Computer Mediated Communication and Vocabulary Learning: The Case of Facebook

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Abstract
Nowadays, Computer-Mediated Communication (CMC) becomes the most dominant mode of communication as computers, smartphones, and tablets are worldwide used devices for communication especially with the internet facilities through different platforms. However, despite the spread of computer-mediated communication modes and devices, they were mainly used for entertainment purposes. This research intends to investigate Facebook use as an environment for learning vocabulary. In addition, it aims at developing, within Facebook users, the possible vocabulary learning strategies that would enhance their English vocabulary learning. Therefore, two research tools were used with a group of Facebook users: a questionnaire and an experiment where a facebook group named “Vocabulary Acquisition” was created to be involved in certain vocabulary learning strategies. A pretest and a posttest were used to evaluate the effects of this experiment on English vocabulary learning. The obtained results confirmed that the participants under investigation have significantly improved their vocabulary learning via Facebook. In addition, vocabulary learning has been greatly affected by certain training in some strategies. Hence, Facebook proved to be not only a source of entertainment but also a useful informal learning tool of English vocabulary.

Keywords: computer-mediated communication, Facebook, vocabulary learning
Introduction

English, as an international language, plays an increasingly crucial role in the world today. Simultaneously, there is a growing spread of technology and internet use among most people—young, adults, and even old. In recent years, Computer-Mediated Communication (CMC) especially Facebook, has been widely accepted as an alternative to face to face communications. According to Herring (2014), Computer-Mediated Communication (CMC) was originally designed in the United States in the late 1960’s to facilitate the transfer of computer programs and information between users via the networks. CMC spearheaded by the commercial Internet service providers in the 1990’s; “Communication has become easier than ever with a high-speed internet connection and other mobile technologies” (Şahin, 2009, p. 116). The internet has overcome problems of distance communication by providing different types of communication methods (Mehri & Izadpanah, 2017, p. 979). The mid to late 1990s was described as the “golden age” for CMC (Herring, 2014).

CMC is a type of communication which allows people to combine numerous media in a single message when conversing, and it is an interactive channel which allows users to be active and engage in two-way communication (Ean, 2011, p.3). Three main characteristics were attributed to computer mediated communication. First, Highly Interactive Communication as Abd El-Basit&Auter (2009, p. 3) argue with the introduction of computer, internet, and digital mobile devices, and with the interaction between these technological advancement, communication evolved and became more interactive than old forms of communication. Goran (2011, pp. 3-4) mentioned that CMC combines the written form of communication with the speed of delivery.

Second, CMC is a multi-way communication as online communication will include at least two participants, more precisely, at least two networking computers. Third, Synchronous or Asynchronous Communication features are related to the communication practice time. Synchronous learning refers to situations where participants interact in learning tasks at an equivalent time using CMC tools such as group chats in web, video or voice chats, instant text chat. In contrast to synchronous learning, Asynchronous method refers to situations where participants interact in learning activities at separate and freelance times (Salloum, 2011 cited in Mehri & Izadpanah 2017, p. 978). CMC provides new opportunities for language learning that cannot be found in traditional classrooms (Mahdi 2014, p. 9). The users are more interactive and produce more new words in synchronous communications than in asynchronous ones (Pérez, 2003, p. 415).

The task of vocabulary acquisition is related to see the distinction between knowing a word and using it. Acquiring vocabulary should focus on the retention
of words and their usage in the right contexts. Ellis (1994, p. 24) suggests that the knowledge aspect requires the employment of conscious mechanisms of learning while the skill aspect involves implicit learning. Besides, the learner must establish relationships between form, meaning, and function, both in utterances and intexts; they must establish the elaborate knowledge about individual words so they can be used communicatively; and they must establish an associational network of words (Easterbrook, 2013, p. 115). He adds that in the case of the English language, it is necessary for the learner to know the meaning of the isolated words (free morphemes) and bound ones.

