King Saud University

Deanship of Higher Studies

College of Education

Master Programme of TESOL

Tweet, Share and Learn; The Effect of Micro-blogging on Twitter on the Vocabulary Improvement of Saudi Female EFL College Students

Graduation Project

CI 598

Submitted in Partial Fulfilment of the Requirements

for the Degree of Master of TESOL

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Second semester, 2013

Abstract

This study describes how Twitter (a social networking tool) was implemented as part of a foreign language Reading Comprehension course; it reports on the students' perspectives and opinions about their experiences. The participants were 52 level 2 learners studying in the English department at Huraymila College of Science and Human Studies. The purpose of the treatment was to ascertain improvements in vocabulary acquisition.

The participants were given a pre-test before they were exposed to use of Twitter and a post-test six weeks later. The results revealed that the experimental group performed better than the control group. There were significant differences that favoured the experimental group, in terms of word meaning, spelling, the grammatical behaviour of the words, and the total score. In addition, a questionnaire was administered to the Twitter users to investigate their attitudes and motivation. Students in the experimental group demonstrated a positive attitude towards using Twitter. Therefore, this study suggests that integrating social networking tools into the foreign language learning setting can improve students' vocabulary.

Keywords: micro-blogging, EFL college students, vocabulary improvement.

Acknowledgements

I would like to express grateful thanks to my supervisor, Prof. Yousif Al-Shumaimeri, for his guidance, effort, patience and for providing me with insightful and valuable comments throughout the development of this study.

My deepest respect and gratitude also go to my relatives and friends who extended their hands for help during conducting this study.

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1. Introduction

Technology has long played a significant role in the foreign language classroom. Yet, with the rise of personal computers and modern mobiles in recent decades, the use of technology as a teaching tool has become more widespread. Indeed, students themselves are now identifying a need for technological solutions that will give them the freedom to choose their own learning strategies, so as to successfully navigate the information provided to them during lessons and improve their level of understanding. The majority of today's students own some form of digital device; for example; notebooks, MP3 players, Ipods, Ipads, tablets and smart phones, it is therefore increasingly apparent that the new generation, the "Net Generation" (Carlson, 2005) thinks differently from the older generation. Educators therefore, have a responsibility to improve their educational approaches through the utilisation of technology to engage students more in their learning.

Increasingly in recent years, researchers and educators have begun to focus on online platforms that motivate students by providing them with wider social networks and authentic tasks (Godwin-Jones, 2008). In particular, the adoption of technology in language learning, specifically Mobile Assisted Language Learning (MALL), has attracted the attention of many scholars and educators, including those in Saudi Arabia (Almarwani, 2011; Nassuora, 2012).

Net users were originally thought of as passive viewers of websites; however, over time this perception has changed and collaborative ways of sharing information and discussing different issues have emerged. Jones (2008) attributed this reimagining of the online context to the opportunities for social interaction between users: "the web has evolved and is evolving. Technology has made the web more dynamic and

more responsive. However, it is the social interaction occurring on the web that is changing it even more". This interaction has been prompted by the popularity of social media sites such as Facebook, Twitter, You Tube, My Space, Second Life, Flickr, Wikis and Blogs. Use of these by individuals to communicate has risen rapidly. The applications of social networking seem to increase almost daily.

In part responsible for this changing context, the online social platform Twitter, is no longer being used as merely a tool for entertainment and advertising. The application can also be used in an academic setting to enhance and foster discussions regarding specified topics. Twitter is an online social networking and micro-blogging service that enables its users to read and post very short messages of no more than 140 characters known as "tweets", which are displayed on the author's profile page and delivered to the author's "followers" (Lomicka and Lord, 2011). Since the system was designed in San Francisco and first launched in October 2006, Twitter has become one of the most popular social media tools; currently used by millions of "tweeters", who regularly send and receive messages over the web. It is an effective tool for sharing information and experiences, expressing ideas, keeping in touch with friends, reporting on the latest news or sharing thoughts and comments about current events, etc. Java et al. (2007) have shown that people frequently use Twitter to talk about their daily activities and to share information with like-minded individuals. The success of Twitter can be attributed to the simplicity with which one can create an account and access information, as well as its availability via a various mobile devices. Johnson (2009) commented on the power of Twitter to encourage the participation of different audiences, by moving beyond physical boundaries.

Twitter, as a form of MALL is becoming increasingly popular as a learning tool, especially in the context of English language teaching. A key advantage is that it

offers an authentic tool for communication with other English speakers and so has application in learning contexts where opportunities for authentic forms of communication are scarce. This is relevant to the Saudi context, as, despite all the efforts made by our government to develop education; Saudi learners still do not have sufficient opportunities to practice English language as an authentic means of communication both inside and outside of the classroom. In addition, as most Saudi students are familiar with various social networks and are motivated by the use of technology, Twitter may prove to be a valuable tool. Learners would be able to use Twitter to practice target language use with native and non-native users of English in an authentic environment; students could also remain connected to the course outside of class.

It will be especially interesting to see the effects of such an application in a Saudi EFL context. It is anticipated that the findings would potentially be useful to researchers and teachers seeking to explore new methods of collaborative learning that motivates EFL students to more fully interact in the target language and learn from one another.

In view of the above, this study aims to investigate the effect of using Twitter on female college students' vocabulary improvement. Thus, the present study will be significant for educators, students, parents, researchers and others who are interested in the field of CALL and EFL for a number of reasons:

1. It shows language teachers how Twitter can be a powerful tool for improving students' vocabulary and provides them with information about how to use this application.

2. It suggests new ways of applying social networks for educational purposes.

3. It encourages and guides students to make better use of modern technology.
4. It develops college students' skills in using Twitter.
5. It indicates whether Twitter can help to enhance students' motivation in learning English vocabulary.
6. It contributes to previous studies that point to the benefits of using Twitter for language learning.

2. Statement of the problem

The micro-blogging platform has made its way into the arena of education, and specifically into college classrooms, however few studies have been conducted as to its effect in terms of improving the vocabulary of EFL learners. Therefore, this research aims to investigate whether Twitter is an effective and useful tool that could be utilised in English classrooms in Saudi Arabia to promote the level of output of students in L2. It aims to uncover the advantages of using Twitter as well as any current barriers to the use of micro-blogging in the research context.

3. Hypothesis of the Study

The present study attempts to test the following hypothesis:

Twitter has a positive effect on vocabulary improvement of EFL college students.

4. Research Questions

This research attempts to answer the following questions:

1. Does micro-blogging on Twitter lead to increased word knowledge, in terms of meaning, spelling and the grammatical behaviour of words?

2. Does Twitter enhance motivation amongst EFL students in regards to vocabulary improvement?

3. Is there a statistically significant difference between the achievements of the experimental group (who employed micro-blogging on Twitter) and those of the control group (who learned using traditional methods) in the post-tests?

5. Review of the Literature

5.1 Overview of micro-blogging

Twitter and other social networking sites are categorised as forms of micro-blogging. Micro-blogging is a relatively new form of blogging, relying on collaborative technology to communicate with people from different domains. Twitter is the most common micro-blogging service, and allows users to send and receive very short text updates of no more than 140 characters, or micro media such as photos or clips and then post them, either to be viewed by everyone or by a certain group chosen by the user (Lomicka, and Lord, 2009). It also provides an opportunity for real communication in an authentic learning environment, promoting writing as a fun activity, fostering editing and literacy skills.

