Developing EFL Writing Skills through WhatsApp Dialogue Journaling

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ABSTRACT

The present study attempts to explore the effects of WhatsApp and Pen/Paper dialogue journal writing techniques on university students' writing performance. 45 freshmen students from Sociology department of State University in Turkey, participated in the current study forming three homogenous groups of 15, namely WhatsApp dialogue journaling (WDJ), pen/paper dialogue journaling (Pap DJW) and the control group. The experimental groups (WDJ and Pap DJW) received 12 treatment sessions expecting students to create dialogues through dialogue journaling while the control group had no treatment except weekly class requirements. Data were collected through a pre- and post-writing test administered to all groups and an open-ended questionnaire on attitudes administered just to the experimental groups. Paired-samples T-test and one-way analysis of variance (ANOVA) were conducted to determine the differences among the three groups while a content analysis was carried out to examine the attitudes. The findings related to the pre- and post-tests of all groups indicated a significant progress in overall writing production. When considering each of writing components separately; however, the differences between the pre and post tests revealed no improvement in vocabulary competence of WhatsApp group or organization skills of control group. On the other hand, pen and paper group students made a remarkable progress in all writing components. In addition, ANOVA results showed no significant difference among the groups regarding writing overall production or any component performance. Finally, both pen and paper and WhatsApp group indicated positive attitudes and a great desire towards utilizing dialogue journaling in EFL writing classes. This study will help teachers and learners of English and researchers to find out the efficacy of target writing techniques and thus make appropriate decisions concerning EFL learning.

INTRODUCTION

Today, technology seems to have entered in many lives at a large extent. Making communication easier, mobile phones might easily be observed to be the most popular of the technological devices used by people in all ages. They have innovative features and thus are called as smart phones which offer easy communication through internet and enables people a quick access to e-mails or social networking sites (Montag, et al., 2015). The overuse of smart phones, especially among young people, seems to have urged teachers to seek for its educational benefits for their students.

Writing is accepted as one of the most challenging skills to improve by language learners. Instead of finding ways to facilitate the writing process, teachers are usually prone to correct the grammatical errors in writing resulting in unwillingness and anxiety of students (Garlikov, 2000). However, looking for the methods allowing students to express themselves properly in writing is regarded to have several benefits (Alber-Morgan, Hessler & Konrad, 2007). To achieve this aim, a writing technique, namely dialogue journaling, was first applied with native and non-native 6th grade English speaking students in California (Peyton, 1993). This traditional pen and paper dialogue journaling technique was commonly preferred by many language teachers, especially English-as-a-foreign language (EFL) teachers (Dunlap, 2006). Yet, with rapid improvements in technology, students' interests also change and this shift requires teachers to seek for more technological ways to attract their attention. Thus, the new appearing trends such as WhatsApp, the great popularity of which is quite obvious, bring the need for an elaborative search for their educational practicality.

As the main problem in this research is the need for trendy and effective ways to improve writing production, practicing dialogue journal writing through WhatsApp is considered possibly to be a good alternative to the traditional pen and paper dialogue journaling as a solution. In the light of this consideration, the first aim of this study is to explore whether dialogue journaling is effective on Turkish elementary level EFL students' success of overall writing and five writing components (content, organization, grammar, vocabulary and mechanics). The second aim is to investigate whether WhatsApp dialogue journaling surpasses the traditional pen

and paper way in terms of the referred variables. Finally, this study aims to explore students' attitudes towards the referred journaling practice as a class requirement and whether there is any significant difference between the attitudes of these two distinct groups.

The following research questions were posed to achieve the purposes of this study:

(1) Is there any difference between the pre and post-test mean scores of pen and paper, WhatsApp and control groups in terms of overall performance and five components (content, organization, grammar, vocabulary, and mechanics) of English writing skill?

(2) Is there any difference between the mean scores of pen and paper, WhatsApp and control group in terms of overall performance and five components (content, organization, grammar, vocabulary, and mechanics) in English writing on the post-tests?

(3) What are the students' attitudes in pen and paper and WhatsApp groups towards using the target dialogue journaling technique in English writing classes?

