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Days without schools: The effectiveness of WhatsApp, as an English learning tool, during COVID-19 pandemic

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Abstract:
Due to the spread of COVID-19 epidemic, many schools, colleges and other higher education institutions around the globe were forced to close and go online. The purpose of this study was to investigate the impact of WhatsApp, as an English learning tool, on EFL students' writing skills during current epidemic. A total of 38 English major students during spring semester of 2020 participated. The participants received traditional instruction at the first half of the semester and throughout multiple e learning tools in the second half. Data were collected using test and retest. The findings of the study revealed that 1) students found WhatsApp helpful and engaging as a learning tool, 2) although students' writing scores were slightly higher after using WhatsApp, the difference in students' writing competence was not statistically significant, 3) switching the traditional mindset of students and instructors was a real challenge, and 4) mobile and online learning succeeded as a convenient substitute to the traditional methods.
Keywords: Absence of schools; WhatsApp; Covid-19; EFL students; writing skills.

1. Introduction

Since the beginning of 2020, teaching and learning has taken a huge unexpected turn with the spread of COVID-19 pandemic around the world. The world of academia, schools, and colleges were for the first time forcibly put on hold as classes in many, if not all, schools and colleges either were cancelled or suspended (Adnan & Kainat, 2020). With the pandemic severely hitting many countries, online and mobile teaching and learning were the only safe options available. As a result, E-learning and virtual mediators have for the first time become a must or the only safe alternatives available for teaching and learning in schools and colleges (Bilos, Turkalj & Kelic, 2017).

According to the latest number released by the UNESCO on April 05, 2020, there were more than 1.8 billion students around the world affected and being prevented from attending schools and universities to stop the spread of the epidemic. The number of cases and affected students is still growing, moreover. Many schools, colleges campuses, classes and libraries were all locked down, and many conferences lap sessions and sports activities were totally cancelled. This means that around 80 percent of students around the world were kept out of schools, pre-schools, colleges and other higher educational institutions (McCarthy, 2020).

Moreover, as the situation of COVID-19 globally evolves more, teaching and learning become more complicated as people become worried about their lives, health and safety. As a result, some lenient roles and policies were enacted as distance teaching and learning become the only option available. In spring 2020, for instance, college students were, for the first time ever, given some virtues such as the freedom to drop out a class at any time, reduction of final exams' marks, and not counting any grade less than the students' current GPA's prior to spring semester.

With the advent of the mobile apps, WhatsApp, the instant messaging app, becomes very popular among college students and instructors. WhatsApp has some advantages over other apps that seem to be more effective in educational settings such as simplicity, free of cost, accessibility, and flexibility to teach anytime and anywhere (Sonia & Rawekar, 2017). It can also be installed on multiple platforms, smartphones or desktops (Lu & Churchill, 2014). The current study investigated the effectiveness of using WhatsApp, as a learning tool, during COVID-19 pandemic on the writing of EFL students taking ENG 244 class, Advance Writing. WhatsApp was used in the current study as a learning tool in some assigned tasks, done by students as individuals or in cooperative groups. The main question for the current study focused on students' learning progress as:

1) Are there statistically significant differences in students' writing skills because of

switching the instruction type during spring 2020 due to COVID-19?

2. WhatsApp as a learning tool

Emerging social media applications, such as WhatsApp, have been frequently used in the teaching pedagogies. WhatsApp, created in 2009 by Brian Anton and Jan Koom, two Yahoo employees, is a free instant messaging app that can easily and freely be installed in many mobile devices with different types of operation systems like the iPhone and android. The app enables users to make voice or video calls, and audio or written messages for individuals or groups, and exchange files, photos, images and text messages simultaneously.

The active users of WhatsApp are now widely and rapidly growing around the globe as it has been estimated that there are more than 2 billion active users for WhatsApp around the world. The app is characterized as a provider for unlimited learning opportunities (Gachago et al., 2013). WhatsApp has been popular among students in schools and colleges, and considered the most-used messenger app by university students (Aburezeq & Ishtaiwa, 2013).

WhatsApp has many features that make it an effective learning tool. Bere (2012), for instance, listed some of WhatsApp's collaborative features such as a) group chats in which simultaneous group chat and messages is possible for up to 50 users or more, b) unlimited number of messages which allow users to send unlimited instant messages of multiple types such as images, voices or videos, files and texts, c) free installation on multiple platforms, smartphones and desktops, and d) and offline instant messages which enable devices to save the received messages automatically even if the device is off.