The literature consulted provides evidence that learners are currently using micro-blogging on both "Facebook" and "Twitter". For example, Kabilan et al. (2010) state that Facebook has played a significant role in students' lives and helped to facilitate language learning, as it can provide valuable opportunities for students' lifelong learning, to improve their skills, enrich their knowledge and develop their self-confidence. Junco et al. (2011) reported that, in their study, when an experimental group used Twitter and was compared to a control group, the Twitter-using group achieved higher levels in GPA tests and also reported higher motivational engagement

than the control group. Parry (2008) identified different ways to use Twitter in the university classroom: to promote class chatter, classroom community, get a sense of the world, track a word, track a conference, instant feedback, follow a professional, follow a famous person, teach grammar, rule based writing, maximizing the teachable moment, public notepad, writing assignments. Lomicka and Lord (2011) reported that micro-blogging helped to create a collaborative community for language learners; one in which they can learn, share information, express themselves and reflect on their experiences.

5.2 Micro-blogging and learning

Although Twitter is still a relatively new online phenomenon, the literature revealed several studies that have already examined micro-blogging in the academic environment (e.g. Ebner, Lienhardt, Rohs, & Meyer, 2010). The results of these have shown that using this application can facilitate informal learning.

Batchelder (2010) pointed out that students using Twitter developed confidence in their ability to find the information they needed and also saw a value in finding solutions by engaging in collaboration and by keeping in touch with a support group. Grosseck and Holotescu (2008) demonstrated that micro-blogging on Twitter could be an effective tool for professional development and that it could facilitate collaboration between students by altering boring and traditional rules to address students' needs. Briggs (2008) reported that micro-blogging on Twitter can help to strengthen the relationship between the teacher and his/her students, and also between the students themselves.

5.3. Twitter forces collaborative learning and group work

Twitter is a fast paced resource that encourages collaboration and group work among teachers and also students themselves. They can post a link or request for something and other members then respond quickly using the platform. Veletsianos (2011) conducted a study investigating scholar's participation practices on Twitter. The results revealed that Twitter was considered to be a very beneficial tool for scholars; allowing them to share information, resources and media associated with their professional practice. They can also share information about their classrooms, and students can request assistance from their peers. Thus, the application can help to strengthen social relationships. Borau et al. (2009) pointed out that Twitter is beneficial not only for developing language skills but also for improving cultural competence, because students can develop cultural awareness through communicating with native speakers.

Costa et al. (2008) conducted a case study of Twitter during summer school courses undertaken by PhD students in Macedonia. The aim of the study was to gauge the scope of students' collaboration via Twitter. The researchers found that Twitter was a very useful tool in promoting group work. The participants responded positively to the program and used Twitter to communicate regarding the course information, and as a means for providing feedback about presentations and classes as well as for sharing reflections on learning. Drewelow (2012) used Twitter in a foreign language teaching method course to investigate whether it could promote future teachers' understanding of the collaborative nature of learning and the teaching profession. She found that Twitter can be used to build a sense of community among students, foster learning outside of the classroom and to share teaching experiences .

5.4. Twitter and motivation

Twitter can be used to attract student's attention and also to encourage them to continue participating in course activities. According to the "expectancy-value theory of motivation" (Vroom, 1964), students' motivation is determined by how much they value the object of learning, as well their expectations of success. Relating this theory to the social and authentic learning environment provided by Twitter meant that students were more motivated to amplify their thoughts and experiences.

Junco et al. (2010) suggested that the implementation of micro-blogging on Twitter in higher education establishments increases students' motivation, grades and encourages colleges to be more active and participatory. Reid, Houchen-Clagett and Browning (2010) conducted a study to explore the influence of Twitter on students' motivation and participation on a developmental English and information technology course. They found that the use of tweeting motivated students to become more actively engaged in course activities.

5.5. Micro-blogging and (English as a foreign language) EFL

There are only a few examples, but an increasing body of work is emerging reporting the effectiveness of Twitter in the field of English as a foreign language (EFL). For example, Borau et al. (2009) presented one of the first studies focusing on Twitter for language learning. The participants in their studies were ESL college students who had been enrolled on an online platform for seven weeks. They responded to Twitter positively and the researcher’s questionnaire findings and analysis of the students' tweets showed positive findings. They noted that, despite there being no face-to face interaction on Twitter; it was nevertheless an effective tool for developing both communicative and cultural competence. According to Mork

(2009), using Twitter in EFL education has many advantages. Initially, it has a role to play in communicating class content; teachers can also use the application to send reminders to students about assignments, tasks, tests, etc. It is a suitable tool for teachers wishing to post small and up to date pieces of information with no need to upload information to the class website or blog, or to send emails, which students might neglect or even delete. Furthermore, Twitter is an excellent tool for facilitating cooperation and feedback amongst students, and because posts are very short, this encourages students to be more concise in their writing.

Antenos-Conforti (2009) showed that students tweeted comfortably and confidently in a second language, suggesting that it could be a useful tool to improve their vocabulary and writing skills, as well as their cultural competence. George Mayo (2008), an 8th grade English teacher at the Silver Spring International Middle School in Montgomery County, described micro-blogging on Twitter as a simple, fun and safe digital resource for children. He conducted a storytelling project, over a period of seven weeks, using Twitter as a platform, to improve his students' writing skills. His study aimed to investigate how EFL students' participation could be enhanced. He created a Twitter account named "Many Voices" and invited his students and other students around the world to join in. Through tweets, each student was required to add a sentence or two to the ongoing story. The results showed that micro-blogging on Twitter offers an excellent opportunity for collaborative writing, as participants were very motivated and enjoyed participating in the writing tasks set.

5.6. Micro-blogging and improving vocabulary

This paper will shed light on the use of Twitter as a tool to improve students' vocabulary in an easy and enjoyable way. To achieve this, previous studies that have examined micro-blogging for language learning will be reviewed here.

Godwin-Junes (2008) suggested that social networks, including Twitter, provide a genuine opportunity for self-development and lifelong learning. They argue that language teachers can benefit from using this tool to create new activities to enhance online composition, editing and assessment. Students are also interested in seeing their writings documented online, and this encourages them to further develop their writing skills. Sharon Scinariello, of the University of Richmond (2008), applied question /answer activities using tweets to expand on her work in the French language classroom. The aim of her study was to help her students to practice verbal constructions and digital storytelling. She found that using Twitter helped her to create a meaningful, enjoyable, authentic learning environment that provided opportunities for her students to practice the target language. It was also a perfect way to connect her students with French culture.

Ullrich et al. (2011) stated that micro-blogging on Twitter can facilitate collaborative learning and encourage individual creativity among the students. They conducted a study aimed at investigating how best to increase students' participation using the target language via Twitter. The lecturer created a Twitter account and invited students to post at least seven tweets a week and read the incoming tweets from their fellow students. The results revealed that Twitter was a suitable tool to promote EFL students' writings, especially for those who might feel very shy in face to face situations, and so find themselves lacking the necessary words. Mork (2009) suggested different Twitter activities for language learning. For example, in the case of vocabulary, activities such as making sentences with new words and asking the students to tweet new words with an example sentence daily, weekly, etc. They can also post a definition of the word, its synonyms and antonyms, and track words to

learn about their usage by researching different ways of using certain words and then tweeting to share their findings.

Antenos-Conforti (2009) used Twitter with a group of intermediate university level Italian students, to examine their perceptions and habits when using Twitter for learning about Italian language and culture. Questionnaires and surveys were administered and the results showed that the majority of the students believed Twitter helped to enhance their confidence when writing in Italian. In addition, students responded positively to teacher's feedback, as provided via Twitter and negotiated meaning through Twitter for vocabulary learning. Perifanou (2009) also used practical micro-gaming language activities, such as digital stories, film scripts, Italian music and cartoon based stories in the micro-blog environment. She found that micro-blogging was a very effective means by which to enhance students' motivation, participation, collaboration and practice of basic language skills.

Hattem (2011) conducted a study on the use of micro-blogging on Twitter in an intensive English advanced grammar course and the findings revealed that micro-blogging was a powerful tool that helped students with learning grammar in an interesting environment. Moreover, the students responded positively and enjoyed practicing the target language more than their traditional assignments. The results of the survey also showed that Twitter helped to enrich students' vocabulary.