In view of the literature on vocabulary acquisition, three important processes may lead to a word being remembered. These comprise noticing, retrieval and creative or generative use. First, as Nation (2001, p. 64) explains that in the noticing process, attention is given to an item. This means that learners need to notice the word and to be aware of it as a useful language item. This process also occurs when learners look up a word in a dictionary, study a word, guess from context, and been explained to them. Second, the retrieval process may lead a word to be remembered. According to Baddeley (1990, p. 156), “A word may be noticed and its meaning comprehended in the textual input to the task. If that word is subsequently retrieved during the task, then, the memory of that word will be strengthened”. He explains that retrieval can be receptive or productive. Receptive retrieval involves perceiving the form and having to retrieve its meaning when the word is met, in listening or reading. Productive retrieval involves wishing to communicate the meaning of the word and having to retrieve its spoken or written form. As far as repetition is concerned, Baddeley (1990, p. 156) clarifies that “It is not simply repetition which is important, but the repeated opportunity to retrieve the item which is to be learned”. Then, Nation (2001) sees generative use as the third major process in word remembering. Certain studies, (Joe, 1995; Ellis, 1995) show that generative processing is an important factor in language vocabulary learning. Nation (2001, p. 68) states that “Generative processing occurs when previously met words are subsequently met or used in ways that differ from the previous meeting with the word”. Then, the generative uses of vocabulary are those where meeting the word in new context forces learners to reconceptualize the meaning that they previously had for that word.

Zimmerman (1997, p. 5) emphasizes that learning vocabulary is central to language learning as it gives a sense of command towards the language being learnt. He claims that lack of vocabulary knowledge will result in lack of meaningful communication. Schmitt (1997, p. 207-208) categorized vocabulary learning strategies into six main groups with 58 individual strategies in total:

1. Discovery determination Strategies: analyze part of speech, affixes and roots, check for L1 cognate, analyze pictures and gestures, guess from textual context, bilingual dictionary, monolingual dictionary, word lists, flashcards.
2. Discovery social Strategies: ask teacher for L1 translation, ask teacher for paraphrase or synonym of new word, ask teacher for a sentence including new word, ask classmates for meaning, discover new meaning through group work activity.

3. Consolidating social strategies: study and practice meaning in a group, teacher checks students’ flashcards or word lists for accuracy, interact with native speakers.

4. Consolidating social strategies: study word with a pictorial representation of its meaning, image word’s meaning, connect word to a personal experience, associate the word with its coordinates, connect the word to its synonyms and antonyms, use semantic maps, use ‘scales’ for gradable adjectives, peg word method, loci method, group words together: to study them spatially on page, use new word in sentences, group words together within a storyline, study word spelling, study sound of word, say word aloud, image of word form, underline initial letter, configuration, use keyword method, affixes and roots/parts of speech, paraphrase word meaning, use cognates in study, learn words of an idiom together, use physical action, use semantic feature grids.

5. Consolidating cognitive strategies: verbal/written repetition, word lists, flash cards, note-taking, use vocabulary section in textbooks, listen to tape of word lists, put L2 labels on physical objects, keep vocabulary notebook.

6. Consolidating metacognitive strategies use L2 media, testing oneself with word tests, use spaced word practice, skip/pass new word, and continue to study word over time.

Espinosa (2015) sees that using Facebook to reinforce classroom study is connected with the technological innovations and the new trends in teaching/learning. Besides, this social networking site can be beneficial in learning English. For instance, Facebook is “a social networking site and online communication tool that allows users to construct a public or private profile in order to connect and interact with people who are part of their extended social network (Espinosa, 2015, p. 2206).” In his article, he examined the limitations and the benefits of using Facebook as a learning tool and provides strategies to teachers for a better use of Facebook for academic purposes. Similarly, Bailey, Park, Haji (2017, p.12-13) clarify that integrating social network platforms like Facebook with language learning programs can help in providing an affordable and authentic environment to practice L2 communication as students are provided new channels to use the target language outside the classroom. They see that this is important especially in countries where English is a foreign language. They explain that Social Network Services are persistent because online communication is durable, thus allowing visibility by potential audiences, regardless of the constraints of time or space.
However, Kabilan & Zahar (2016, p. 217) explain that currently, not many research have been done on the use of Facebook for teaching and learning of languages. They add that in terms of empirical studies on Facebook and language proficiency and competency, their literature review finds that no studies have been conducted to determine to what extent Facebook contributes, or otherwise, to learners’ actual improvement of language knowledge and skills. In their study, the focus was given to vocabulary knowledge. Likewise, Bailey, Park, Haji (2017, p.15) confirm that there is still a gap in our understanding of how Facebook can be used in L2 education.