REVIEW OF LITERATURE

According to the ECAR 2016 facts and figures report, 95 % of population lives in a mobile-cellular network area and mobile devices seem to be used in several different areas of life. The field of education is one of those areas affected by the mobile technology because of students' diversified and increasing needs (Bansal & Joshi, 2014). This caused mobile learning (m-learning), which is described as the use of mobile tools as a mediator for any learning process inside and outside the class (Alexander, 2004), to have emerged as a supplementing tool to the traditional way of learning in many educational institutions today.

Becoming a major research topic in education, m-learning concluded positive findings in relation to students' and educators' attitudes (Al-Emran, Elsherif & Shaalan, 2016; Al Hunaiyyan, Alhajri & Al-Sharhan, 2016; Briz-Ponce et al., 2017) and was agreed to offer flexibility of accessing several resources (76%), increase social interactivity (81%) and also to be collaborative (82%) (Bansal & Joshi, 2014).

Mobile Assisted Language Learning

Considering their growing popularity, using mobile devices in foreign/second language education has also been a great focus in research. Upon reviewing the literature, particularly the efficacy of specific applications being installed on smart phones seems to receive attention (Basal, Yilmaz, Tanriverdi & Sari 2016; Shih, Lee & Cheng, 2015). Through relating studies, positive effects of language learning applications in smart phones on students' writing proficiency were concluded (Lee & Kim, 2013). In a similar vein, mobile assisted learning environment offering images, definitions and text based presentations were seen to increase the success in vocabulary (Agca & Ozdemir, 2013) and increase students' retention (Thornton & Houser, 2003). As for students' attitudes, researchers seem to come up with similar views in that students find engagement with mobile technology enjoyable

and highly motivating (Shih, Lee & Cheng, 2015; Thornton & Houser, 2005; Van De Bogart, 2011).

WhatsApp as a Social Media Tool

Social media is defined as a platform in which applications and the content are produced and perpetually modified by all the users in collaboration (Kaplan and Heinlein, 2010). Its rise has led to educational advantages engaging students into conscious learning and providing instructional activities. (Rehm & Notten, 2016; Rezaei & Meshkatian, 2017; Veletsianos & Kimmons, 2016; Wheeler, Yoomans & Wheeler, 2008). Especially WhatsApp, a mobile social media tool, has created great interests for this purpose.

WhatsApp is an online smart phone application which provides users numerous ways of communication such as group talks, individual chats or WhatsApp calls and enables them to share simple texts, multimedia files, contact numbers or even sharing the location (Anglano, 2014). Attracting especially young people, it constitutes 19.85 % of daily smart phone usage, which is 161.95 minutes per day (Montag, et al., 2015).

The popularity of WhatsApp has brought questions in relations with its efficacy in education. In this context, some studies found it influential, motivating and superior to face-to-face learning (Amry, 2014; Barhoumi, 2015; Nitza & Roman, 2016; So, 2016; Trenkov, 2014). Moreover, it was reported to provide in-depth relations and a pleasant environment (Bouhnik & Deshen, 2014), and an easy share of course related information (Barhoumi, 2015; Willemse, 2015). Furthermore, it was suggested to create collaboration among students (Bansal & Joshi, 2014; Willemse, 2015) and provide communication opportunities for post course sharing.

In respect with students' attitudes towards the educative use of WhatsApp, a number of advantages were demonstrated in the literature (Amry, 2014; Bansal & Joshi, 2014; Nitza & Roman, 2016; So, 2016) one of which is offering a non-restricted area for students to express themselves freely and thus increasing participation (Trenkov, 2014). On the other hand, WhatsApp was sometimes found disruptive and thus the traditional learning techniques were more preferred in classroom (Bansal & Joshi, 2014) or seen as disadvantageous due to the potential of technical problems, internet disconnection, irrelevant messaging, the lack of a suitable smartphone (Bouhnik & Deshen, 2014) and creating time consuming chats which cause concentration deficiencies and problems for balancing academic preparation (Yeboah & Ewur, 2014).

WhatsApp in Language Education

Research primarily emphasized the effectiveness of WhatsApp on different components of writing skills such as writing voice (Alsaleem, 2013; Hani, 2014), generating ideas (Fattah, 2015), the ability of mechanics and punctuation (Fattah, 2015), creating good sentence structures (Andujar, 2016), effective word choice (Alsaleem, 2013; Hani, 2014; Jafari & Chalak, 2016), and teaching idioms (Basal, Yılmaz, Tanrıverdi & Sari, 2016). On the other hand, through some studies WhatsApp was claimed to destroy the sentence structure and spelling in English (Andujar, 2016; Yeboah & Ewur, 2014).