Despite the advantages of using micro-blogging on Twitter for language learning, there are a number of challenges to consider. For example, Grosseck and Holotescu (2008) identified many problems with using Twitter in education; Twitter might be time-consuming, addictive, and even lead to bad grammar due to the text length limitation; only 140 characters. However, conversely, Dunlap and Lowenthal (2009)

viewed the 140 characters limit as a valuable professional development tool since it trains the students to be more concise in their writings.

5.7 Conclusion

Studies on the influence of Twitter have revealed that it may be an important development in students' learning options and in EFL, but few studies have been conducted on its effect on vocabulary improvement of the EFL learners. Therefore, this study aims to add empirical insights into the implementation of Twitter as a tool to improve vocabulary. It provides EFL students with an opportunity to develop good habits of word learning. It also attempts to explore the new methods teachers can use when employing digital technologies to extend and enrich student's vocabulary and learning experiences. Moreover, this study will add to existing literature, by investigating the potential of combining effective principles of professional development with a formative experiment methodology to bring about pedagogical change.

6.Methodology

6.1 Research approach and design

The aim of this study is to examine the effect of micro-blogging on Twitter on the vocabulary improvement of EFL college students. The design of this study is a quasi-experimental design; involving a pre-test/post-test with the Twitter treatment as the independent variable and the scores on the post-test being the dependent variables.

6.2 Sampling process and participants

The participants in this study were 52 learners from Huraymila College of science and Human studies, in the English department, level 2. The participants' age range

was from 20 to 22 and they had studied English for seven years, from sixth grade to 3rd grade at secondary school. They participated in the study over a six-week period in the second term in the academic year 2012-2013. They were recipients of a Reading Comprehension course for three hours a week. For the purpose of the study, the students were chosen randomly and divided into two groups; 26 students formed the control group and studied vocabulary in the traditional way and 26 students formed the experimental group, which used Twitter for learning vocabulary.

To guarantee that the two groups were at the same proficiency level, a pre-test was given to both groups, consisting of three questions testing the students' word knowledge, in terms of the meaning, spelling and grammatical behaviour of the words. The results of the pre-test showed that the mean average of the participants' grades were very similar across both groups. The results were also measured using an Independent Samples Test (t-test). The test revealed no statistically significant difference at the $p < .05$ level among the two groups' pre-test results in terms of the meaning, spelling and grammatical behaviour of words (Table 1).

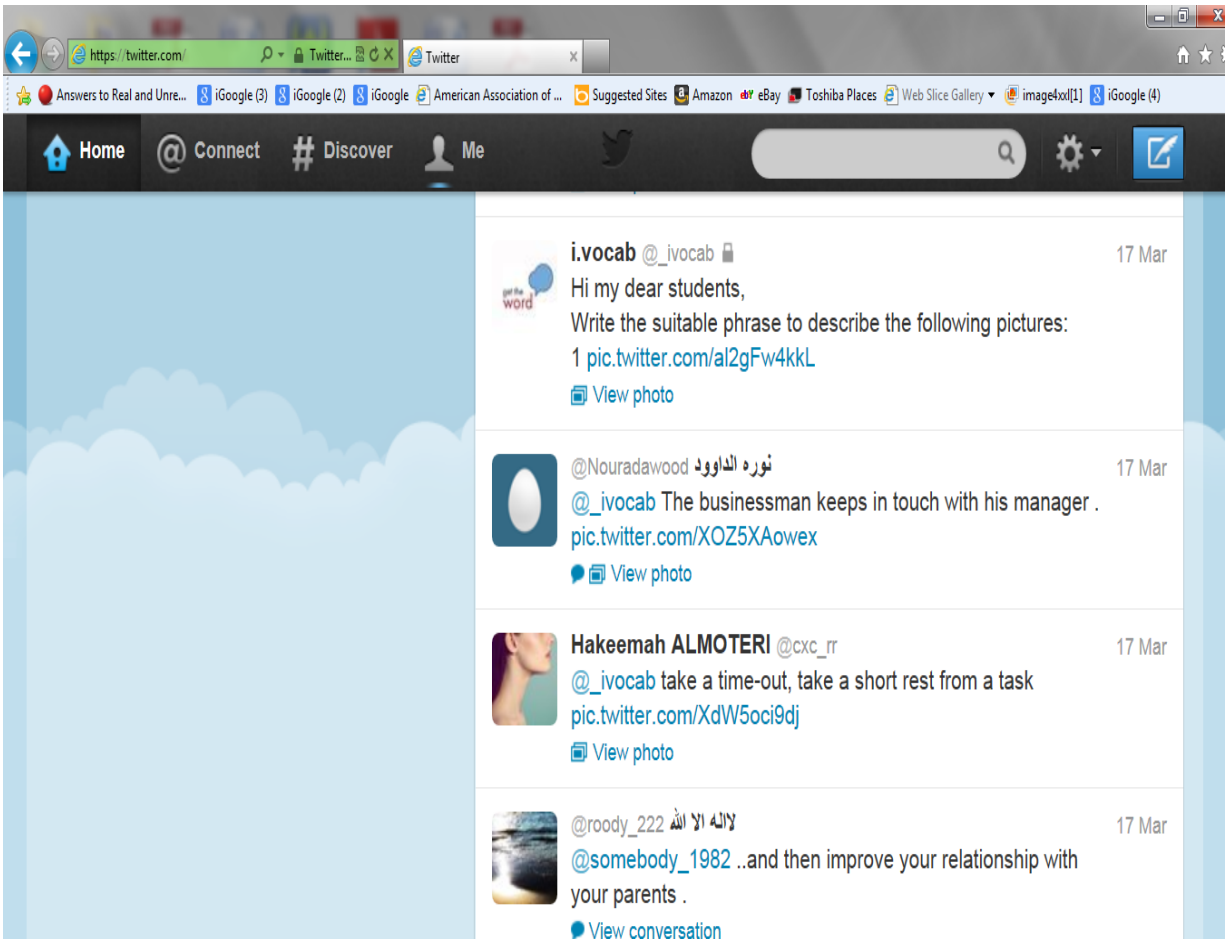
Table 1: Groups' pre-test results.

Group	No.	Mean	St. Deviation	T value	Sig
Control	26	22.65	15.55	-1.776	.082
Experimental	26	29.96	14.07		

6.3 Material

This study used a Twitter account entitled "i.vocab ". It was secured, so that only members of the experimental group could be added to that particular account, and

students were asked to create a private Twitter account for use with the course and to follow their classmates. They were also instructed to post at least three tweets a week and to reply to their followers' tweets.