**Statement of the Problem**

Computer-mediated communication means are everywhere, and approximately everyone is using them. For instance, Facebook is the most used means of communication all over the world. Nowadays, English is an international language; it is widely spread with technological innovations and innovative ways of communication. However, in Algeria, people still do have problems in speaking English because of its status as a foreign language; this leads to the lack of vocabulary repertoire in using this language. Then, in the age of computer mediated communication precisely the facebook that is used mainly as a means of entertainment and communication, Can it have a role in learning English vocabulary?

**Research Questions**

This study attempts to answer the following research questions:

1. Is it feasible to use facebook for learning English Vocabulary?

2. Would the training on certain strategies on the Facebook improve EFL learners’ vocabulary acquisition?

**Research Aims**

This research aims at developing, within Facebook users, the possible vocabulary learning strategies that would enhance their English vocabulary learning. Furthermore, the research seeks to makeshift in Facebook use from only an entertainment tool to an educational one.

**Hypotheses**

1. If EFL learners use Facebook as a tool for learning English, then they would likely enhance their vocabulary acquisition in English.

2. If EFL learners are involved in acquiring new vocabulary through certain selected strategies via Facebook, then they would improve their vocabulary acquisition.
Method

In order to answer the research inquiry, a questionnaire and an experimental study will be used as research tools. The questionnaire was administered to participants at the very beginning in order to collect information about their Facebook use in relation to English vocabulary learning. While the experimental study with pre and post-tests was designed to investigate the efficacy of certain vocabulary learning strategies accounting for Schmitt’s taxonomy.

Participants

Twenty participants were involved in the study (9 males and 11 females). Their age ranges from 18 to 37 years old. Their native language is Arabic and all of them had prior formal instruction in English, generally at the middle school, secondary school and university. Further, they differ in occupations, social status, and educational level. The participants were informed of the purpose and procedures of the research. They also knew that their test scores and their identity would remain confidential. They were asked to answer a questionnaire, before being involved in the pre-test to check their vocabulary.

Research Methodology

The first step of this experimental study was creating an online communication group, named “Vocabulary Acquisition,” on the Facebook site in which the treatment procedure has taken place after the participants joined the group. Moreover, we promised them that their identity, as well as, their scores will remain confidential. Thus, we coded the participants’ names as follows (#1, #2, #3 …). This experimental work consists of four parts: (a) a self-reported questionnaire. (b) Take a pre-test. (c) Participate, or at least, take a look on the posts daily. (d) Take a post-test (the post-test is devoted to participants who would complete the entire study).

A questionnaire (Appendix 1) was administered before involving the participants in the experiment. It aimed at providing an understanding of the participants’ experiences of using Facebook in addition to their English proficiency level. The participants received the questionnaire through a private message, and they were asked to fill it in and send it back. Before distributing the questionnaires, the participants were told that they should answer all the questions as clearly as possible. It is divided into three sections. Section one, personal information, includes four questions that center around the personal information of the participants; age, level, the period of participating EFL, and the need for using English in daily life. Moreover, section two, vocabulary acquisition, deal with vocabulary learning, and the participants’ knowledge about the process of acquisition, four questions are devoted to this section. Further, section three, Facebook use, with four questions, likewise, aimed at collecting information about the participants’ background within the platform of Facebook.
A test was administered to obtain data about the learners’ use of given strategies when facing new vocabulary. The type of test opted for is “the pre-test + the post-test.” They were identical, held at a given interval (10 days). The first took place before the participants were exposed to some selected posts on Facebook (X) and the second after they have encountered them. Twenty participants have participated in both O1 and O2. These two equal tests were meant to measure the degree of the impact of (X) on the participants’ acquisition of new words, which were based on a free choice.