Considering students' attitudes towards using WhatsApp in class, research revealed fun (Alsaleem, 2013), motivation and satisfaction (Winet, 2016), willingness (Fattah, 2015) and positive beliefs towards its efficacy in language learning process as it is easy to use and offers quick share of information (binti-Mistar & Embi, 2016).

Dialogue Journaling

A solution to writing problems that many EFL students challenge with has persistently been investigated by the recent research. Concordantly, dialogue journal writing has been found to be one of the effective instructional strategy offering an interactive engagement as well as authentic practice for both teachers and students in EFL classrooms (Dunlap, 2006; Denne-Bolton, 2013). Peyton (1993) defines dialogue journaling as a written conversation enabling one-to-one communication between teacher and learners on a regular basis in or out of the class during a school period. Students are free to write as much as they would like and receive a response by peers or the teacher relating to their questions or comments. The teacher is not an evaluator but just a participant and may initiate new topics or ask questions.

Upon reviewing the literature, studies seemed mainly to emphasize on two ways of dialogue journaling, the conventional and electronic way. In the conventional way, students and teachers create their entries with a pen and paper mostly in classroom with no integration of technological devices. The other, in contrast, requires a teacher-student or student-student interaction through an electronic platform (Naba'h, 2012). The research investigating the academic efficacy of both ways showed that practicing dialogue journaling on a daily base, students use the language in real and meaningful context, feel free to express themselves and have the opportunities of learning a new culture besides sharing their own (Kim, 2005).

When considering academically, some studies suggested practicing dialogues to have no significant effect on EFL writing performance (Richards, 1995; Yoshihara, 2008). Controversially, other studies based on the electronic dialogue journaling techniques found significant improvements on voice and vocabulary choice (Alsaleem, 2013; Madkour, 2016) besides students' writing styles (Madkour, 2016) through WhatsApp and Google documents.

In consideration of attitudes, dialogue journaling via both electronic and traditional ways mainly received positive comments (Wang, 1996; Ruan & Beach, 2005; Yoshihara, 2008) from students reporting it to be a good way of being efficient in writing (Thorson, 2011).

Theoretical Framework

This research is theoretically based on the Framework for the Rational Analysis of Mobile Education (FRAME) model as the students are in a social activity in which interaction is a key (Koole, 2009). According to this model, mobile learning is defined as a process arising from the convergence of mobile technologies, social interaction and learning capacities of humans. The model is supposed to be beneficial in the design of learning and teaching strategies for mobile education through a consideration of personal and social aspects of learning besides technical characteristics of mobile tools. It refers to a learning model in which learners use various virtual and physical situations via an interaction mediated through technology with other people, systems or information at any place and time.

METHODOLOGY

This study was carried out in a mixed method design. The methodology used for the study is explained under participants and setting, instruments, procedure, and data analysis parts below.

Participants and Setting

Participants of this study were 45 (12 males, 13 females) students majoring in Sociology department of a state university in Turkey. The study was conducted in the Fall term of 2016-2017 academic year. The students were at the elementary level defined by the university's proficiency exam. Considering the students' preference for what groups they would like to take part in, the availability of the necessary possessions (smart phone, internet access, etc.) and the scores of the writing task in the background questionnaire administered to students beforehand, three homogenous groups equivalent in mean score of writing task were formed to avoid the selection bias which also ensured the internal validity. Fifteen students were selected for each group including one control and two experimental groups namely WhatsApp dialogue journal writing (WhatsApp DJW) and pen and paper dialogue journal writing (Pap DJW).

Data Collection Instruments

Data was collected through (a) a writing test, (b) a background questionnaire (with familiarity questions and a writing task), (c) an attitude questionnaire (including open-ended questions).

Writing test

A writing test was administered before and after the study (See Appendix A). The coefficient value of Pearson Correlation between test-retest results was calculated and, with 0.96 coefficient rate, the test was accepted to be reliable for the aim of the study. For validity concerns, two other English teachers were asked to review the first version of the test to evaluate its appropriateness regarding the issues of content, students' age, interests and level in English. Based upon the suggestions, the test was revised and included sub-questions to help participants for what they preferred to write about.

