords: WhatsApp, Mobile learning Strategy, Reading and Writing skills, EFL Prospective Teachers.

1-Introduction

Language is the way people think about their community. Without language, humans may be able to communicate but not influence each other. The ultimate goal of teaching a foreign language is to enable learners to use it for communication. EFL Communication should include the four basic language skills of listening, speaking, reading and writing. These skills must be mastered in order to learn the language effectively. They are divided into oral skills and written skills written skills include reading and writing.

Reading is the most important foreign skill, particularly in cases where students have to read materials related to their discipline. People read specific information from a text, get specific information, or read for pleasure or for interest. In addition, reading is a purposeful process of identifying, interpreting and evaluating ideas in terms of the mental content or total awareness of the reader (Elkolly, 2006).

The use of a specific academic language is related closely to the literacy skills involved in the higher education context. According to the assignments, the student must analyze, interpret, and evaluate knowledge and have the ability to develop an argument, point to theory, draw conclusions, analyze, and criticize, to develop a central idea, process information, include facts, use the correct terms, and apply models (if possible), To follow a logical arrangement, use texts in its original form, cite references, talk about personal experiences, and give an opinion to provide personal interpretations of the facts

Chan (2005) suggests that learning is the result of social interaction between students and each other in cooperative learning activities. Activities may include participation using mobile devices as discussion forums which can be used as a means of sharing knowledge building. Consequently, the social network opens the way for new opportunities for interaction and cooperation between teachers and learners. This social network could be accomplished through mobile learning. In addition, with the increased use of mobile technology, why not provide students with the ability to study anytime, anywhere and at their convenience using mobile devices. Mobile learning is the delivery of learning, education or learning support on mobile phones, PDAs or tablets. Students in major universities and higher education institutions use text and instant message-based mobile communications (British Council, 2014)

The use of mobile devices in mobile learning is an important part of informal and non-traditional learning (Trentin& Repetto, 2013). This type has many different advantages, as Nusoura (2012) stated that the use of mobile learning in the field of education has some advantages as Learners can interact with each other and with practitioners instantly and directly, wherever time and place. Moreover, it is easier to accommodate more mobile devices in the classroom than desktop computers. and, for personal digital assistive devices, smartphones, and tablets that carry notes and e-books are lighter and easier to carry and handle than laptops or bags full of files and textbooks. Handwriting with smart device pens such as a stylus pen is much easier than using a keyboard and mouse to write. Mobile devices offer many new features and functions such as task sharing, video, and photo streaming; email; cut, copy and paste text operations; device scrolling around a group; sending work between the group with each other using infrared / Bluetooth; sending Receiving SMS / MMS; video conferencing; and internet browsing.

1.2. Context of The Problem

The current study's problem is based on the following sources:

1- the researcher'experience as an English language instructor, most students' written communication is bad and their scores are poor.Students can not write or read fluently or correctly. Students' writing and reading skills discover weakness in the skills.

2- Scanning relevant studies, which dealt with the level of learners EFL reading and writing skills discovered that there is a poverty in their writing and reading skills. This poverty is not only in the college stage but also in all stages of education, some related studies include Elkolly, (2006), Nassef (2004) and Nada (2010)

3- a pilot study is placed to ensure and the problem. The researcher prepares reading test (Appendix A).This test includes reading essay to read and answer nine questions concerning this passage to measure their reading subskills (literal comprehension skill ,critical comprehension skill and creative comprehension skill) and also prepares a writing test (Appendix A).This test includes a question about a certain topic and the group is asked to write an essay in respond to this question using specific reasons and examples to support their answers. This test is used to measure their writing subskills (mechanics of writing and content related skills). The

study group are 20 students of the third year enroll in the English section, Shebin El-Kom Faculty of Education, Menoufia University, during the second semester of the academic year 2014-2015. The results show weakness in their reading and writing skills. Their findings confirm that there is already a problem.

1.3. Statement of The Problem

The current study's problem is due to the weakness of the EFL reading and writing skills among third-year English section students at the faculty of Education, Menoufia University.

1.4. Questions of The Study

To fulfill the the study's aim, the following main question is as follows:

How can mobile learning via WhatsApp be effective in developing EFL reading and writing skills among education faculty students?

From this main question, the following sub-questions are derived:

- 1- What are the reading skills Faculty of Education, English perspectives teachers should have?
- 2- What are the writing skills Faculty of Education, English perspectives should have?
- 3- What are the features of mobile learning program that helps developing reading and writing skills among Education Faculty Students?
- 4- To what extent is mobile learning program effective in developing overall reading comprehension skills among Education Faculty Students?
- 5- To what extent is mobile learning program effective in developing reading comprehension skills?
 - a-Literal reading comprehension skills
 - b-Critical reading comprehension skills
 - c-Creative reading comprehension skills
- 6- To what extent is mobile learning program effective in developing overall writing skills among Education Faculty Students?
- 7- To what extent is mobile learning program effective in developing writing skills among Education Faculty Students?
 - a-Mechanics of writing

b- content-related skills

1.5. Aim of The Study

The current study aims at developing EFL prospective teachers reading skill(literal-critical-creative) and writing skills (mechanics-content related skills) through using mobile learning strategy via WhatsApp.