**Pre-Test Description**

The test was designed in an attempt to examine the subjects’ ability to use a selected number of strategies when facing a new vocabulary. It compromises five (05) tasks wherein each one assesses a given strategy according to Schmitt’s taxonomy of vocabulary learning strategies. The elicitation and the responses modes’ are generally through writing. However, one task takes the shape of a visual material which is pictures.

The test was composed of five (05) tasks: translation to Arabic, identification of words, putting the words in appropriate sentences, giving the definition of words and finding out the keywords from the definitions (Appendix 2). The tests have been scored on 20 points wherein the first, and the fourth tasks receive 03 grades, the second and the third tasks are on 05 grades, and the last task takes 04 grades.

**Experiment Design**

The procedure of data collection within the main experiment was conducted from the Facebook platform. Since the main objective of this study is to investigate the impact of Computer-Mediated Communication on vocabulary acquisition, a ten-day instructional material was designed with major emphasis on vocabulary acquisition strategies. Each day was dedicated to acquire a certain lexical item and develop a particular vocabulary learning strategy within the participants involved in the experiment. Here is the design of the experiment:

**Day 1:** The experiment started with mind mapping technique to develop the cognitive strategy within the participants using the word ‘surfing’ as a target item.

**Day 2:** The cognitive strategies were still targeted through the technique of written repetition of the word ‘portion.’

**Day 3:** The determination strategy through the technique of the analysis of affixes and roots for example “Orthodontist”, The post offered to the learners were divided into two parts: 1) definition of prefixes as a part of speech, and 2) a table containing some prefixes and their meanings as: ‘mis’, ‘Ortho’, ‘over’, ‘co’, and ‘di’.
Day 4: The determination strategies through two Facebook posts focusing on brainstorming technique.

Day 5: The social strategy of vocabulary acquisition is presented through group working technique through Facebook. To improve their sense of teamwork, they were required to work in pairs and predict the differences between two posted pictures.

Day 6: The social strategies are still highlighted, and a Facebook post covered the technique of interacting with a native speaker through an audio-visual aid.

Day 7: The metacognitive strategy was proposed referring to the technique of using the English language media as a method to acquire new vocabulary.

Day 8: The metacognitive strategies are still covered. The participants were asked to test themselves through a word matching list.

Day 9: The memory strategies were proposed through the keyword technique that requires creating a linkage between the target language ('English) and the first language (Arabic). For example, the word “Algebra”

Day 10: The memory strategies were still targeted through associating a word with its synonyms and antonyms. For example, post on the word ‘wise’.

Results

Questionnaire Results

In the first section dealing with general information, 55% of the participants are between 18-24 years old, 20% between 26-28 years old, and only 15% were between 30-37 years old as shown in the following table.

Table 1. Participants’ Age Range

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>20</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>27</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>28</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>32</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>37</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>
Thus the means of the participants’ age is 19.5 years old. Sixty-five percent have experience of using English from 7 to 12 years. The others 35% are engaged with English as a foreign language for a period extending from 13 to 25 years as demonstrated in the following table.

Table 2. Participants’ Experience in Using English

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>25 %</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>10 %</td>
</tr>
<tr>
<td>12</td>
<td>5</td>
<td>25 %</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>18</td>
<td>2</td>
<td>10 %</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100 %</td>
</tr>
</tbody>
</table>

The mean of the English participating period is 10.3. In considering their level in English, 40% of the participants see themselves have an intermediate level. Whereas 35% believe that they are beginners, and 30% have an advanced level. They use English for different reasons as 50% for personal entertainments, 40% for academic purposes, and only 10% for occupational reasons.