SE. @alharbi_seham 17 Mar
@somebody_1982 A true relationship is having someone who accepts your past, supports your present, loves you and encourages your future.
View conversation
Al.anoud Alharbi @somebody_1982 16 Mar
Esward *fall in love with Bella and went to marry her and advance in there *relationship #twilight ♡ pic.twitter.com/jFRjC5OHtQ
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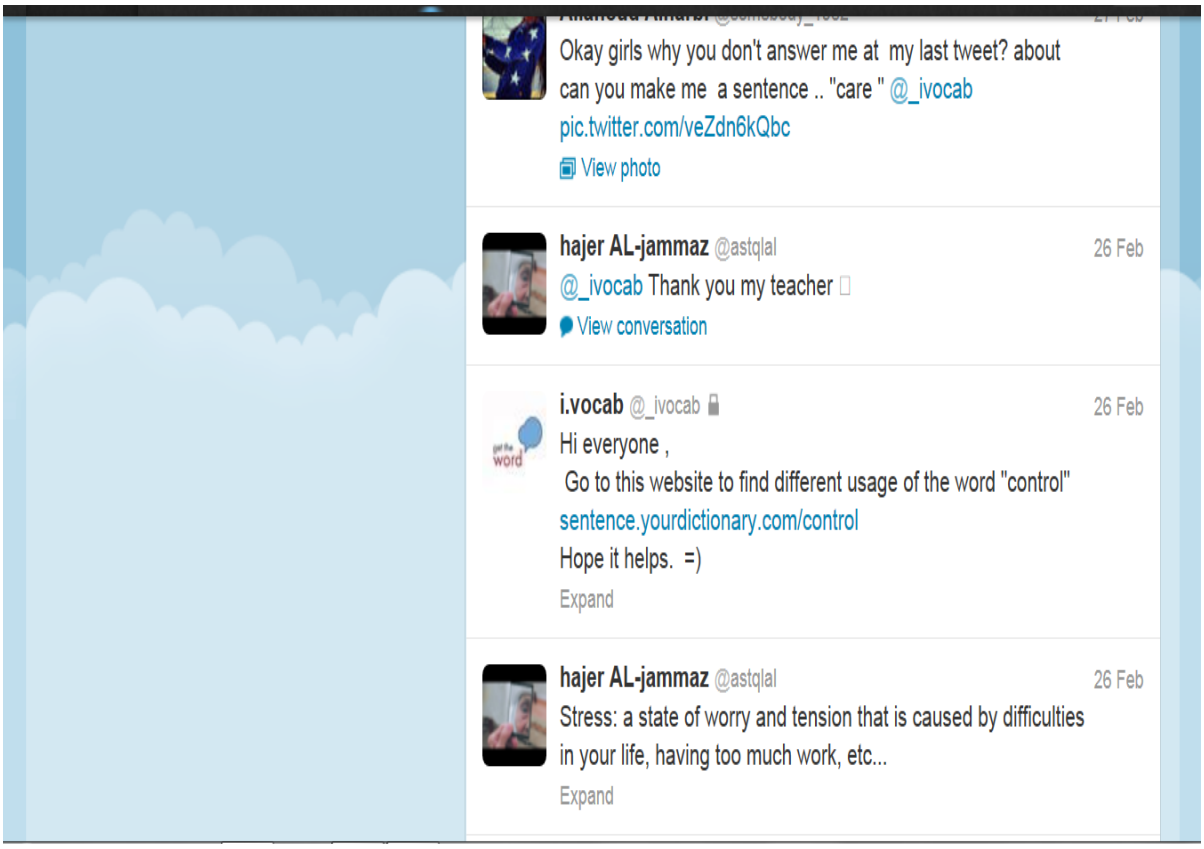
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pic.twitter.com/veZdn6kQbc
View photo
hajer AL-jammaz @astqlal 26 Feb
@_ivocab Thank you my teacher
View conversation
i.vocab @_ivocab 26 Feb
Hi everyone ,
Go to this website to find different usage of the word "control"
sentence.yourdictionary.com/control
Hope it helps. =)
Expand
hajer AL-jammaz @astqlal 26 Feb
Stress: a state of worry and tension that is caused by difficulties in your life, having too much work, etc...
Expand

6.4 Instruments

A pre-test was used to measure the students' knowledge of the target words before the treatment. As mentioned above, the pre-test used to insure that both groups had the same proficiency level. It was also used to ensure that any differences in vocabulary knowledge would be a result of the experimental conditions and not of any pre-existing knowledge.

At the end of the experiment, a post-test was used to measure students' vocabulary and these results were compared with the results of the pre-test.

In both tests, the students were required to complete three questions. The first question required the students to translate some words into Arabic. The second question was divided into two sections; A and B including 20 words. Students were given a list of prefixes and suffixes and asked to add acceptable prefixes or suffixes to the words. The third question asked the students to fill in the missing letters.

After conducting the post-test, a survey questionnaire was given to the subjects in the experimental group to explore their attitudes towards using Twitter for the purpose of learning vocabulary. The questionnaire was adopted from a previous study (Lomicka, 2011) and its constructs were measured on a five-point Likert-scale, ranging from strongly agree (1) to strongly disagree (5) .The mean scores for the selection of the 5-point Likert-type items were designed to measure the students' motivation for using Twitter. The maximum and the minimum boards of each scale were:

1- The means lying from (1.00-1.80) were classified as strongly disagree;
2- The means lying from (1.80-2.60) were classified as disagree;
3- The means lying from (2.60-3.40) were classified as neutral;

4- The means lying from (3.40-4.20) were classified as agree; and

5- The means lying from (4.20-5.00) were classified as strongly agree.

To determine the reliability of the questionnaire, an internal consistency method was used, as applied with Cronbach's alpha. The reliability test for the instrument produced a Cronbach alpha of 0.849, which can be considered a high reliability value.

7. Analysis of data and discussion of the results

The purpose of the current study was to determine the effectiveness of Twitter on EFL college students and their attitudes towards its use in the Saudi Arabian EFL vocabulary classroom. This section attempts to answer the questions posed by the study.

7.1 Testing the hypothesis:

In order to answer the research hypothesis, which is, Twitter has a positive effect on vocabulary improvement of EFL college students, a T Test and Levene's Test were used to find the equality of means and variances to calculate the students' overall achievement scores on the pre-test and on all the post tests for the control group and the experimental group.

Table 2: Levene's test and T test for pretest and post test for experimental and control groups

	Levene's Test for		**t**	**Sig (2 tailed)**
	F	**Sig.**		
Pre-test	.101	.752	-1.776	.082
Post-test	.200	.654	-2.223	.031

As it is shown in table 2, according to Levene's test and in the terms of pre-test, the variability in the two groups is not significantly different at the $p < .05$ (.752 > 0.05) which means that the scores in one group do not vary too much more than the scores in the second group. This indicate that both groups were equivalent .

Also, from the table 2 ,according to the independent sample t test , the table shows that there was no statistically significant difference between the both groups' achievements in the pre-test at the $p < .05$ (.082 <0.05)

However in the term of the post test, according to the Levene's test , the variability in the two groups shows that there was no statistically significant difference (.654 > 0.05) at the $p < .05$

In addition, the independent sample t test shows that there is a statistically significant difference between the experimental and control groups achievement post test at the $p < .05$ (0.031 <0.05)

7.2 Testing the first question:

A paired sample test was used to find any significant difference between the post-test and pre-test results for both groups was conducted in order to answer the first question: Does micro-blogging on Twitter lead to an increase in word knowledge, in terms of the meaning, spelling and the grammatical behaviour of words? These results are shown in Tables 3 and 4.

The control group

In terms of meaning, the paired sample t-tests were conducted on the post-test scores for the control group, showing that the participants performed better on the post-test (M = 13.58) than they did on the pre-test (M = 10.27). There was a

statistically significant difference at the $p < .05$ level. in the meaning scores for the pre and post-tests.

In terms of spelling, the participants in the control group performed better on the post-test (M = 6.08) than on the pre-test (M = 5.58). However, there was no statistically significant difference at the $p < .05$ level in the test scores for the two scores.

In terms of understanding the grammatical behaviour of words, the participants in the control group performed worse on the post-test (M=6.23) than on the pre-test (M= 6.38). Despite this, there was no statistically significant difference at the $p < .05$ level in the test scores for the two scores.

In terms of the total score, the control group performed better in the post-test (M= 25.38) than on the pre-test (M=22.62). However, there was no statistically significant difference at the $p < .05$ level in the test scores for the two scores. In addition, the standard deviations for both tests were above 1; at 15.52 and 16.39 accordingly.

Table 3: The paired t-test results for the control group (pre and post-tests).