1.6. Importance of The Study

1. Help EFL students in developing their reading and writing skills in an easy and attractive manner. It could enable those learners to learn independently. Moreover; it motivates students for effective learning and interaction.
2. Help EFL instructors in offering a new strategy that can help them develop their students' reading and writing skills. In addition, it provides them with some effective devices to interact and communicate through social media between students and teachers.
3. Help Faculty/ staff members in providing a new strategy to be used by reading and writing teachers teaching writing and reading courses in TEFL.

1.7. Boarders of The Study

This study is delimited to

- 1- Third year students (N=30) at the Faculty of Education, Menoufia University.
- 2- Some reading comprehension skills.
 - Literal comprehension skills.
 - Critical comprehension skills.
 - Creative comprehension skills.
- 3- Some writing skills.
 - Mechanics of writing.
 - Content related skills.
- 4- The second semester of the academic year 2018-2019.

1.8. Definitions of Terms:

The main terms of the study are Reading skills, Writing skills, Mobile teaching and WhatsApp.

Reading Skill

Ibrahim (2007) defines reading comprehension as a complex skill that requires the mastery of several sub-skills including literal, inferential and critical comprehension skills.

The operational definition in this study refers to some reading skills, the proposed program ought to develop among third year prospective teachers. These skills include literal comprehension, critical comprehension and critical comprehension skill.

Writing Skill:

Gad (2020) defines “writing skill as skills that required for secondary school students for writing guided pieces in correct grammar, accurate punctuation, accurate spelling, correct layout, good range of sentences structures and present and organize thoughts in readable manner.

The operational definition in this study refers to some writing skills, the proposed program ought to develop among third year prospective teachers. These skills include mechanics of writing (punctuation, spelling and capitalization) and content related skills (using logical transitions, using grammatical correctly, using words correctly, writing with unity and coherence).

Mobile Learning

Definition of Michal (2019) defines “mobile learning as an umbrella term for the integration of mobile computing devices within teaching and learning” (p.361).

The operational definition in this study refers to mobile learning as strategy involved in a program through using WhatsApp to develop reading and writing skills among third year prospective teachers.

WhatsApp

Definition of Bouman (2013)

“WhatsApp is a free smartphone app available on smartphones like iPhone, Nokia, Blackberry, Symbian and Windows and allows users to send text messages, voice messages, photos, videos, sites, and contacts. All this can be done in a conversation with one individual and also in a group conversation” (p155).

2. Review of Literature

Reading skills

2.1- The Definition and importance of Reading:

Reading is a basic life skill. It is a corner stone for a child's success in school, and throughout life. Without the ability to read well, opportunities for personal fulfillment and job success inevitably will be lost. (The commission on reading) defines reading as the process of constructing

meaning from written texts. Skilled reading is constructive; learning to reason about written material using knowledge from everyday life and from disciplined fields of study. Skilled reading is fluent, mastery of basic processes to the point where they are automatic so that attention is freed for the analysis for meaning. Skilled reading is strategic: controlling one's reading in relation to one's purpose, the nature of the material, and whether one is comprehending and motivated to able to sustain attention and learning that written material can be interesting and informative.

Davis (2014) also states a variety of reasons for why reading is important.

- a. Reading is fundamental function in today's society.
- b. Reading is a vital skill in finding a good job.
- c. Reading is important because it develops mind.
- d. Reading helps in discovering new things.
- e. Reading develops the imagination. With reading a person can go anywhere in the world or even out of it.
- f. Reading is fundamental in developing a good self-image.
- g. Good reading skills improve spelling and expand the vocabulary.
- h. Reading is important because words – spoken and written are the building blocks of life.

2.3.6 Stages of Reading

Miller (1996) mentions certain Pedagogical stages of reading according to:

1. Pre- reading: this initial level of learning as described in bloom's taxonomy, involves recognizing and comprehending features of a text. As pre- reading tasks involve speaking, reading and listening.
2. Initial reading: initial reading tasks orient the learner to the text and activate the cognitive resources that are associated with learner's own expectations.
3. Rereading: in rereading, the learner is encouraged to engage in active L2production such as verbal or written analysis and argumentation. These activities require longer and more complex discourse. At this point, the language learner's critical thinking needs to interact with their general knowledge. Ideally, cultural context and the individual foreign language learner's own identity emerges as central to all acts of production.

2.3.8 Levels of Reading Comprehension Skill

Dacosta& Guiterrez (2020) mentioned that there are six types of comprehension :

Literal comprehension: Literal comprehension refers to an understanding of the straightforward meaning of the text, such as facts, vocabulary, dates, times, and locations. Questions of literal comprehension can be answered directly and explicitly from the text.

1. Reorganization: Reorganization is based on a literal understanding of the text; students must use information from various parts of the text and combine them for additional understanding.
2. Inference: Making inferences involves more than a literal understanding. An inference involves students combining their literal understanding of the text with their own knowledge and intuitions.
3. Prediction: Prediction involves students using both their understanding of the passage and their own knowledge of the topic and related matters in a systematic fashion to determine what might happen next or after a story ends.
4. Evaluation: Evaluation requires the learner to give a global or comprehensive judgment about some aspect of the text.
5. Personal response: Personal response requires readers to respond with their feelings for the text and the subject. The answers are not found in the text.