The second section on vocabulary acquisition considers participants’ opinions towards the importance of acquiring new vocabulary in English, whether they check new vocabulary meaning, which strategy they use and whether they use the newly acquired vocabulary. 55% of the participants under investigation believed that acquiring new vocabulary is important in developing their level in English. 35% see that it is very important, and only 10% see it as unimportant process. Besides, not all participants check the meaning of vocabulary whenever they face a new word; only 75% do so while 25% do not. For those who check the meaning of the vocabulary, the great majority of the participants (80%) use “guessing from the context” as a strategy to check new vocabulary, 13.4% check the dictionary, and only 6.6% ask the help of someone as shown in the following table.

Table 3. Strategies Used in Checking New Vocabulary Meaning

<table>
<thead>
<tr>
<th>Strategy</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check dictionary</td>
<td>2</td>
<td>13.4%</td>
</tr>
<tr>
<td>Translation to L1 or L2</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Guess from context</td>
<td>12</td>
<td>80%</td>
</tr>
<tr>
<td>Ask someone</td>
<td>1</td>
<td>6.6%</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100%</td>
</tr>
</tbody>
</table>

In the third section on Facebook use, considering the daily time spent on Facebook by participants, 60% of them spend from 1 to 3 hours per day and 30%
spent more than 3 hours daily, and 10% less than 1 hour a day. All the participants (100%) do join groups and like pages that are related to English language learning. All participants use English when chatting on the Facebook platform to a different degree. Moreover, 40% of participants always use English in chatting with their friends while 30% said they sometimes use it in their chatting. Yet, 30% rarely use it. When participants were asked about the extent of the effect of English chatting on their improvements on the English language, 80% opt for “very much”, and the other 20% for “to some extent.”

**Pre-Test Results**

The test has compromised different types of activities as explained in the section of test description; the time allocated for the test was 45 minutes. The vocabulary strategies used that were tested in acquiring certain items were: the cognitive, metacognitive, determination, memory, and social strategies.

The total score of all the participants in the pre-test was 144/400, that represented 36%. It further indicated that no participant was able to take the full mark in any activity, their best performance was in the third activity, that employed the memory strategy, their total score was 51/100 which represented 35.4% of all the correct responses. However, their worst reply was in the fourth activity, that employed the social strategy, with the score 15/60 that represented 10% of all the correct responses. In the first activity that depends on the cognitive strategy, namely the translation technique, only one participant (5%) got the best mark (2.25/3), 11 of them (55%) get (1 – 1.5/3), and 8 (40%) of the participants scored (0 – 0.5/3). The total scores of this first activity were 17, 25/60 (12%), and its means was 0.9.

In the second activity that employs the determination strategy the best mark was 2 out of 5 marks, only 3 participants (15%) were able to obtain this mark, and 9 of them (45%) scored either 2 or 2.25/5 and the rest three of them (15%) obtained 1.5/5, the total score of the activity was 26.5/100 which represented 18.4% of all the correct answers with a means estimated by 1.3.

In the third activity that employed the memory strategy to increase the learners’ acquisition was the excellent scored activity with 51 points out of 100 points. The total score of the participants was divided on their number to get the means that was 2.55; in this activity, all the participants were able to get at least 2 marks out of 5. Thus 11 of them, i.e., 55% got 3/5, and the other 45% got 2/5.

Moreover, in the fourth activity focusing on the social strategy represented the least scored activity with total of 15 marks out of 60 and a means considered by 0.75. The best mark in this activity was 1/3 obtained by 15 participants (75%) while the rest five of them (25%) got 0/3. Finally, the fifth activity dealing with the metacognitive activity had a total score of 34/80 that represented 23.6% participants obtained either 1 or 2 /4. Thus, 14 (70%) of them got 2/4, and the other 6 (30%) got only 1/4.
Speaking about the vocabulary acquisition strategies, we can conclude from the pre-test analysis that the most already developed strategy within the participants in the memory strategy with means 2.55. However, the least developed one is a social strategy with a means estimated by 0.75.

**Post-Test Results**

Helmensti (2017) explains that at the end of the treatment, the participants fill in the post-test that measures their ability to apply knowledge or perform a specific task learned in the treatment courses. Comparing participants’ post-test results to their pre-test results enables researchers to see whether the treatment was successful in increasing participant knowledge and skills of the training content.