Background questionnaire

A background questionnaire was administered to whole forty-five students (See Appendix B). The questionnaire provided information about students' age, gender, familiarity

with technology and WhatsApp, frequency of being online via a mobile phone, writing proficiency, whether they have a smart phone or not, etc. Students were also asked for a voluntarily participation in this research and to prefer a group to be assigned in.

Attitude survey

Data considering students' attitudes towards using the dialogue journal technique via both WhatsApp and pen and paper were obtained through open-ended questions (See Appendix C). The participants were asked to express their feelings through dialogue journaling on the target writing tool in the last treatment session.

Procedure for Experimental Group 1: WhatsApp DJW Group

This group included fifteen students who had an easy access to internet with a Wi-Fi connection, possessed a smart phone and usually preferred WhatsApp for communication. The researcher was the sixteenth member of the group as a facilitating participator as well as being an observer or coordinator when it was necessary. Each week the members had previously agreed three sessions at 8 pm on the planned day. The average duration for conversations was around three hours. The rules and the discussion time were reminded to participants thirty minutes before each session. This time was allocated to enable full participation and preparation for WhatsApp discussion. Each student shared his or her feelings, thoughts and experiences relating to the day's discussion topic. They were free to comment on others' entries, post any videos or pictures and create casual talks spontaneously as well as asking each other and the researcher any questions. These twelve sessions were usually held in three day intervals.

Procedure for Experimental Group 2: Pen and Paper DJW Group

Including other fifteen students, this group was expected to write their entries on a notebook previously supplied by the researcher during each journaling session. Similar to the WhatsApp group, they wrote the entries on three different days throughout four weeks to reach a total of twelve sessions. The discussion topics and the date for each session were the same as the WhatsApp group, yet dissimilarly, they wrote the journals individually at home. Participants were also received a time schedule indicating the date of the sessions. Every student submitted their journal to the researcher on the assigned time so that the researcher could respond their questions, make comments and initiate a different discussion topic for the next session.

Procedure for the Intervention Sessions

The procedure of the twelve intervention sessions in both experimental groups was exactly the same. First session with discussion topics and the questions were provided below:

Session 1

The first session started at 8 pm. The topic and related questions are quoted as below:

> Researcher: "Describe your school day/day today" You can inform us about (1) what time you got up, (2) what time and how you went to school, (3) how many classes you had, (4) what classes they were, (5) what you did after school and finally (6) whether it was a good day for you. Write at least ten sentences to describe your day please."

In the following Figure 1, there are two sampling images representing WhatsApp and pen and paper group students' replies.

Procedure for the Control Group

This group involved the other fifteen participating students selected from those who were reluctant to participate in any intervention group or had no access to a smart phone or internet but still desired to take a part. No treatment session was applied during the total intervention time yet the group was administered the pre and post-test as well. Each week the class had three-hour English course following the course book.

Data Analysis

The writing prompts in the pre and post tests were assessed by three different English teachers to ensure inter-rater reliability with the help of a writing rubric, a modified version of Jacobs, Zinkgraf, Wormuth, Hartfiel, & Hughey's (1981) scale. The rubric consisted of five features namely content, organization, grammar, word choice and mechanics each of which was given a score from 1 to 5 depending on performance. The pre- and post-test results were analysed through Paired-samples T-test and ANOVA.

RESULTS

Overall Writing Performance and Writing Components of Each Group

The first research question was asked to explore whether there is any difference between the pre and post-test mean scores of pen and paper, WhatsApp and control groups in terms of overall performance and five components (content, organization, grammar, vocabulary and mechanics) in English writing skill. Paired-samples T-test was employed to find out the differences of pre and post mean scores as shown in Table 1.

Results related to overall writing success

Showing the paired-samples T-test results based on the pre and post-test scores of students in WhatsApp, pen and paper and control groups, three tables were provided below to demonstrate the overall writing progress of these three groups within the intervention time.