2.3.9 Assessment of EFL reading skills

Some examples of assessments that measure reading skills are:

1. Test of word reading efficiency.
2. Test of silent word reading fluency.
3. Gray oral reading (rate and accuracy scaled score combined).
4. AIM web progress monitoring measures.
5. Dynamic indicators of basic: early literacy skills.
6. Qualitative reading inventory.
7. Texas primary reading inventory.

The purpose of assessing for reading skills is to verify students learning how to personalize and interpret a variety of texts. The type of assessment needs to show that each student is processing and gaining meaning from various texts.

Section two: Writing skill

2.4.1 Definitions of Writing Skill

Mohammed (2010) defines writing as it is often referred to as verbal literacy remains paramount of success throughout life from the beginnings of education to the future employment of adults. Writing provides the foundation of education and the basic requirement of all academic disciplines. Technology has added a new type of literacy which is referred to as digital fluency. It has opened new approaches for designing courses in writing; moreover, the internet provides new applications that encourage individual expression and consistent community development.

2.4.2 Importance of Writing Skill

Mecabe and whittaker (2006) explain the importance of writing through a number of 1 points:

- 1- Understanding the universe and humans is to a great extent the result of our ways of inventing and explaining written texts.
- 2- With no writing, the literary mind can not think propably.
- 3- Writing motivates for progress in cognitive processes than any other skill .
- 4- During writing, thoughts are organized coherently that readers can relate them to each other to reach the overall meaning through the process of reading.
- 5- Writing is related with the organization of knowledge and the convervence of meaning.
- 6- Writing is an issue of process not only an issue of product.
- 7- Writing contains ways to generate ideas before presenting them to the readers and to arrange the ideas and language we produce.

2.4.3 Types of Writing

According to Technology (2016), there are five main types of writing:

- 1- Expository writing is where the author intends to inform, explain, describe or define their subject to you. This will be found in textbooks and online.
- 2- Descriptive writing uses a lot of great visual words to help the reader to see the person, the person or the place they are writing about.

- 3- Narrative writing is very common in novels, poetry, and biographies.
- 4- Persuasive writing takes on the opinion of the writing or issues the writer is writing for.
- 5- Creative writing is perhaps the greatest type of writing as Short stories poetry, novels, and plays.

Section Three: WhatsApp:

Importance of WhatsApp application:

1. WhatsApp activities allow for unique and continuous learning opportunities. Han & Ko Kin (2016) mention that while using what'sApp, students have the chance to individualize their learning, especially the language they have been working on. For example, they can monitor and check their language output for mistakes. Further students could practice their pronunciation while rehearsing for the recording; all while exposing themselves more to the language and building positive feelings towards the language.
2. WhatsApp provides students with motivation, free expression and enthusiasm for learning a foreign language. Rambe & Chipunza (2013) show that students feel WhatsApp gives them the possibility to express themselves freely in a non-restricted environment thus removing the low participation constraints characteristics of lectures. Also their research shows that students learn technical skills by sharing and searching information on WhatsApp. They could also use on other study related platforms like the blackboard environment.

Church and De Oliveria (2013) list a number of reasons why people adopted WhatsApp as their main communication channel rather than alternatives such as SMS or other social networks. Firstly, the low cost of the application combined with the ability to send an unlimited number of messages, Immediacy .and the desire to fell a part of the trend since their acquaintances has already adopted the application. In addition, the capacity to conduct an on- going conversation with many friends simultaneously, and The knitting together of a community of friends or family, finally there is sense of privacy relative to other social networks.

2.2.5 Features of WhatsApp Application

The WhatsApp platform has the following collaborative features (WhatsApp, 2010) cited at (Army, 2014, 114)

- 1- WhatsApp provides online students with the ability to exchange text messages, images, videos and voice notes to their social network group and contacts.
- 2- WhatsApp provides students or instructors with the ability to create a group (social network group) that supports the social interactions of up to 11 group members. Members can engage in discussion forums.
- 3- WhatsApp messenger provides the ability for students to send messages without limits. The application uses Wi- Fi to ensure continuous data transmissions a cross the WhatsApp mobile system.
- 4- Students using WhatsApp through a variety of mobile devices, such as smart phones, Galaxy tablet! And so on can message one another through texts, images, videos and so on.

Method

3.1. Participants of the study

Thirty prospective teachers enroll at third year of English section at the Faculty of Education, Menoufia University. Participants assigned only one study group. Those participants are selected because they have exposed to EFL various reading and writing martials during two previous academic years and are expected to have acceptable reading and writing skills as they were in a high stage of their teacher preparation program. In addition, they could teach real students in their student-teaching program and convey their EFL reading and writing skill to their pupils. Consequently, they actually need to develop their EFL reading and writing skills.

3.2. Design of the study

The current study adopts the descriptive analytical design in reviewing literature and previous studies. It also adopts one group experimental design where the only one group (study group) is pre-tested on their reading and writing skills, then the treatment is conducted by the researcher. The implementation of study takes place during the second semester of the year 2018/2019 for 13 weeks. One session per week (divided into three periods). each period takes 120 minutes. After the treatment, the study group is post-tested on their reading and writing skills

by using EFL integrated reading and writing test. Differences between the mean scores of the pretest and posttest are calculated by using t-test.