Group	Variable	Test	No.	Mean	St. Deviation	T value	Sig.
Control Group	Meaning	pre	26	10.27	8.780	-3.900	.001
		post	26	13.58	9.231		
	Spelling	pre	26	5.58	4.941	-.740	.466
		post	26	6.08	3.867		

	Grammatical behaviour of words	pre	26	6.38	3.163	.187	.853
		post	26	6.23	4.819		
	Total	pre	26	22.62	15.523	-1.920	.066
		post	26	25.38	16.395		

Significance at the .05 level.

An overview of the results for the control group is depicted below in Figure 1. The total mean for the meaning of the post-test was the highest (comes after the total post and pre tests) . Students only showed significant differences in the meaning score. They showed an inferior performance in grammar and spelling, but the difference was not significant. Despite the fact that participants performed better in the post-test, the difference was not significant.

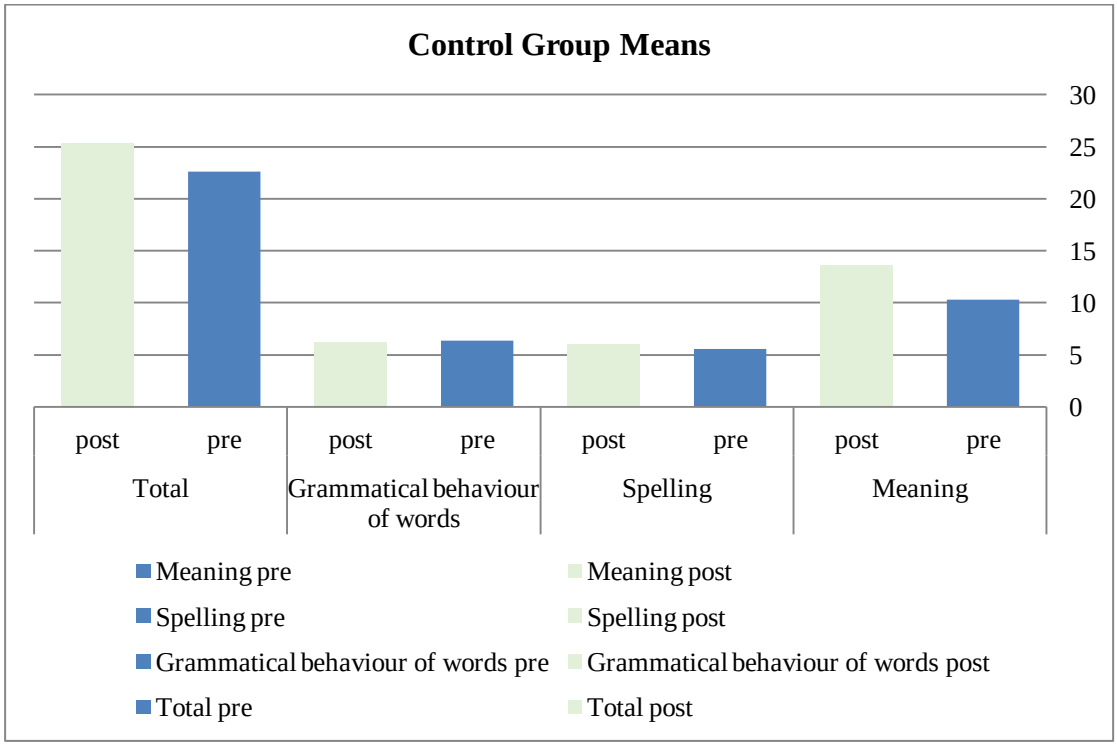

Figure 1: Results of the control group paired sample t test

The experimental group

In the terms of meaning, the paired samples t-test conducted on the pre and post-test scores of the control group showed that the participants performed better on the post-test (M = 19.04) than they did on the pre-test (M = 13.69). There was a statistically significant difference at the $p < .05$ level in the meaning scores for the pre and post-tests.

In terms of spelling, the participants of the experimental group performed poorer on the post-test (M = 7.81) than on the pre-test (M = 8.58). However, there was no statistically significant difference at the $p < .05$ level in the test scores for the two scores. In terms of the grammatical behaviour of words, the participants in the experimental group performed better on the post-test (M=9.92) to a greater extent than on the pre-test (M=8.58). However, there was no statistically significant difference at the $p<.05$ level in the test scores for the two scores.

In terms of the total score, the experimental group performed better in the post-test (M=35.96) than on the pre-test (M= 29.96). There was a statistically significant difference at the $p<.05$ level in the test scores for the two tests. However, the standard deviation for both tests was above 1, with 14.070 and 16.54 accordingly.

Table 4: The paired t-test results for the experimental group (pre and post-tests).

Group	Variable	Test	No.	Mean	St. Deviation	T value	Sig.*
Experimental Group	Meaning	Pre	26	13.69	7.807	-5.212	.000
		Post	26	19.04	8.766		
	Spelling	Pre	26	8.58	4.743	1.270	.216

		Post	26	7.81	3.677		
	Grammatical behaviour of words	Pre	26	8.58	4.743	-1.458	.157
		Post	26	9.92	6.368		
	Total	Pre-test	26	29.96	14.070	-2.993	.006
		Post-test	26	35.96	16.549		

Significance at the .05 level.

An overview of the results of the experimental group is given below in Figure 2. The total mean in the meaning was the highest (right after the total post and pre-test test) . Students only showed significant differences in the total post-test score and the meaning post-test score. They showed a poorer performance in spelling and grammar, but the difference was not significant.

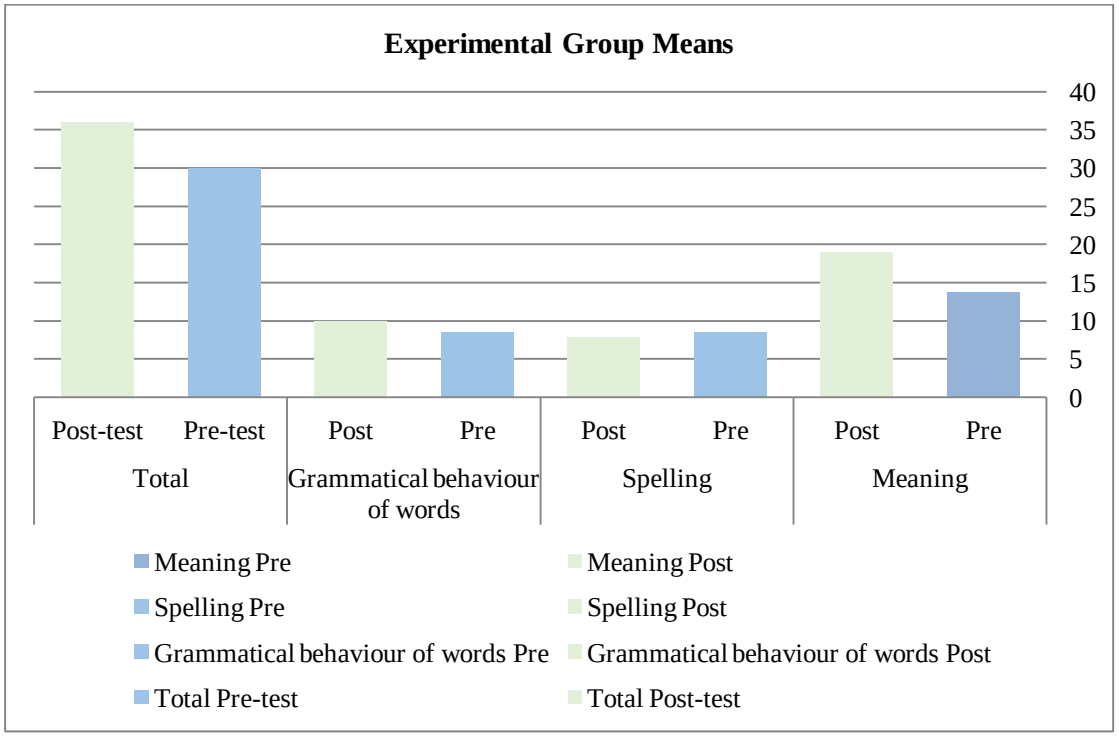

Figure 2: Results of the experimental group paired sample t test

7.3 Testing the second question

In order to answer the second question raised in the study, a questionnaire was used to calculate the use of Twitter and learners' motivation. The question asked was: Does Twitter enhance motivation among EFL students with regards to vocabulary improvement?