As it is seen in the table above, there is a significant difference between the pre and post writing test scores of WhatsApp group (p =0,004 < 0,05), pen and paper group (p =0,003 < 0,05), and control group (p =0,002 < 0,05), which
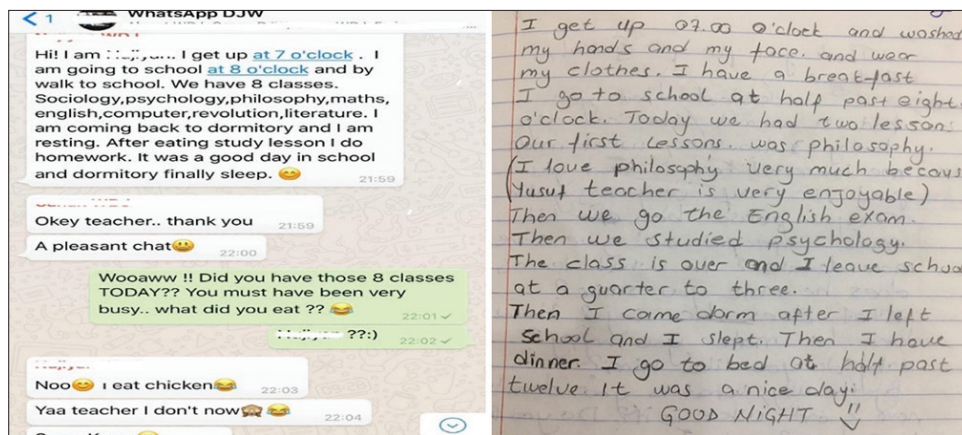
Figure 1. WhatsApp and pen and paper dialogue journaling samples from session 1

Table 1: Paired Samples T-test results relating to the overall writing success

		Paired differences							
Tools	Tests	Mean	Std. Deviation	Std. Error mean	95% confidence interval of the difference		t	df	Sig. (2-tailed)
					Lower	Upper			
WhatsApp	Pre-Test-Post-Test	-8,46	9,42	2,43	-13,68	-3,24	3,47	14	**0,004**
Pen/paper	Pre-Test-Post-Test	12,13	13,20	3,40	-19,44	-4,82	3,56	14	**0,003**
Control	Pre-Test-Post-Test	-7,20	7,58	1,95	-11,39	-3,00	3,67	14	**0,002**

clearly shows that students in all groups made a significant progress during the target one-month intervention session.

Results related to the success in writing components of each group

Based on the difference between students' pre- and post-tests regarding the five components of writing skill, statistics indicated that WhatsApp dialogue journaling technique has a positive effect on students' content (p=0,010), grammar (p=0,011), organization (p=0,025) and mechanics (p=0,003) performance in EFL writing while no significance was found on their vocabulary skills (p=0,228). The pen and paper group showed significance in all writing components (content p=0,010; organization p=0,40; vocabulary p=0,021; grammar p=0.031; mechanics p=0,014). There is a significant difference on the post-tests of the control group students in terms of content (p=0,030), vocabulary (p=0,011), grammar (p= (0,014) and mechanics (p=0,010) in contrast with their organization skills (p=0,371).

Overall writing performance and writing components between groups

To answer the second question of this research asking whether there is any significant difference between the mean scores of WhatsApp, pen and paper and control group relating to the overall writing achievement and five writing components on the post-tests, the groups' post-test scores were compared. One-way analysis of variables (ANOVA) was administered to the post-tests.

Table 2: ANOVA results between groups in terms of overall writing success on the post-tests

	Sum of squares	df	Mean square	F	Sig.
Between groups	124,57	2	62,28	0,39	**0,677**
Within groups	6642,40	42	158,15		
Total	6766,97	44			

Results related to overall writing success between groups

One-way analysis of variance (ANOVA) was employed to explore any significant difference between the groups relating overall writing success on the post-tests. Table 2 shows the results.

Comparing the post-test mean scores of the groups, ANOVA results concluded that there is no significant difference among the groups in terms of overall writing performance (p=0,677>0,05) which means none of these groups outperformed each other in this sense.

Results related to the performance of all groups in writing components

None of these groups is significantly superior to the others in the knowledge of content (p=0,677), organization (p=0,107), grammar (p=0,504), vocabulary (p=0,836) and mechanics (p=0,827). The results obtained from ANOVA in relation to the success in writing components are as in Table 3.

Attitudes towards using dialogue journals

The third research question investigated students' attitudes towards using WhatsApp and pen and paper dialogue journaling techniques in English writing classes. A content analysis was employed for the data obtained from the attitude survey on which students were free to answer the questions separately. The following parts will present the results of the content analysis of attitudes from each group and exemplify the most frequent student answers.

Attitudes of WhatsApp DJW group students

All students preferred to provide the answers through posting just one entry.