3.4. Instruments of The Study

Integrated reading-writing test checklist, an integrated reading-writing skills test (Two equivalent versions), an integrated reading-writing skills rubric, and a teacher's guide are designed by the researcher as instruments and materials of the study.

3.4.1. Integrated Reading-Writing Checklist

To design an integrated reading-writing skills test, a checklist of EFL reading and writing skills are prepared by the researcher. (Appendix C)

3.4.1.1. Aim of the EFL Integrated Reading-Writing Checklist

This checklist aims at determining the suitable levels of the target reading and writing skills and subskills include in each level .in the light of the determined levels and sub-skills, the test is designed.

3.4.1.2. Description of the EFL Integrated Reading-Writing Checklist

After reviewing literature and studies related to EFL reading and writing levels and skills, the researcher constructs the first form of the checklist taking into consideration that the checklist should include various subskills that suit the study group's level and age.

The checklist consists of five reading and writing levels: literal, critical, creative, mechanics and content related skills. Under each level, a number of EFL reading and writing subskills are included.

3.4.1.3. Checklist Validity

The preliminary version of the EFL reading and writing checklist is delivered to the Jurors who teach English as a foreign language (TEFL)Appendix (G) to validate it in terms of how to clear and suitable. Some unsuitable and irrelevant skills are omitted .some verbs are modified to be more specific and clear .the final version of the checklist is shown in Appendix (C).

3.4.2. The EFL integrated Reading-Writing Skills Test (Two equivalent versions)

The researcher designs the integrated reading-writing skills test in an attempt to identify the level of the study group's reading and writing skills before and after the treatment, the researcher designs two equivalent version

3.4.2.1. purpose of the Integrated Test:

The researcher prepares the first version of the integrated reading and writing test to determine the entry level of the third year prospective teachers in reading and writing skills before the treatment, while the second version of the test is used as a post-test to investigate the effectiveness of using mobile learning strategy via WhatsApp in developing the participants' EFL reading and writing skills.

3.4.2.2. Description of the Integrated test:

After reviewing literature and studies related to the kinds of questions that used to measure EFL reading and writing skills, the researcher constructs the test considering some points:

- The test covered the target five levels of the EFL reading and writing skills (literal, critical, creative, mechanics and content related skills).
- The test is suitable in length, linguistic difficulty, complexity and familiarity of the topics.

The test includes two parts. Part one includes one reading passage with 12 questions of various types to evaluate the participants' literal, critical and creative reading skills. Part two consists of four questions of various types to measure participants' mechanics and content related skills of the writing skill.

Closed as well as open-ended questions are used throughout the test. The specification of the integrated reading and writing test is shown in appendix (F)

3.4.2.3. Test Validity

To ensure the validity of the test, the test is submitted to a jury of nine members specialized in English language methodology and Curriculum (See Appendix G). Jury members are asked to judge the suitability of the test for what it is intended to measure, whether the skills are appropriate to the college students' level and the test difficulty level and length and the appropriateness of the test in measuring the intended skills. The jurors approve and recommend that some points should be omitted and modified. These points are modified and all the jurors' remarks are taken into consideration. According to the jury's remarks and modification, the researcher makes the final version of the test.

Some of the jurors' comments and remarks are as follows:

- Allotting time for the test.
- Adding /removing some words in the test.
- Decreasing the questions of the test. The test is too long.
- Giving instructions for the students about the test concerning unlimited words or as many words as they can write and requirements for each question of the test.

To test the equivalence of the two versions. Person's correlation coefficient ($R=0.75$) is calculated between the participants' scores on the two versions of the pilot administration. The two versions are statistically equivalent.

3.4.2.4. Test Reliability

To achieve the reliability of the test, the researcher administers The test twice to a group of (20) prospective teachers other than the study group. within two weeks' interval. The researcher uses the way (test re-test) to calculate the reliability of the test by comparing the students' scores in both the first and second administration using Pearson's Correlation Coefficient ratio. The two sets of scores are correlated. The reliability Coefficient for version 1 is ($R=0.81$) and for version 2($R=0.84$) and Cronbach's Alpha of the test is 0.804 that means the test is statistically reliable. Table (4) shows reliability statistics by calculating Cronbach's alpha of the scores of reading and writing skills test. and table (5) shows Person formula for Both Administrations.

Table (5): Person Formula for Both Administrations

Skill	r
overall reading skills	0.81
overall writing skills	0.84
Overall reading and writing skills	0.82

3.4.2.5. Statistical validity of the test.

The validity of the test is calculated through using internal consistency: by measuring correlation coefficient between dimensions' marks and the total marks of the test. The findings show that the test has a high validity and could be administered.