The same pre-test was used at the end of the study as a post-test to assess the students’ achievement in the acquisition of the new vocabulary items through certain selected strategies. The objective of the post-test was to assess the effects of the instructional methods (vocabulary acquisition strategies) on learners’ achievement.

The post-test was evaluated according to the same criteria and grading of the pre-test. Each participant’s answer is evaluated separately (the best score was 20), and all the participants’ scores were added together to make the total score of the group. Further, all the participants’ means were calculated through the total means divided by the number of participants.

The results of the participants in the post-test, unlike the pre-test, were above the average in total scores and means. The participants obtained 233.5 /400 scores which represent 58.38% of the results with 12.02 as a means. It contrasted to the pre-test as many participants were able to get the full mark in some activities, mainly the third one. Getting a full mark indicated that the participant developed the adopted vocabulary acquisition strategy and also acquired the lexical item used within that strategy.

The memory strategy employed in the third activity and after the treatment procedure was still in the lead with the score 75/100, which represented 32% of all the correct answers. Hence, 6 participants representing (30%) were able to gain the full mark (3/3). Half of them (50%) get (2/3). However the other 4 (20%) had no improvements at all and got the same mark of the pre-test (1 – 1.5 /3).

Another activity that presented evident and major improvements was the fourth activity that dealt with the social strategy. Previously, in the pre-test, participants obtained 15/60 marks which represented (10%). However, after the treatment procedures they get total scores of 47/60 which represented (20%) of all the correct answers. Thus, 15 participants (75%) were able to get the best mark which is 3/3, 2 of them (10%) got 1/3 whereas the rest 3 participants (15%) were not able to get any mark.
The cognitive strategy, used in the first activity, had likewise shown slight improvements as far as the total score (32.25/60) and the means (1.6), half of them (50%) got marks restricted between 2 and 2.5/3 and the rest 50% got marks placed between 0.25 and 1.25.

Activity five that dealt with the metacognitive strategy also secured some developments within the participants. Thus four participants (20%) were able to get the full mark 5/5, 15% get 4/5 marks, 25% get 3/5 marks, 30% get 2/5 marks, and only 10% got 1 mark. However, not all the strategies were developed. The determination strategy, illustrated in the second activity, did not grow within all the participants only one of them (5%) got the best mark that was 3/5.

We can conclude from the post-test results that the treatment procedures had a positive impact on most strategies adopted in the experiment, especially, the memory strategy with a means estimated by 3.75. However, the undeveloped strategy is the determination strategy with a means estimated by 1.4.

Discussion

Comparative Evaluation of Results

The results of the pre-test and post-test were analyzed and used to assess the differences in word acquisition, through certain strategies, before and after the treatment procedure. Both tests' scores were calculated and compared to examine which vocabulary acquisition strategies were best developed and to determine the most acquired words and the least acquired ones. The following table illustrates the differences between the pre-test and post-test means:

<table>
<thead>
<tr>
<th>Activities</th>
<th>Strategy used</th>
<th>The pre-test mean</th>
<th>The post-test mean</th>
<th>Dif</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>Cognitive</td>
<td>0.80</td>
<td>1.60</td>
<td>0.80</td>
</tr>
<tr>
<td>Activity 2</td>
<td>Determination</td>
<td>1.40</td>
<td>1.40</td>
<td>0.00</td>
</tr>
<tr>
<td>Activity 3</td>
<td>Memory</td>
<td>2.55</td>
<td>3.75</td>
<td>1.20</td>
</tr>
<tr>
<td>Activity 4</td>
<td>Social</td>
<td>0.75</td>
<td>2.35</td>
<td>1.60</td>
</tr>
<tr>
<td>Activity 5</td>
<td>Metacognitive</td>
<td>1.70</td>
<td>2.95</td>
<td>1.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>7.25</strong></td>
<td><strong>12.05</strong></td>
<td><strong>4.80</strong></td>
</tr>
</tbody>
</table>