Figure 2 shows student responses for questions on attitudes towards using WhatsApp to support the class work. As it can be seen in the entries above, students expressed their satisfaction with this practice. It is obvious that they liked it so much and had fun during the time they were journaling. Moreover, most students claimed that the treatment was academically contributive and they feel more comfortable to express themselves in English.

Attitudes of Pen and Paper DJW group students

Students in pen and paper group demonstrated fun in this kind of dialogue journal writing technique as those in WhatsApp group (Figure 3).

These results also show that they find the pen and paper journaling useful for practicing English. It can be clearly seen that they feel improvement in their English to some extent thanks to this practice. Besides, these students also expressed a desire for the continuation of practicing these kinds of activities in the future as WhatsApp group students did.

DISCUSSION

Based on the aim of this research, the first research question was asked in an attempt to explore whether the students show any significant progress in English writing overall and

Table 3: ANOVA results regarding all groups in terms of writing components (posttest)

		Sum of squares	df	Mean square	F	Sig.
Content	Between groups	8,57	2	4,28	0,39	**0,677**
	Within groups	457,20	42	10,88		
	Total	465,77	44			
Organization	Between groups	19,73	2	9,86	2,36	**0,107**
	Within groups	175,46	42	4,17		
	Total	195,20	44			
Vocabulary	Between groups	11,20	2	5,60	0,69	**0,504**
	Within groups	338,00	42	8,04		
	Total	349,20	44			
Grammar	Between groups	2,80	2	1,40	0,18	**0,836**
	Within groups	326,40	42	7,77		
	Total	329,20	44			
Mechanics	Between groups	4,44	2	2,22	0,19	**0,827**
	Within groups	488,80	42	11,63		
	Total	493,24	44			

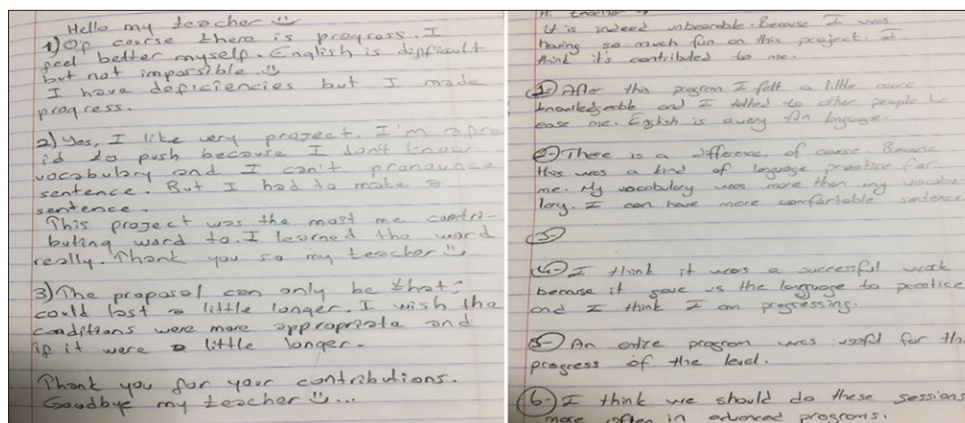**Figure 2.** Sample responses relating to attitudes from WhatsApp group