Table (6): Correlation coefficient between dimensions and the total marks

Reading and writing skills	literal comprehension	critical comprehension	creative comprehension	mechanics of writing	content related
Pearson Correlation	0.803**	0.816**	0.794**	0.802**	0.810**

3.4.2.6. Test Timing

To determine the appropriate time of the EFL integrated reading and writing test. The researcher records the time taken to answer the test during the pilot treatment . The time of the test was measured by calculating the sum of the time taken by each student and dividing by using the number of students using the following formula:

The time taken by all student

Students' number

So the time of the test was 85 minutes

3.4.2.7. Test administration

The pre-test is administered to the study group, on 24 January 2019 for 95 minutes (the time of the test) and the post test is administered on 26 April 2019 for 95 minutes.

3.4.2.8. Test Scoring

The test was corrected and scored using a rubric constructed by the researcher (appendix C).The researcher use the rubric to correct the 'participants' answers of the open-ended questions in the pre and posttest. The total score of the test is 85. Answers to closed questions are scored according to a model answer prepared by the researcher. The participants' responses to open-ended questions are scored on basis of the rubric.

3.4.3 The EFL Reading and Writing Rubric:

The rubric was prepared to assess the prospective teachers' responses to the open-ended questions included in the test. The rubric includes the five levels of reading and writing skills. Each level includes a number of subskills. The scale consists of four points :(4) exemplary, (3) proficient, (2) satisfactory, poor(1). The preliminary version of the EFL reading and writing rubric is submitted to a panel of Jurors who are specialists in teaching English as a foreign language to validate it in terms of clarity and suitability. They recommended that more definite words to be used so as to

be able to assess the participants' skills accurately. After making the recommended modifications, the final form of the rubric was shown in appendix H.

3.4.4. The Teacher's Guide:

The researcher revised official description of reading and writing course and its objectives for third year prospective teachers Appendix (J). and then constructed the teacher guide that can be used to develop reading and writing skills to prospective teachers. The content is gathered and prepared from several resources (EFL books, journals, magazines, and websites) by the researcher (Appendix I)

3.4.4.1. Aim and Objectives

The aim of the teacher guide was to help English third year prospective teachers at the faculty of education to develop their reading and writing skills through using mobile leaning strategy via whatsApp. The aim of the teacher guide was translated into many behavioral objectives.

By the end of these sessions, participants would be able to:

1. Identify the main ideas of a reading passage.
2. Form suggestions about a certain topic through its title.
3. Use correct capitalization in writing sentences and paragraphs.
4. Read a passage quickly to form an overall imprison.
5. Form suggestions about a certain topic through a picture.
6. Use correct punctuation in writing sentences and paragraphs.
7. Identify the main topic sentences and the relationship between these sentences.
8. Use correct spelling of words.
9. Identify spelling rules and exceptions.
10. Make reliable prediction about what is likely to be found in a text.
11. Recognize any picture and graphs in a reading passage and their significance.
12. Summarize the eventual points in reading passage.
13. Identify the correct place of the prepositions.

3.4.4.2. Content:

The material consists of two main parts

Part one

This part includes two sessions that represented orientation and preparation. It represented an introduction of EFL reading and writing skills

and the mobile learning strategy via WhatsApp. The participants have their printed book and workbook to use during the sessions the researcher prepares power point presentation as a main teaching aid used inside the class to demonstrate the content to the participants. The content contains texts, pictures, graphs, illustration and videos.

Part two

The remaining eleven sessions are used to develop reading and writing sub skills. The content of the teacher guide is shown in appendix (I). The reading texts were chosen from websites and modified by the researcher to be appropriate with the participants in terms of length and difficulty. The definite integrated sub skills of reading and writing skills have been developed in each session. Each session trained participants on specified skills of both reading and writing skills.

Results and Discussion

4.2.1. Hypothesis one

"There would be a statistically significant difference between the study group mean scores of the pre and post-tests of literal reading comprehension skills in favor of the post-test".

In order to investigate the validity of this hypothesis, data had been described, summarized, and presented statistically to calculate the arithmetic average (the mean), the deviation standard; and the minimum and maximum scores that the study participants achieved in both the pre and post-tests were calculated, as illustrated in the following table:

Table (11): Descriptive Statistics of the Scores of EFL study group in the pre-posttests.

skill	Program Application	No.	Mean	Std. Deviation	Minimum Sore	Maximum Sore
Literal comprehension	post	30	8.47	1.43	5	10
	pre	30	4.23	2.1	1	8

Table (11) shows that the mean value of the scores of the post-application of the Literal comprehension skill was (8.47) which is higher than the mean value of the scores in the pre-test that was (4.23). Table (11) shows an increase in the scores of the post-test than the scores of the pre-test in the Literal Comprehension Skill Test. It also shows the increasing consistency (deviation standard / the mean) in the scores of the post-

implementation than the pre-implementation due to a learning strategy based on a mobile application, the WhatsApp.

Table (12): T-Value for the mean Scores of the Two tests

	Paired Differences		t-test	D.f	Sig	η^2	effect size (d)	Practical significance
	Mean	Std. Deviation						
Literal comprehension	4.23	1.65	14.02	29	at (0.01)	0.87	5.21	educationally important

It is clear from the above table that the calculated value of "t" (14.02) was greater than the tabulated value of "t" at 29 scores of free and significant level "0.01"; which meant that the difference between the mean scores of the pre-post: tests had reached to the level of statistical significance.