Table 5: Twitter Questionnaire Motivation Results:(N=26)

No	Statement	Mean	St. Deviation
1	Learning English vocabulary on Twitter made this a more interesting course.	4.35	.485
2	I looked forward to reading everyone else's tweets.	4.00	.849
3	I found myself wanting to post tweets.	4.08	.891
4	I liked that we could share links, images and clips related to the new vocabulary.	4.73	.452
5	The information I read in other tweets contributed to a greater sense of class community.	3.73	.827
6	Knowing the people I'm following made me feel more comfortable tweeting in English.	4.12	.816
7	I enjoyed re-reading the past tweets of others on my timeline.	4.12	.909
8	I enjoyed re-reading the past replies of others on my timeline.	4.08	.796
9	The tweets contributed greatly to my knowledge of English vocabulary.	3.96	.599
10	Because of Twitter, I put more time into this class than into a regular English class.	3.69	.928

11	Posting tweets helped build my confidence in writing English.	4.12	.711
12	Twitter reduced my anxiety about learning English.	3.92	.796
13	I was able to infer meaning from the tweets according to the context.	4.19	.694
14	I gained confidence in my abilities as an independent learner.	3.85	.834
15	I learned a lot from the replies to my tweets.	4.38	.697
16	I learned a lot from replying to other students' tweets.	4.35	.846
17	I learned a lot from reading other people's tweets.	4.08	.796
18	Having the teacher reply to the tweets increased the learning potential.	4.54	.647
19	Having the teacher tweet and reply to the tweets increased the motivation.	4.54	.706
20	I enjoyed tweeting vocabulary more than traditional writing assignments.	4.38	.941
	Total	4.16	.274

As shown in Table 5, the participants generally agreed that using Twitter motivated them to learn (M= 4.16). In general, there was moderate to strong agreement among the participants with regards to all of the statements. The participants strongly agreed on seven statements (1, 4, 15-16 and 18-20). The highest mean (4.73) was for participant's strongest agreement with reference to the fact that Twitter offered the opportunity to share links, images and clips related to the new vocabulary. Statements (18-19) came next with (M = 4.54) regarding the teachers' role in tweeting and replying to tweets as a factor associated with increasing

participants' motivation. Participants remained strongly in agreement with the statements (1, 15-16 and 20) with (M = 4.35, 4.38, 4.35 and 4.38) which suggested that Twitter made the vocabulary course more interesting and learnable than the traditional classroom.

Conversely, participants moderately agreed on thirteen statements (2-3, 5-14 and 17). The statement that the majority of students agreed upon in this scale was Statement 13, which stated that Twitter had helped them to infer meaning from the tweets according to the context (M = 4.19). They equally agreed on statements (6-7 and 11) with (M = 4.12) regarding the features of Twitter (such as known followers, timeline and posting tweets) which helped them to be improved in their learning vocabulary. With (M = 4.08) participants in statements (3, 8 and 17) equally agreed that they liked posting and reading others postings and replies. The least statement that participants agreed upon (M = 3.69) was: Because of Twitter, I put more time into this class than into a regular English class.

7.4 Testing the third question

The aim here is to evaluate the responses to the enquiry regarding whether Twitter is effective for enhancing the acquisition of vocabulary of EFL higher education students? Statistically significant differences were investigated by means of an independent sample t-test. This evaluated the differences in the pre- and post-tests to conclude the research findings. At the start of the study, the pre-test suggested no relevant differences between the two groups; and therefore, it is reasonable to suppose that the post-test differences in scores would be a consequence of the treatment.

The post-test

Table 6:The independent sample t-test results for the differences between the two groups in the post-test

Variable	Group	No	Mean	St. deviation	T	Sig.
Meaning	Control	26	13.65	9.234	-2.156	.036
	Experimental	26	19.04	8.766		
Spelling	Control	26	6.08	3.867	-1.835	.072
	Experimental	26	7.81	3.677		
Grammar	Control	26	6.23	4.819	-1.893	.064
	Experimental	26	9.92	6.368		
Total	Control	26	25.81	16.393	-2.223	.031
	Experimental	26	35.96	16.549		

Significance at the .05 level

As shown in Table 6, the results of the independent t-test conducted on both groups' post-test scores in terms of meaning are provided. The experimental group performed better (M = 19.04) than that of the control group (M = 13.65). There was a statistical difference at $p < .05$ in the test scores for the two groups.

In terms of spelling, the experimental group performed better on the post-test (M = 7.92) than the control group (M = 6.00). However, there was no statistical difference at $p < .05$ in the test scores for the two groups. The experimental group performed better on the post-test in terms of grammar (M = 9.00) than the control group (M = 6.15). There was no statistical difference at $p < .05$ in the test scores for the two groups.

In terms of the total score, the experimental group performed better on the post-

test (M = 35.96) than the control group (M = 25.81). There was a statistical difference at $p < 0.05$ in the test scores for the two groups.

Figure 3 below provides an overview of the inferential statistics computed for the pre and post-tests for the two groups.

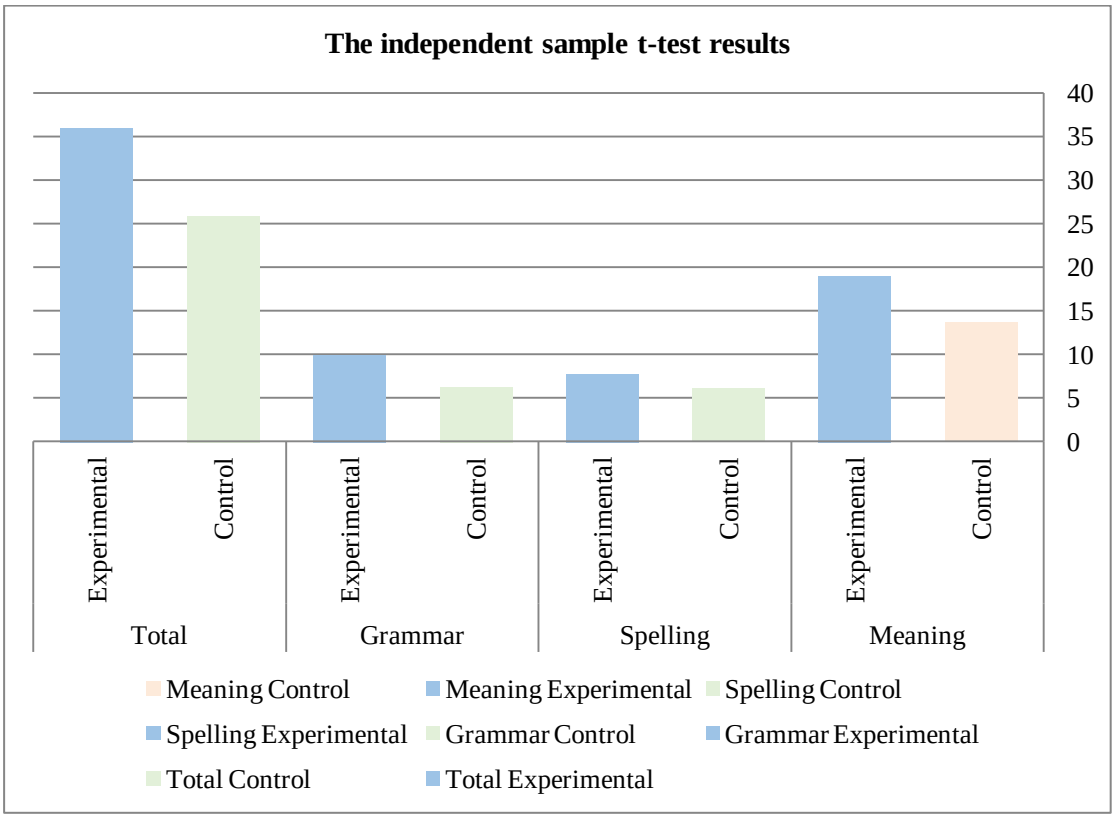

Figure 3: Independent sample t-test results for both groups

7.5 Discussion of results

This section discusses the research findings relative to the questions proposed at the start of this work. The first research question aimed to discover whether there would be significant improvement in participants' performance in the post-test when compared with the pre-test. The control group results revealed that there were no significant differences in the participants' performance in terms of spelling and the grammatical behaviour of words. However, the students demonstrated that there were