Using WhatsApp as a learning tool has been recently spreading among many students around the globe. Many recent studies have mentioned some of the unique features embedded in many applications in the mobile devices such as low cost, easy accessibility, and ability to make the learning environment (Avci & Adiguzel, 2017; Alzubi & Singh, 2018). However, the current literature lacks the discussion on the extent to which WhatsApp is effective in teaching English and the perspective of learners themselves. This study investigated the use of WhatsApp as an effective learning tool in teaching and learning of English writing.

3. Literature Review

There are growing evidence in the current literature that mobile apps have significant potentials to support learning and teaching, open opportunities to many online accessible resources, and focus more on students' creativity, involvement, flexibility, and meaningful learning (Chamorro, 2018). For instance, Albert (2013) stated that using mobile apps for English teaching and learning would eventually benefit students greatly in many different ways. Using technology and mobile apps in the process of learning and acquiring a foreign language would somehow enrich students' learning, connect them with the real world of English and, perhaps, create opportunities to communicate with the native speakers.

WhatsApp, the instant messaging app, has been widely considered in the current literature as emerging effective learning app. Amry (2014) explored WhatsApp effectiveness as a mobile learning tool comparing the achievements and attitudes of online students with their counterparts in the control group who studies only through face-to-face instruction. Amry found that using WhatsApp instant messaging app was effective and students in the experimental group performed better with higher achievement scores than their counterparts in the control group who received only the face-to-face instruction.

Similarly, WhatsApp has been found a significant factor in raising students' motivation to learn and progress and interact in more meaningful ways with others. Plana et. la (2013) found that WhatsApp was an effective learning tool which not only improved English reading skills among students in Spain, but also increased their motivation and attitudes towards reading English texts and passages. Subjects in their study called WhatsApp as 'transnational platform' which encouraged them to share their thoughts, feelings, and concerns with others and express themselves freely with no restrictions.

Moreover, Aburezeq & Ishtaiwa (2013) found that WhatsApp could and would develop three levels of interactions with various extents: student-content interaction (54%), student-student interaction (71%), and student-instructor interaction (42%). The study, moreover, expressed the fact that WhatsApp provided a virtual time and space for sharing ideas, feelings, and exchange of knowledge and information.

However, recent studies stressed the fact that the current situation of mobile teaching and distance learning during COVID-19 pandemic is indeed novel and unique. It has brought learning and teaching into a mess or more accurately crisis (Pace, Pettit, & Barker, 2020). With a very short

notice, many educational institutions or organizations found themselves in urgent need to adjust their teaching methods, change tools in their instruction, lesson plans, assessment tasks and train their instructors and students with the new learning managements' apps and systems (Toquero, 2020).

In addition, Adnan and Kainat (2020) argued that the present-day situation of online teaching and learning is entirely different than before because most, if not all, of the educational institutions around the globe were forced to switch to distance teaching and learning regardless of their limited funds, resources, or even readiness. Moreover, Kaur (2020) believed that the fear of COVID-19 spread among students in schools and colleges compelled academic experts and policy makers in many countries to not only reconsider distance learning, but also gives the right and responsibility to teachers and instructors to choose the learning app they prefer.

As a result of the current situation, some characteristics should be found in students to be able to cope well with online learning classes (Vrasidas & Glass, 2002; Bell & Akroyd, 2006; Major, 2010). Self-motivation, independence, and self-regulation are some of the characteristics that frequently emphasized in the literature as necessary for students to possess (Palmer, 2012; Xu & Jaggars, 2014). Failure to possess such characteristics would more likely result in failing the online classes.

Arias, Swinton & Anderson (2018) stressed the fact that although learning online often allows for some freedom, it requires more discipline and dedication from both teachers and students. With the absence of the traditional imposed class schedule, organizing time and scheduling their tasks in timely frames are some of the essential disciples require for effective online class.