Thus, the hypothesis was accepted which indicated that " There are statistically significant variations in the study group mean scores of the EFL Prospective Teachers in the pre –and post-tests of Literal Comprehension Test in favor of the post-test."

4.2.2. Hypothesis Two

"Statistically significant variations would be found in the study group mean scores of the pre and post-tests of critical reading comprehension skills in favor of the post-test".

In order to investigate the validity of this hypothesis, data had been described and summarized, and statistically presented to find the arithmetic average (the mean) and the deviation standard; minimum and maximum scores of pre and post-tests of the study group were calculated, as illustrated in the following table:

Table (13): Descriptive Data of the Scores of EFL study group in the pre-posttests.

Skill	implementation	N	Mean	Std. Deviation	Minimum	Maximum
Critical comprehension	post	30	7.33	2.11	2	9
	pre	30	3.4	2.21	1	8

Table (13) shows that the mean value of the post-test of the Critical reading comprehension skill was (7.33) which was higher than the arithmetic mean of the pre-test that was (3.4). Also, the table shows that there was an increase in the scores after implementing the learning strategy of critical reading comprehension than the scores of the pre-test of the Critical Comprehension skill test. It also shows the increasing consistency (Standard deviation / the mean) in the scores of the post-test than the pre-test due to a mobile learning strategy via WhatsApp.

The difference between the mean scores of the two tests as illustrated by the following table.

Table (14): The T-Value for the Difference between the Mean Scores of the Two tests

	Paired Differences		t-test	D.f	sig	η^2	effect size (d)	Practical significance
	Mean	Std. Deviation						
Critical comprehension	3.93	2.46	8.75	29	at (0.01)	0.73	3.25	educationally important

Table (14) shows that the calculated value of "t" (8.75) was higher than the value of "t" in the table which is at the score 29 of free and significant level (0.01); which meant that the difference between the mean scores of the pre-post: tests had reached to the level of statistical significance.

Thus, the hypothesis was accepted which indicated that " There are statistically significant differences between the study group mean scores of the pre –and post-tests EFL prospective teachers in the critical reading Comprehension skill test in favor of the post-test."

4.2.3. Hypothesis Three

"There would be a statistically significant difference between the study group mean scores of the pre and post-test of Creative reading comprehension skills in favor of the post-test".

In order to investigate the validity of this hypothesis, data had been described and summarized by calculating the arithmetic mean, the standard deviation; the minimum and maximum scores of the pre and post-tests of the study group were calculated, as illustrated in the following table:

Table (15): Descriptive Statistics of the Scores of EFL study group in the pre-posttests.

skill	implementation	N	Mean	Std. Deviation	Minimum	Maximum
Creative comprehension	post	30	13.53	3.42	3	17
	Pre	30	5.47	3.39	1	13

Table (15) shows that the value of the arithmetic mean score of the post-test of the Creative Comprehension skill was (13.53) which was higher than the arithmetic average (Mean) of the pre-test which was (5.47). As table (15) shows, there is a rise in the scores of the post-test than the scores of the pre-test of the Creative Comprehension skill test. It also shows the increasing homogeneity (=Std. Deviation / Mean) of scores of the posttest than the pre-test due to a mobile learning strategy via WhatsApp.

The difference between the mean scores of the two tests; as illustrated in the following table (16):

Table (16): The T-Value for the Difference between the Mean Scores of the Two tests

	Paired Differences		t-test	D.f	sig	η^2	effect size (d)	Practical significance
	Mean	Std. Deviation						
Creative comprehension	8.07	3.22	13.74	29	at (0.01)	0.87	5.1	educationally important

The previous table clears that the measured value of "t" (13.74) was bigger than the tabulated value of "t" at score (29) of free and important level "0.01"; this meant that the variation between the study group mean scores of the pre-post: tests is statistically significant.

Thus, the hypothesis was accepted which declared that "There are statistically significant differences between the study group mean scores on the pre post-tests of the creative reading Comprehension skill in favor of the post-test."

4.2.4. Hypothesis Four

"There would be statistically significant variation in the mean scores of the pre post-tests of overall reading skills in favor of the post-test".

In order to investigate the validity of this hypothesis, data had been described and summarized to calculate the arithmetic mean, the standard deviation; minimum and maximum of the scores of the study participants in both the pre and post-tests were calculated, as illustrated in the following table:

Table (17): Descriptive Statistics of the Scores of EFL study group in the pre-posttests

skill	implementation	N	Mean	Std. Deviation	Minimum	Maximum
Overall Reading	post	30	29.33	6.28	12	36
	pre	30	13.1	6.58	4	27

Table (17) explains that the value of the study group mean score of the post-test of the overall reading skill was **29.33** which was higher than the mean score of the pre-test which was (**13.1**). As table (17) shows, there is an increase in the scores of the post-test than the degrees of the pre-treatment of the Overall reading skills test. It also shows the increasing homogeneity (=Std. Deviation / Mean) of the scores of the post-test than the pre-test due to a mobile learning strategy via WhatsApp.

Table (18): Summary of the Scores of the pre and posttests.