significant differences in terms of meaning, the grammatical behaviour of the words and the total score. However, the experimental group's results were statistically positive.

As suggested by previous studies, social networking sites do appear to provide more authentic social and communicative learning environments than traditional classrooms; they also seem to engage students more (Lomicka, 2009; Cheal, Coughlin and Moore 2012). The results of this study do suggest that Twitter can improve students' vocabulary. These findings are in agreement with other studies that identified significant differences in students' performances when they used Twitter (Cheng, 2012; Hattem, 2011; Perifanou, 2009). This positive finding is due to the instructional benefits of Twitter, since students are connected and learn from each other, thereby strengthening their relationship. In addition, as a tweet is limited to 140 characters, this encourages students to write clearly and concisely. Students also receive immediate feedback through Twitter, which enhances their understanding of the course. As shown by Dunlap and Lowenthal (2009), using Twitter supports informal learning or self-learning, motivating students to be more independent.

In response to the second research question, a survey questionnaire was used as a self-report instrument to assess participants' motivation of using Twitter with regards to vocabulary improvement. Most of the students agreed that using Twitter motivated them to learn the language and improved their vocabulary, as it offered them the opportunity to share useful links, images and clips related to the new vocabulary. The students also found Twitter useful in reference to the teacher tweeting and replying to students' tweets; this suggests that Twitter motivated students and made the course interesting for them.

The third research question explored which group's performance had improved the most in the post-test (the experimental group with the Twitter treatment or the control group with the traditional method). Analysis showed the relationship was statistically positive. In the post-test, the performance of students in the experimental group revealed significant differences in terms of word meaning, spelling, the grammatical behaviour of the words and the total score.

These findings indicate that Twitter had a strong influence on the experimental group. In particular, they benefitted from several activities on Twitter, which developed their vocabulary, while the control group did not. As discussed by Mork (2009), using Twitter in EFL education can be a powerful way of developing students' language skills. In this study, the students improved their work in terms of understanding the meaning of words, having engaged in various activities on Twitter. For example, the students write example sentences to explain the meaning of the new words and sometimes provide the English definition of these words. As for the spelling, participants in the study were given pictures and asked to write the word to describe the pictures. Students also suggested funny games for practicing the writing the spelling of words. As for the grammatical behaviour of words, students were provided with links and clips that explained their use of prefixes and suffixes.

8. Conclusion

This study was motivated by the increasing tendency towards integrating social networking sites in education, and specifically through Twitter. The results revealed positive learning outcomes and experiences for the participants, in reference to improvements to their vocabulary, as Hattem's (2011) work suggested. When compared to the control group, the experimental group indicated greater

improvements in terms of word meaning, spelling and understanding the grammatical behaviour of the words. Furthermore, as found in previous studies, the students were very motivated and engaged in learning via Twitter (Lomicka, 2009; Hattem, 2011). This preliminary study therefore suggests that introducing an educational context to exploit micro-blogging on Twitter is a promising area of research in CALL.

Several pedagogical implications for EFL students and teachers can be derived from the study. In particular, the results support the integration of Twitter into a course framework. When using Twitter, students are actively participating and appear to be very motivated to post new tweets. They also cooperated and learned from one another. Some students reported that this was the first time they had used Twitter and they enjoyed the experience.

Some limitations of the present study include the number of participants; there were 52 Saudi female college students. In addition, fuller testing should be conducted on other groups including both females and males.

In conclusion, as smart phones and other mobile devices are becoming more affordable, and since future generations will require more knowledge and skills, it is important to improve our teaching methods and integrate new technology in our courses. Overall, the present study provides preliminary evidence that Twitter is a powerful tool and has a positive effect on Saudi female college students.

References

Almarwani, M. (2011). ML for EFL: Rationale for Mobile Learning, *ICT Journal of language learning*, 4th edition, Retrieved March13, 2013 from: http://www.pixel-online.net/ICT4LL2011/common/download/Paper_pdf/IBL52-365-FP-Almarwani-ICT4LL2011.pdf

Antenos-Conforti (2009). *Microblogging on Twitter, social networking in intermediate Italian classes*. Retrieved March13, 2013 from http://www.chss.montclair.edu/~antenose/mytwitter.pdf

Batchelder, C. W. (2010). *Social software: Participants' experience using social networking for learning.* Unpublished article. Retrieved March13, 2013 from http://udini.proquest.com/view/social-software-participants-goid:276007072/

Borau et al. (2009). *Microblogging for Language Learning: Using Twitter to Train Communicative and Cultural Competence*, Retrieved March13, 2013 from http://www.springerlink.com/content/x71216h278646187/

Briggs, L.L. (2008). *Micro Blogging with Twitter,* Retrieved March13, 2013 from http://campustechnology.com/articles/2008/03/micro-blogging-with-twitter.aspx

Carlson, S. (2005). The Net generation goes to college. *The Chronicle of Higher Education*, *52*(7), A34. Retrieved March13, 2013 from http://www.msmc.la.edu/include/learning_resources/todays_learner/the_net_generation.pdf

Costa, C. et al. (2008). 'Microblogging in Technology Enhanced Learning: A Use-Case Inspection of PPE Summer School', *Workshop at the European Conference on Technology Enhanced learning*, 2008, September 16, Retrieved March13, 2013 from http://knowcenter.tugraz.at/download_extern/papers/2008_ccosta_microblogging.pdf

Cheng. Hau. (2012). *Applying Twitter to EFL Reading and Writing in a Taiwanese College Setting.* Retrieved March13, 2013 from http://scholars.indstate.edu/bitstream/10484/4574/1/Hao%20Yuan%20Cheng.PDF

Drewelow, I. (2012). *Twitter in the teaching methods course: Foreign language graduate teaching assistants perspectives. The Jalt CALL journal*, V.8, Retrieved March 13, 2013 from http://journal.jaltcall.org/articles/8_2_Drewelow.pdf

Dunlap, J. C. & Lowenthal, P. R. (2009). Tweeting the Night Away: Using Twitter to Enhance Social Presence. *Journal of Information Systems Education, 20(2).* Retrieved March13, 2013 from http://patricklowenthal.com/publications/Using_Twitter_to_Enhance_Social_Presence.pdf

Ebner, Lienhardt, Rohs and Meyer (2010). *Microblogs in Higher Education – A chance to facilitate informal and process-oriented learning?* Retrieved March13, 2013 from

http://www.sciencedirect.com/science/article/pii/S0360131509003418

Godwin- Jones (2008).Emerging Technologies Web- writing 2.0 : Enabling, documenting, and assessing writing online, Journal *of language learning and technology*, June 2008,V 12, Retrieved March13, 2013 from https://resources.oncourse.iu.edu/access/content/user/mikuleck/Filemanager_Public_Files/L750%20Electronic%20Lang%20and%20Lit/Electronic%20Evaluation/Emerging%20Trends%20Assessing%20Writing%20Online%202008.pdf

Grosseck, G. and Holotescu, C. (2008). *Can We Twitter for Educational Activities*, Retrieved March 13, 2013 from http://www.cblt.soton.ac.uk/multimedia/PDFsMM09/Can%20we%20use%20twitter%20for%20educational%20activities.pdf

Hattem, D. (2011). The practice of Microblogging. *Journal of second language teaching & research, V 1, No 2.* Retrieved March 13, 2013 from *http://pops.uclan.ac.uk/index.php/jsltr/article/view/47*

Java et al. (2007). *Why We Twitter: Understanding Microblogging Usage and Communities*, Retrieved March13, 2013 from http://ebiquity.umbc.edu/paper/html/id/367/Why-We-Twitter-Understanding-Microblogging-Usage-and-Communities, 12/8/ 2007.