4. Methodology

The current study investigated the effectiveness of WhatsApp as a dynamic learning tool during schools and colleges' suspension. Spring 2020 was a unique term in which all students in Saudi Arabia received two different types of instruction in two phases due to the outbreak of COVID-19 pandemic: 1) phase I, face to face instruction which lasted about '6' weeks from the beginning of the semester, and 2) phase II in which students received instruction via one of the most convenient mobile or learning platforms for students and teachers lasting around '5' weeks from week '8' till the end of the semester. Week '7' was the week in which suspension of colleges' attendances occurred and classes were all cancelled.

Participants' writing skills were measured twice: a) first at the end of phase I and during week '6' which students received face-to-face instruction, and b) retest their writing skills at the end of phase II in week '12' and after they received intensive instruction via WhatsApp. Participants during phase II were provided instruction and given assigned writing tasks. They used WhatsApp to write and exchange written messages to do the writing tasks as individuals and in groups. These tasks asked to write short essays on the same topic using the writing techniques studied in the course.

During the second half of the semester, students experienced major interruptions in teaching and assessments which had just turned into a mess. WhatsApp, as an instant messages app, was an educational savior and used as a popular instruction type among teachers and instructors in Saudi Arabia. It has become one of the leading apps for voice and video chatting and teaching widely used for live teaching, coaching, learning and virtual communication and training. It provides synchronous online learning and generates learning-oriented interactions with an easy and reliable platform for writing, video and audio collaborations.

Purposive sample was used to collect the data. The total number of participants was 38 male students majoring in English at Qassim University who, with their consent, participated in the study. The following table illustrates the characteristics of participants:

Table 1: **Demographic Characteristics of the Participants**

Characteristics	N	Percentage	Rank
Level of education	(n=38)		
Sophomore	27	71.2	1st
Junior	11	28.8	2nd
Age:			
>21	23	60.5	1st
<21	15	39.5	2nd

To achieve the study goals, mixed methods were used. Test and retest were administered to students based on which the quantitative data were collected along with semi-structure interviews to investigate the matter a little deeper.

Moreover, consent forms were given and signed. Participants were all assured about the confidentiality of their personal identifications, and informed about their right to participate or withdraw at any time as their participation in the study was voluntary and used for research purposes

only.

4.1 Data Collection

Spring semester of 2020 was indeed unique for which all students in Saudi Arabia forcibly experienced blended learning and received the teaching and instruction of their classes in two phases: 1) face-to-face lasted for almost '6'weeks form the beginning of the semester, and 2) distance instruction using online platforms or mobile apps, like WhatsApp, which also lasted for another '5' weeks starting from the middle to the end of the semester after the shuttering of schools due to the fear of COVID-19 spread. As a result, all participants experienced the two types of instructions regardless of their learning preferences.

In the study, students received traditional or face-to-face instruction in their advance writing class three hours a week for six weeks. In week 6, subjects were given a test, a writing composition test, at the end of the face-to-face instruction and before the suspension to measure their writing competence. In the test, students were prompted to write a short essay consisting of 180-200 words and instructed to apply the writing techniques they learned in the class. Detailed instructions about the structure of the essay were given to the participants along with clear rubrics based on which their writing would be graded.

Upon the 7th week of spring semester, classes were suspended and students were prohibited from attending. Students and instructors were directed to go online, and they received their distance learning through WhatsApp. The class met twice a week for the same duration. The students spent on WhatsApp learning the same hours as they did during face-to-face instruction. In addition, no other technological means such as other virtual platforms or e mails were required in conjunction with WhatsApp. The switch from face-to-face to WhatsApp occurred with no delay in higher education institutions as the classes were suspended and all were directed to use one of the distance learning platforms convenient for students and instructors. All participants received the same content, materials and instruction via WhatsApp by the same instructor. At the end of the semester, specifically at week 12, retest were given to students. In the retest, students were asked to write a short essay consisting of about 220-250 words, but about a different topic than the topic of the pretest, and handed the same rubric based on which they would be graded.

4.2 Grading

In grading students' writings, a rubric was developed with grades ranging from the lowest 1 to the highest 30. All participants were male students majoring in English & Translation, and taking Advance Writing class. The overall grading of students' writing in the test and retest took the same criteria as in TOEFL consisting of three levels:

a) Limited: when students' scores ranged from 1 - 15.
b) Fair: when the scores ranged from 16- 23.
c) Good: when the scores ranged from 24 - 30.