Statistical measures	Post test	Pre- test
Minimum	12	4
Maximum	36	27
Lower Quartile (Q1)	25	6.75
Median	32	13.5
Upper Quartile (Q3)	34	17.5

It is obvious from the above drawn representation that there were statistical differences in the mean scores of the pre- post-test graphically. To examine the significance of the variations, t-value (Paired samples t- test) was used to clear the difference between the mean scores of the two tests; as shown in the coming table (19):

Table (19): The T-Value in the Mean Scores of the Two tests

	Paired Differences		t-test	D.f	sig	$^2\eta$	effect size (d)	Practical significance
	Mean	Std. Deviation						
Overall reading	16.23	5.82	15.27	29	at (0.01)	0.89	5.67	educationally important

It is obvious from the previous table that the measured value of "t" (15.27) was bigger than the tabulated value of "t" at score 29 of free and significant level "0.01"; thus the variation in the study group mean scores of the pre-post: tests was statistically significant.

To show the effect and educational significance of the results, the value of ETA square ($^2\eta$) had been measured as its value (ETA square) was 0.89. In the light of this, we can say that 89% of the differences between the grades of EFL prospective teachers in the overall reading skill could be due to teaching treatment and that there was a great effect and educational significance for using a mobile learning strategy via WhatsApp for improving and developing an overall reading skill.

Thus, the hypothesis was accepted which explained that "There are statistically significant variations in the study group mean scores in both the pre –and post-tests of overall Reading Skill Test in favor of the post-test."

4.2.5. Hypothesis Five

"There would be a significant statistical variation in the mean scores of the pre -post-test of the mechanics of the writing skill in favor of the post-test".

In order to investigate the validity of this hypothesis, data had been described and summarized through calculating the arithmetic average (Mean), the standard Deviation; minimum and maximum scores of the study participants in both the pre post-test were calculated, as shown in the following table:

Table (20): Descriptive Statistics of the Scores of EFL study group in the pre-posttests.

skill	implementation	N	Mean	Std. Deviation	Minimum	Maximum
Mechanics of writing	post	30	12.8	1.88	8	15
	pre	30	4.77	2.85	1	10

Table (20) shows that the study group mean score value of the post-implementation of the mechanics of writing skill (it was 12.8) which is higher than the mean score of the pre-implementation (it was 4.77). As shown in table (20), there is an increase in the scores of the post-implementation than the scores of the pre-test of the mechanics of the Writing Skill Test. It also shows the increasing consistency in (Deviation Standard / Mean) the scores of the post-test than the pre-test due to a mobile learning strategy via WhatsApp.

To examine the significance of the differences, t-value (Paired samples t-test) was used for the difference between the study group mean scores of the two tests; as illustrated by the following table (14):

Table (21): The T-Value of the differences in the Mean Scores of the Two tests

	Paired Differences		t-test	D.f	sig	η^2	effect size (d)	Practical significance
	Mean	Std. Deviation						
Mechanics of writing	8.03	2.39	18.45	29	at (0.01)	0.92	6.85	educationally Significant

The above table cleared that the calculated value of "t" (18.45) was greater than the value of "t" in the table at score **29** of free and significant level "0.01"; which meant that the variations in the mean scores of the pre-post: tests were statistically significant.

Thus, the hypothesis was accepted which explained that " There are statistically significant variations between the EFL study group mean grades on the pre –and post-tests of the Mechanics of writing skill in favor of the post-test."

4.2.6. hypothesis Six

"There would be a statistically significant difference between the study group mean scores of the pre post-tests of Content related skills in favor of the post-test".

In order to indicate the validity of this hypothesis, data had been described and summarized to calculate the mean score, the standard deviation; the minimum and maximum of the scores of the study participants in both the pre and post-test were calculated, as shown in the following table:

Table (22): Descriptive Statistics of the Scores of EFL of the study group in the pre-posttests

skill	implementation	N	Mean	Std. Deviation	Minimum	Maximum
Content related	post	30	22.63	3.59	10	28
	pre	30	9.27	6.14	1	24

Table (22) explains that the value of the arithmetic mean of the post-test of the content related skill was **22.63** which was higher than the arithmetic mean of the pre-test which was **9.27**. As shown in table 15, there was an increase in the score of the post test than the scores of the pre- test of the content skill related test. It also shows the increasing consistency. (Deviation Standard / Mean) of the scores of the posttest than the pre- test due to a mobile learning strategy.

The t-value (Paired samples t- test) was used to show the significance of the variations in the mean scores of the two tests; as illustrated by the following table (23):

Table (23): The T-Value of the Difference between the Mean Scores of the two tests

	Paired Differences		t-test	D.f	sig	² η	effect size (d)	Practical significance
	Mean	Std. Deviation						
Content related	13.37	6	12.21	29	at (0.01)	0.84	4.53	educationally significant

The previous table explains that the measured value of "t" (**12.21**) was higher than the value of "t" at score **29** of free and significant level

"0.01" in the table; which declares that the variation between the study group mean scores of the pre-post: tests was statistically significant.

Thus, the hypothesis was accepted which indicated that " There are statistically significant differences in the mean scores of EFL study group mean in the pre post-tests of the Content related skill in favor of the post-test."