Johnson, S. (2009). How Twitter will change the way we live, Retrieved March13, 2013 from http://www.time.com/time/magazine/article/0,9171,1902818,00.html

Junco et al. (2011). *Putting twitter to the test: Assessing outcomes for student collaboration, engagement and success*, Retrieved March13, 2013 from

http://reyjunco.com/wordpress/pdf/JuncoElavskyHeibergerTwitterCollaboration.pdf

Kabilan, M.K. et al. (2010). Facebook: An online environment for learning of English in institutions of higher education? *Internet and Higher Education* 13 (2010). Retrieved March13, 2013 from http://www.sciencedirect.com/science/article/pii/S1096751610000588

Katie, A. (n.d.). *Educators Test the Limits of Twitter Microblogging Tool* Published Online at Digital directions, June 25 (2008). Retrieved March13, 2013 from http://www.edweek.org/dd/articles/2008/06/24/01twitter_web.h02.html

Lomicka, L. and Lord, G. (2009) The Next Generation: Social Networking and Online Collaboration in Foreign Language learning. *CALCO Monograph Series*, Volume.8

Lomicka, L. and Lord, G. (2012) A tale of tweets: Analyzing microblogging among language learners, *System*, Volume 40, Issue 1, March 2012, Retrieved March13, 2013 from http://www.sciencedirect.com/science/article/pii/S0346251X11001412

Mork, C. (2009). Using Twitter in EFL education, *The Jalt CALL journal*, V. 5, November, 2009, Retrieved March13, 2013 from http://www.jaltcall.org/journal/articles/5_3_Mork.pdf

Nassuora, A. (2012). *Students Acceptance Of Mobile Learning For Higher education in Saudi Arabia*, AASR journal, March 2012,V.4. Retrieved March13, 2013 from http://aasrc.org/aasrj/index.php/aasrj/article/view/248/0

Parry, D. (2008). *Twitter for Academia*, Retrieved March13, 2013 from http://academhack.outsidethetext.com/home/2008/twitter-for-academia/.

Perifanou, M. A. (2009). *Language Micro-gaming: Fun and Informal Microblogging Activities for Language Learning*, Retrieved March13, 2013 from http://www.springerlink.com/content/n022884722442k88/

Reid, A., Houchen-Clagett, D. and Browning, J. (2010) *Twitter: Integration into Developmental English and Technology*. Informing Science Press. U.S.A

Scinicariello, S. (2008). *Que fais-tu? Twitter for Language and Culture*. The University of Richmond, Retrieved March13, 2013 from

http://www.frenchteachers.org/technology/Twitter.pdf

Schmitt , N. (2010). *Vocabulary Research Methodology.* Retrieved March13, 2013 from http://www.beds.ac.uk/__data/assets/pdf_file/0008/40220/NSchmitt.pdf

Ullrich C. et al, (2011). *Why Web 2.0 is Good for Learning and for Research:*

Principles and Prototypes, Retrieved March13, 2013 from http://www2008.org/papers/pdf/p705-ullrichA.pdf

Veletsianos, G. (2011). Higher education scholars' participation and practices on Twitter, *Journal of Computer Assisted Learning*, Volume 28 Issue 4, August 2012, Retrieved March13, 2013 from http://dl.acm.org/citation.cfm?id=2318760

Vroom, V. (1964). *Vroom Expectancy Theory.* Retrieved March13, 2013 from http://www.scribd.com/doc/54049999/Vroom-Expectancy-Theory

Appendixes

Appendix (A)

(Pretest & Posttest)

Name:

1.Translate the following words into Arabic :

sign	reread	won	age
weather	crime	again	laugh
ground	hold	goal	peace
fix	explain	taught	touch
ago	body	area	taste
control	farm	young	fork
bread	field	wall	through
cross	overly	successful	sale
pleasantly	unpleasant	get sick	give up
feel better	strong tea	find out	fell in love

2.A) Add the appropriate prefixes to each of the given words to make new words :

" dis-, non- , mis- , pre- , un- , in- , re- ,under- , out- "

1. agree
2. advantage
3. view
4. read
5. real
6. graduate
7. use
8. native
9. doors
10. dependent

B) Add the appropriate suffixes to each of the given words to make new words :

" -ly , -est , -ful , -less , -ness , -er , -abl , -ize , -tion "

1. simple
2. sick
3. own
4. prevent
5. hope
6. safe
7. wonder
8. sweet
9. enjoy
10. general

2. Fill in the missing letters in the following words :

1. l_ _ves	11. re_ort	21.ser_ous
2. hap_ iness	12. e_sy	22. spec_al
3. overl_p	13. ri_k	23. fo_tune
4. th_ _f	14. fe_r	24.cont_nue
5.bri_ _t	15. p_etty	25. n_sty
6. pre_ident	16.redu_ing	26. dire_tion
7. _ reedom	17.ju_ge	27.s_rprise
8. ga_age	18. sepa_ate	28. eq_ipment
9. overpa_ _	19. mon_y	29.str_ggled
10 . nei_hbor	20. fer_y	30.w_rm

Appendix (B)

Survey Questionnaire

Part 1: (personal information)

Name :

E-mail (for communication purposes):

Part 2: (Statements)

Please read each item carefully and place a tick (√) in the space that you find most suitable.

Opinions on using Twitter for learning English vocabulary.

No	Statement	Strongly agree	Agree	To some extent	Disagree	Strongly disagree
1	Learning English vocabulary on Twitter made this a more interesting course.					
2	I looked forward to reading everyone else's tweets.					
3	I found myself wanting to post tweets.					
4	I liked that we could share links, images and clips related to the new vocabulary.					
5	The information I read in other tweets contributed to a greater sense of class community.					
6	Knowing the people I'm following made me feel more comfortable tweeting in English.					
7	I enjoyed rereading the past tweets of others on my timeline.					
8	I enjoyed rereading the past replies of others on my timeline.					

No	Statement	Strongly agree	Agree	To some extent	Disagree	Strongly disagree
9	The tweets contributed greatly to my knowledge of English vocabulary.					
10	Because of Twitter, I put more time into this class than into a regular English class.					
11	Posting tweets helped build my confidence in writing English.					
12	Twitter reduced my anxiety about learning English.					
13	I was able to infer meaning from the tweets according to the context.					
14	I gained confidence in my abilities as an independent learner.					
15	I learned a lot from the replies to my tweets.					
16	I learned a lot from replying to other students' tweets.					
17	I learned a lot from reading other people's tweets.					
18	Having the teacher reply to the tweets increased the learning potential.					
19	Having the teacher tweet and reply to the tweets increased the motivation.					
20	I enjoyed tweeting vocabulary more than traditional writing assignments.					

Thank you very much for completing this questionnaire
Your responses are highly appreciated.