The grading for the writing essays of each participant was completely anonymous in which each student's writing was given a code ranging from S1 to S38. Students were clearly asked not to put their names or any other identification information. The writings occurred in the test and retest were both persuasive in nature, but with a different topic in each. The researcher and another colleague, an assistant professor at English & Translation department, marked the writing productions and Holsti's formula of inter-coder reliability was computed to measure the percentage of agreement between the two markers of each participants' writings. The Holsti coefficient of inter-coder reliability for the pretest and posttest were 94% and 97% respectively.

Before analyzing the data in SPSS, moreover, the normality of the data was tested using Shapiro-Wilk's normality test ($p > .05$). The results obtained indicated that the data distribution is not significantly different from the normal distribution. Then, in order to do the t test comparison, subjects were divided into two groups based on their writing scores: 1) 1st group consisted of subjects whose scores in pretest were higher than their scores in posttest, and 2) the 2nd group consisted of students whose posttest scores were higher than the pretest.

4.3 Reliability of the measure

The reliability of test-retest was computed by calculating Pearson correlation coefficient using SPSS, the Statistical Package for the Social Sciences. The reliability of test-retest means the consistency of participants' responses in the same administered tests at two different times and occasions (Bardhoshi & Erford, 2017).

The result of computing Pearson correlation coefficient showed a significant positive correlation between the two tests, r (38) = .84, $p < .000$. This means the scores of each participant in the two tests were correlated; participants' relatively high scores in the pretest tended to be associated with high scores in the posttest as well and vice versa.

5. Research Hypothesis:

For the current study, there were two hypotheses:

H $_1$. There is a statistically significant difference at α .05 between students' writing scores in regards to the instruction type used for the posttest, when WhatsApp was used as a learning tool.

H $_2$. There is a statistically significant difference between subjects' groups in regards to their writing competences: limited, fair and good.

6. Results

The current study investigated the impact of using WhatsApp, as a dynamic teaching and learning tool, on EFL students' writing skills. Upon grading subjects' writing essays, each subject was placed in a level of their writing competence based on TOEFL criteria (limited, fair, and good) in both test and retest to determine whether exposures to certain types of instruction would have an impact on their writing competence. The following table shows the central tendency of students' writing skills in each group.

Table 2. **Central Tendency of Participant' Three Levels of Writing Competence**

Test				Retest					Writing
Max	*Min*	*SD*	*M*	*Max*	*Min*	*SD*	*M*	*N*	Competence
15	8	3.19	11.17	14	5	3.93	9.5	6	Limited
23	19	1.31	20.52	21	16	1.6	19.2	19	Fair
29	25	1.45	26.53	26	24	.81	24.8	13	Good

As the above table shows, the students' average scores in the retest were higher than their average scores in the first test, which indicate that WhatsApp was effective as a dynamic teaching tool. Upon measuring the central tendency of data, One-Way ANOVA with one between-subjects factor was then the statistical test performed through SPSS to measure any statistical significant difference between the three treatment groups: limited, fair, and good in regards to their writing skills. The following table summarizes the findings.

Table 3. **ANOVA Summary Investigating the Differences in Subjects' Writing Competence**

Source	*Df*	*SS*	*MS*	*F*	*P*
Test Between groups	2	972.73	486.36	130.60	.000
Within groups	35	130.35	3.72		
Total	37	1103.16			
Retest Between groups	2	982.77	491.39	161.03	.000
Within groups	35	106.80	3.051		
Total	37	1089.56			

Note: *N* = 38

As table 3 shows, results using One-Way ANOVA revealed a statistically significant difference between subjects' writing skills in the three treatment groups, test F (2, 35) = 130.6, MSN= 486, p=.000, and retest F (2, 35) = 161.03, MSN= 491, p=.000. The data showed a statistically significant difference between the mean scores of the three groups in regards to their writing composition skills. As a result, the statistical null hypothesis, H_0, in the population, there was no statistically significant difference between subjects with limited writing competence, subjects with fair writing competence, and subjects with a good writing ability group, can be rejected. In other words, the difference in the treatment groups in test and retest based on the instruction type, WhatsApp versus face-to-face, was statistically significant.