4.2.7. hypothesis Seven

"There would be variations in the study group mean scores of the pre post-tests of the overall writing skills that are statistically significant in favor of the post-test".

In order to investigate the validity of this hypothesis, data had been described and summarized by calculating the mean score, the standard deviation, and the minimum and maximum scores of the study group mean in both the pre and post-test were calculated, as shown in the following table:

Table (24): Descriptive Statistics of the Scores of EFL the study group in the pre-posttests.

skill	implementation	N	Mean	Std. Deviation	Minimum	Maximum
Overall writing	post	30	35.43	4.97	18	43
	pre	30	14.03	8.34	2	34

Table (24) shows that the value of the mean score of the post-test of the overall writing skill was **35.43** which was higher than the mean score before implementing the test which was **14.03**. As table (24) shows, there was a rise in the scores of the post-test than the scores of the pre-test of the overall writing skill test. It also shows the increasing homogeneity (=Std. Deviation / Mean) of grades of the post-test than the pre-test due to a mobile learning strategy via WhatsApp.

By summarizing the scores of the two tests, the diagram showed the following:

Table (25): Summary of the Scores of the pre and posttests.

Statistical measures	Post test	Pre test
Minimum	18	2
Maximum	43	34
Lower Quartile (Q1)	32.75	6
Median	36	13.5
Upper Quartile (Q3)	38.5	20

It is obvious from the above drawn representation that there are statistical differences among the grades of pre- post-tests graphically. The significance of the differences is shown by using the t-value (Paired samples t-test) that is used for the variation among the mean grades of the two tests; as shown in the coming table (26):

Table (26): The T-Value for the Difference between the Mean Scores of the Two tests

	Paired Differences		t-test	D.f	sig	η^2	effect size (d)	Practical significance
	Mean	Std. Deviation						
Overall writing	21.4	7.21	16.25	29	at (0.01)	0.9	6.03	educationally significant

The previous table explains that the measured value of "t" (16.25) was bigger than the tabulated value of "t" at score 29 of freedom and significant level "0.01". This explains that the differences in the mean scores of the pre-post: tests had come up to the grade of statistical importance.

Thus, the hypothesis was accepted which indicated that "The mean scores of the EFL study group showed statistically significant variations in the pre –and post-tests of the overall writing skill in favor of the post-test."

4.3. Discussion of the Results

The results of the present study revealed that mobile learning via WhatsApp was effective in developing prospective teachers' reading and writing skill after implementing using mobile learning strategy' via WhatsApp. The integrated reading-writing post-test was carried out on the participants. The data obtained were then put into the t-test formula. After calculating the t-value for each hypothesis, it was put into the effect size

formula to find out the real effect that led to the improvement caused by mobile learning advantage WhatsApp. These findings are consistent with the findings of previous related studies.

Concerning the reading skills, the findings were consistent with Alfaleh (2005) and Nomass` studies (2013). Results of other studies agree with the results of the present study about reading sub-skill such as Rambe & Chipunza (2013). Regarding the writing skills, the findings were consistent with Ken worthy (2004), The GDC team (2016) and Burns (2014). There are other studies that were in agreement with the current study writing sub-skill such as Ybarra & Green (2003) and Alqadi (2013).

Mobile learning strategy via WhatsApp emphasized that it is effective in improving third-year prospective teachers` reading and writing skills. Thus, the mobile learning strategy via WhatsApp should be integrated into teaching reading and writing skills. The Findings of the current study are the result of the following:

1-: mobile learning via WhatsApp achieves collaboration among students who are geographically separated.as the study group reach each other`s thoughts and desires whenever they are without being shy or afraid of them .As if any member don`t know how to accomplish a certain activity ,he will learn and imitate other members and gain more experience in dealing with this activity through reading the study group answers and comments . In addition, they have a great opportunity to ask the other members privately to help them in any activity that is hard for them.

2-: mobile learning via WhatsApp improves sensing and integration of information.as the group study see what others think about and their way to answer a special activity so, they combine what they think of and what others think as different entries for the same activity.

3-: WhatsApp activities allowed for unique and versatile learning opportunities: the study group are able to expose themselves more to the language and build positive feelings towards the language .as the study group receive positive comments and feedback from their instructor and from the other members of the study group.

4-: WhatsApp gave students the possibility to express themselves freely in a non-restricted environment and to practice the foreign language whether in written or spoken form. As some students are afraid from community and have a social fear of others but through using WhatsApp

they overcome their fears and have a great chance to express themselves, write and read freely.

7- Mobile learning via WhatsApp doesn't need face interactions. Unlike many classroom language learning contexts, which need the teacher to be physically present, hence learning takes place outside the class where the teacher is not there. As it's possible for the instructor to be contacted at any time especially the instructors in the universities that have tight schedules

In brief, mobile learning via WhatsApp emphasized that it is effective in improving the prospective teachers' reading and writing skills. The strategy employed showed a significant improvement in reading and writing skills. This result might be due to different factors! Student's motivation through WhatsApp and the supportive role of the researcher.

Conclusion

Mobile learning strategy via whgatsapp emphasized its effetviness in improving reading and writing skills for third year prospective teachers .and Whatsapp application enhanced its importance in learning and teaching up on college levels.

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