Figure 3. Sample responses relating to the attitudes from Pen and Paper group

component performance through using WhatsApp and Pen and Paper dialogue journal writing techniques or just being exposed to the class work without any treatment like the control group did within this study. Considering the first experiment group, the analyses related to this question confirmed the efficacy of WhatsApp on students' overall writing performance ($p=0,004<0,005$) as in some other related studies in the literature (Alsaleem, 2013; Lee & Kim, 2013; Fattah, 2015). Parallel with Amry (2014) and Barhoumi (2015), the WhatsApp academically turned out to be an effective and facilitating tool for learning practices. However, when the competence of writing components in WhatsApp group were taken into account, while significant differences between the pre- and post-test in terms of the content, organization, and mechanics competence were concluded, no significant difference was found relating the vocabulary competence in writing. These results are controversial when compared to other studies suggesting mobile assisted learning environment to increase the vocabulary competence (Agca & Ozdemir, 2013) and also WhatsApp to be a great tool for acquisition of collocations (Ashiyan & Salehi, 2016), effective word choice (Adujar 2016; Alsaleem, 2013; Fattah, 2015; Hani, 2014 Jafari & Chalak, 2016) and teaching idioms (Basal, Yılmaz, Tanrıverdi & Sari, 2016). This inconsistence may be caused because of the students in WhatsApp group were free to participate in the conversation or follow it regularly in this study. Additionally, the time allocated for the treatment sessions was limited to between two or three hours for each session. Moreover, students may presumably have used Google translation whenever they need and, if so, this may have prevented them to attempt a search for new vocabulary. Finally, the irrelevant messages and frequent attempts to speak in L1 may have also affected the vocabulary improvement of this group. On the other hand, considering the improvement in the mechanics of writing, the results supported some researchers who reported the positive contribution of mobile learning (Shih, Lee & Cheng, 2014) and WhatsApp (Fattah, 2015; Andujar, 2016) to spelling and punctuation in English writing while they opposed to the findings obtained by Yeboah and Ewur (2014). Likewise, regarding the content knowledge, the results are consistent with Fattah (2015) suggesting WhatsApp to be effective in generating ideas, yet grammatical competence in writing turned to have

controversial results. While this study verifies Fattah (2015) and Adujar (2016) for the efficacy of WhatsApp in creating good sentence structures, it contrasts with Yeboah and Ewur (2014) indicating that it ruins the sentence structure and Adujar (2016) in terms of its efficacy on sentence diversity and syntactic complexity.

Similar to the WhatsApp group, the results in respect with the pen and paper group found significant differences between the pre and post-tests revealing the effectiveness of this technique on overall writing and all writing components. The study concluded parallel results with Song (1996) suggesting dialogue journaling to improve the quality of writing in English. In contrast, it disagreed with Richards (1995) and Yoshihara (2008) concluding this technique to have no significant effect on EFL writing because in fact it turned out to improve certain writing components in this study.

The second research question asked which group did better on writing. The ANOVA results showed no significance among all groups which means no group is better than the others. This result contradicts with several researchers such as Basal, Yilmaz, Tanrıverdi & Sari (2016) claiming that teaching English idioms through a mobile application is superior to the traditional class activities or Agca & Ozdemir (2013) concluding mobile learning to bring vocabulary success. However, this study showed no efficacy of WhatsApp use as a writing tool on English vocabulary improvement. Moreover, when considering WhatsApp as a kind of electronic journaling like e-mail, unlike the present study, some studies concluded with the superiority of the electronic way of dialogue journaling over traditional way in terms of writing achievement (Naba'h, 2012; Wang, 1996). The nature of the type of electronic journaling, either e-mail or WhatsApp, might be the reason for this contradiction, though. Or else, the time allocated for the current study, which is just 4 weeks, may not have become sufficient to provide similar results as compared ones which lasted longer.

Regarding the final research question attempting to investigate students' attitudes towards utilizing the two dialogue journal writing techniques through the course, both groups reported similar positive feelings, beliefs and attitudes. They reported joy in practice and seemed quite satisfied with being a participant and willing to continue the treatment sessions. Students were also found to believe the intervention

to be effective for their English and to feel more comfortable in expressing themselves while speaking English. In consideration with the related literature, these results supported a lot of researchers reporting high satisfaction and motivation towards utilizing the advantages of mobile learning and great desire to be educated with mobile technology. (Amry, 2014; Barhoumi, 2015; Nitza & Roman, 2016; Thornton & Houser, 2005; Trenkov, 2014; Shih, Lee & Cheng, 2014; So, 2016; Van De Bogart, 2011; Winet, 2016). Similar to the literature, the students considered WhatsApp to be educationally useful (Bansal and Joshi, 2014; binti-Mistar & Embi, 2016) and practical to continue as a supporting learning tool for the course (Fattah, 2015; Mistar & Embi, 2016). Finally, the results revealing participants' positive comments are consistent with the literature suggesting students' favourable thoughts of dialogue journal writing (Kim, 2005; Ruan & Beach, 2005; Thorson, 2011; Wang, 1996; Yoshihara, 2008).