To statistically assess the impact of instruction type, namely WhatsApp as dynamic online teaching versus face-to-face, subjects were divided into two groups: 1) the 1st group consisted of subjects whose test scores in writing were higher than their scores in the retest, and 2) the 2nd group of subjects whose retest scores were higher with '20' being the cut point between the two since the lowest score was '5'. In other words, subjects whose average writing scores were ≤ 19 were put in one group, and subjects whose average writing scores were ≥ 20 were put in another group. Scores were rounded to the nearest number.

To determine whether subjects' average mean scores in the test was significantly different from the average mean scores in the retest group in respect to their writing composition skills based on the instruction type, independent-samples *t* test was then performed using SPSS to compare their average mean scores of subjects in regards to their writing skills. Table 4 summarizes the findings.

Table 4. **Summary of t Test results in regards to the instruction type, WhatsApp v. face to face**

Subjects	*N*	*M*	*SD*	*t*	*df*	*p*
test	21	20.67	4.09	1.35	36	.187
Retest	17	21.52	6.7		36	

Note: n = 38

d=.34

The results of independent sample *t* test revealed that although there was a difference in the mean and SD of subjects' scores in the test and retest in regards to their writing skills, the difference is not statistically significant, t (36) = 1.35, p= .18. In addition, the table clearly showed that subjects' writing scores in the retest were slightly higher than their scores in the first test M= 20.7, SD= 4.09 verses M = 21.52, SD = 6.7. The difference between the two means was .08 which indicates that, on the average, subjects writing composition got better after using WhatsApp, and thus their writing scores in retest was relatively higher than their writing skills scores in the first test.

The effect size index (*d*) was computed as *d*= .34; which means that the sample mean for the first group differs from the sample mean of the second group by .34 standard deviations. According to Cohen's (1969) guidelines, this represents a relatively small effect size.

7. Discussion and conclusion

Although current research has, to some extent, agreed that online teaching is different from the traditional methods, current COVID-19 pandemic greatly helped to push distance learning forward and realize that online instruction would and could be as effective as the traditional methods. The current study clearly revealed that WhatsApp was effective as a dynamic online instruction tool. In fact, students writing competence improved more with WhatsApp than when they were receiving face-to-face tradition method.

As for the students' writing composition, the issue was assessed twice: once after the time when subjects received their instruction in the traditional way (test), and the second time with mobile app WhatsApp (retest) to investigate the impact of instruction type on the writing competence. The results showed that there was no statistically significant difference at $\alpha < .01$ level between students' writing scores in regards to their instruction type.

Moreover, although the overall average of subjects' writing scores in the retest was better or slightly higher than their overall average scores in the pretest, when face-to-face instruction was received, the difference in the mean was not statistically significant. This finding of the study aligned with the findings of Amry (2014) which indicated that academic achievement was similar among subjects in online versus face to face.

However, despite the novelty experience of students using WhatsApp as the mean of instruction, the overall scores of students in writing compositions were better which indicate positive attitudes and good experience using WhatsApp. Several recent studies such as Plana et. la (2013), and Albert (2013) also indicated that this generation of students, unlike the generation before, is different and millennials familiar with mobile devices and apps, and thus has positive attitudes towards technology and online sources.

In addition, it seems that we indeed live in the technological era where apps should be significantly included in our teaching practices. Students in this generation might not only prefer using mobile apps, but also demand them to be part of the curriculum and instruction. However, while using technology and other distance learning apps is beneficial for students in this generation as Albert (2013 & 2018) indicated, using WhatsApp as dynamic learning tool need not only dedication and discipline as shown in Arias et la. (2018), but also time investment and guidance. Learning might also become more interesting and enjoyable.

However, some other factors that might affect students' achievement and learning process should be studied in future research. With the integration of mobile apps in learning, some personal and social characteristics, for instance, might play a role as indicated in the study of Xu and jaggars (2014). In addition, other aspects or difficulties such as the possible educational loss or message flooding and time consuming associated with using WhatsApp should be investigated more in the future research.

Using WhatsApp as instruction type provided valuable teaching and learning experiences for students and abundance of learning opportunities that might have not been possible with face-to-face oriented instruction. Moreover, it seems that the impact of pandemic on education globally is yet to be sufficiently measured. However, technology and mobile apps are now more than ever able to produce tools that can create a dynamic learning environment or at least not less effective than the traditional methods. In fact, online types of instruction provide rich resources and effective alternatives for traditional methods. They can be more effective, especially with current students when times and situations require.

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