There are statistically significant differences between the performance of the participants in the pre-test and post-test in most activities. As can be seen from the above table, the use of “Memory strategy” for learning the new word’s meaning is the most frequently developed one in both tests, the pre-test (2.55) and the post-test (3.75), which means that the participants already use this strategy. However, at the end of the treatment courses, it was not the most developed strategy within the participants. Nevertheless, “Social Strategy,” which ranked the lowest means in frequency of strategy use in the pre-test (0.75), was the most developed strategy in the post-test results (2.35) with difference in means estimated by (1.6). The table further demonstrates that there is a
multiplied improvement as far as the “Cognitive strategy” concerned. This is indicated by means of the pre-test that increased from (0.8) and doubled to become (1.6). Though, no participant chooses translation as a cognitive strategy, to check the meaning of new vocabulary. Moreover, the “Metacognitive strategy” had considerable improvements likewise with development estimated by (1.25). As already mentioned, all the strategies had differentiated improvement after the analysis of the post-test. Yet, the “Determination strategy” was the only one that had no improvements at all and its means kept steady in both tests (1.4). Though, the questionnaire’s analysis has shown, in Q 7 that 80% of the participants use guessing from the context, which is a determination strategy, whenever they face a new lexical item. Thus, the treatment courses have no effects on the participants as far as the “Determination strategy” concerned.

Previous studies have dealt with the relation between CMC, Facebook, and learning. For instance, Mahdi (2014) concludes his article by highlighting that further research is necessary to investigate how language teachers can integrate CMC environments and organize suitable tasks; this was highly considered in our study. The major limitation of his reviews is that he examined the uses of CMC in general education, not language learning. Junco (2015) finds out that some researches have shown a negative relation between Facebook use and academic performance; whereas more recent researches suggest the opposite. Indeed, the results of our study showed the positive effect of Facebook on learning whenever the experiment is preplanned and well organized with specific purposes for every activity provided by the researcher. Similarly, Kabilan, Norlida & Zainol Abidin (2010) conducted a study which proved that learning English in Facebook is feasible since Facebook features facilitate and produce effectual and meaningful learning of English within an online community of English language learners.

Moreover, some studies focused on the use of Facebook as a learning tool of English in general with no specific reference to vocabulary (Kabilan et al. 2010, Araya & Espinoza, 2015), others focus on collaboration (Pour & Tahriri, 2016). Some research focuses on the role of Facebook in enhancing certain language skills writing (Yunus and Salehi, 2012; Bani-Hani, Al-Sobh & Abu-Melhim, 2014), reading (Kasuma and Tan, 2019), speaking (Dweikat. 2016). Nevertheless, in their article “Enhancing students’ vocabulary knowledge using the Facebook environment,” Kabilan and Zahar (2016) highlight that only few research have been conducted to investigate the use of Facebook for teaching and learning of languages.

In accordance with the earlier studies, this study showed that Facebook can be used as a learning tool with the facilities of synchronous and asynchronous communication characteristics and the facility of downloading videos, chatting, and permitting interaction among the participants and the researcher. Therefore,
it supports previous research, but it surpasses them. This study contributed in moving the research from investigating Facebook role in learning vocabulary solely through some general activities like reading and checking the dictionary to precisely planned vocabulary strategies with specific techniques through daily posts and further activities. Through our research, no study was found in relation to Facebook use and vocabulary learning strategies with precision on the techniques.

Furthermore, through the results of the experiment and the questionnaire we confirmed the two hypotheses as 1) using the Facebook as a tool for learning English enhanced learners’ vocabulary acquisition in English, and 2) involving students in acquiring new vocabulary through certain selected strategies via Facebook has proved their efficiency in improving their vocabulary acquisition.

**Conclusion**

The present study investigates the effect of Facebook on learning English vocabulary mediated by vocabulary learning strategies (five are identified) through the Facebook platform. In order to investigate the inquiry of the research two tools were employed a questionnaire that gives the needed information to prepare the experimental study with pre and post tests. According to the analysis of questionnaire and tests, nearly all five strategies except the “Determination strategy” are favored by the twenty participants. It further showed that participants improved the vocabulary performance and acquisition after being exposed to vocabulary via Facebook. As a result the two hypotheses were confirmed. Hence, the Facebook could be used as a supplementary learning environment.