Implications

This study provides some educational implications for the use of technological devices, mobile learning and social media as well as communicative dialogues in EFL writing classes for teachers and learners of English or material and curriculum designers. First of all, seeing that students find technology engagement via social media apps or mobile learning techniques into class work quite satisfying and enjoyable, the teachers might create new course plans involving the use of a mobile device or social media platform to attract more interest. Moreover, in consideration with students' great desire against the continuation of the two types of dialogue journaling practice in this study, teachers or other course designers might intend to apply more for such activities in their term plan. Similarly, this study gives teachers the idea to use these techniques into class work with the aim of seeing students' mistakes and progress within the learning process and redesign the course accordingly.

One of the fundamental limitations of this study, on the other hand, is the number of the population which is only forty-five in total and fifteen in groups. However, being able to generalize the findings, this study is essential to be conducted with a bigger sample included in each group.

Another important limitation is related to the writing scale used to score the WhatsApp group's pre and post-tests. As the intervention sessions of this group were based on texting rather than paragraph or essay writing, a possible improvement or success failure in some components, particularly the organization in writing, might not depend on the target tool. Developing a texting rubric through which the tests of WhatsApp group are scored might give better and more reliable results.

Moreover, this study is limited only to the elementary level university students and, for WhatsApp group, those who owned a smart phone with constant internet connection. With a different group of sample, the study might produce different results. Therefore, more research should be conducted with participants in different qualifications to explore whether or not the results resemble each other.

CONCLUSION

In summary, this study firstly aimed to find out the efficacy of two kinds of dialogue journal writing techniques on EFL writing production. To achieve this goal, the improvement rate in each of five different writing components was measured separately. Next, the study aimed to explore whether WhatsApp contributes more to EFL writing performance as a dialogue journaling technique than the conventional way. Finally, the present study also aimed to investigate students' attitudes about utilizing such dialogue journal writing techniques as a supporting tool for improving writing skill in English.

Upon administering the intervention sessions to the target groups, with the help of the instrumentations including pre-post tests and questionnaires, the analyses demonstrated that while pen and paper group showed a progress in the post tests regarding both the overall performance and five writing components, WhatsApp group failed to reveal improvement in vocabulary competence as it did in the other components. On the other hand, the control group also reported a progress in overall and all writing components except organization competence. However, there was found no significant difference when all these three groups were compared in the post tests regarding any of the target variables, which is consistent with a few studies while not with some others.

Although the study found some contradictory results with the literature, it is still in consistence with the Frame Model (Koole, 2009) and the Collaborative Learning Theory in that it confirmed the positive effect of social interaction and collaboration as well as utilizing mobile technological devices into teaching and learning process.

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APPENDIX

APPENDIX A: WRITING PROFICIENCY TEST (PRE-POST TEST)

There are two different topics below. Please choose only ONE of them and write your ideas using at least 150 words. (Use the back side of the page.)

1. Describe your favorite sport. Answer the following questions.
    a. How is it played?
    b. How many players are needed?
    c. What is the best place and condition to do that sport?
    d. What is the equipment needed?
2. Describe the problems of university students. Answer the following questions.
    a. What kind of problems do they have?
    b. What should be done to solve these problems?
    c. What do the students need to have a better education?
    d. What would you like to have in the campus?

APPENDIX B: BACKGROUND QUESTIONNAIRE

Name/Surname:
Age:
Phone number/E-mail: Gender: Female ☐ Male ☐
Please answer the following questions. Put a cross (X) when it is necessary.
1. Do you use a smart phone? YES ☐ NO ☐
2. Do you always have internet connection? YES ☐ NO ☐
3. Do you use WhatsApp application in your smart phone? YES ☐ NO ☐
4. How often do you use WhatsApp to communicate with others?
I NEVER use WhatsApp to communicate. ☐
Once a day ☐
More than 3 times a day ☐
Once a week ☐
I ALWAYS use WhatsApp to communicate.
5. What purpose do you use WhatsApp for?
6. Would you like to participate in the one month "Dialogue Journal Writing" program? If yes, which one do you prefer? Please put a cross. (X)
    WhatsApp DJW ☐ Pen and Paper DJW ☐
7. Write a paragraph describing yourself and your family. Describe each person's age, job, hometown, physical appearance, hobbies and interests. (Write at least ten sentences.)

APPENDIX C: ATTITUDES QUESTIONS

1) Did you like writing dialogue journals through WhatsApp/Pen and paper as a requirement of the course?
2) Do you think this project has contributed much to your English? How?
3) How do you feel while expressing yourself in English now?
4) Do you feel more comfortable?
5) Do you have any suggestions or anything to add?