However, this research shows some limitations. First, the number of the participants was limited. Second, the duration of the experiment is short; the longer the period, the better the retention of the vocabulary and the larger the vocabulary list that would be memorized. Third, this research focused on five vocabulary strategies cognitive, determination, social, metacognitive, and memory strategies. Future research would include more vocabulary learning strategies and techniques. Besides, this research focuses on the acquisition of vocabulary; future research would address other aspects as the effect of Facebook on the psychology of the learners for a better retention and use of new vocabulary. Besides, experiment could be conducted with a special focus on how to learn vocabulary in English through the Facebook with a special on specialized vocabulary. Then the main contribution of this article lies on focusing on language learning with a special interest in vocabulary learning strategies and techniques.
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Appendices

Appendix 1. The questionnaire

Section one: Personal Information

1. Age: .................. Years old.
2. How long have you been participating English? ..................... Years.
3. How do you rate your English level?
   a. Beginner.
   b. Intermediate.
   c. Advanced.
4. What do you need English for?
   a. Your studies
   b. Your occupation
   c. Your personal entertainment

Section two: Vocabulary Acquisition

5. In your opinion how important is acquiring new vocabulary?
   a. Very important.
   b. Important.
   c. Not important.
6. Whenever you face new English vocabulary, do you check its meaning?
   a. Yes.
   b. No.
7. If yes which strategy do you use?
   a. Check dictionary.
   b. Translate to Arabic or French.
   c. Guess from context.
   d. Ask someone.
8. Do you use the newly acquired vocabulary?
   a. Yes.
   b. No.

Section three: Facebook Use

9. How many hours do you spend on Facebook per day? ............... Hours.
10. Do you join groups or like pages that are related to English language learning?
    a. Yes.
    b. No.
11. Have you ever used English in Facebook chatting with your friends?
    a. A lot.
    b. Somehow.
    c. A little.
    d. Not at all.
12. To what extent do you think that chatting in English helps you improve your English?
   a. Very much.
   b. To some extent.
   c. Not at all.

Appendix 2. The test

**Activity one**

Translate the following sentences in Arabic and leave the difficult words in English:

1. Most health departments throughout the world recommend that we consume five portions of fruit and vegetables each day.
2. My daughter is studying the principles of Algebra.
3. Three tablespoons of olive oil daily can prevent cancer.

**Activity two**

Use the pictures illustrated to find the keywords (1 picture illustrates 1 word):

**Activity Three**

Use the following words in meaningful sentences employing your personal experiences
“gloomy, ailment, disgrace, avenue, brain-drain”

**Activity Four**

Working with another person, provide the appropriate definitions to the following words. : fog, curve, rhythm.
Activity Five

From the lyrics of Bill Withers' song “Lean on Me” provide the exact words that match the following definitions:

1. Intransitive verb: to incline, deviate, or bend from a vertical position
2. Deep distress, sadness, or regret especially for the loss of someone or something loved.
3. The quantity that can be carried at one time by a specified means; especially, a measured quantity of a commodity fixed for each type of carrier.
4. The ability to think and act using knowledge, experience, understanding, common sense, and insight.

**The Lyrics**

Sometimes in our lives we all have pain
We all have sorrow
But if we are wise
We know that there's always tomorrow
Lean on me, when you're not strong
And I'll be your friend
I'll help you carry on
For it won't be long
'Til I'm gonna need
Somebody to lean on
You just call on me brother, when you need a hand
We all need somebody to lean on
I just might have a problem that you'll understand
We all need somebody to lean on
If there is a load you have to bear
That you can't carry
I'm right up the road
I'll share your load
If you just call me (call me)
If you need a friend (call me) call me uh huh (call me)
If you ever need a friend (call me)
Call me (call me) call me (call me) call me (call me) if you need a friend
(Call me) call me (call me) call me (call me)
call me (call me) call me (call me)