

THE EFFECTS OF WHATSAPP-BASED LESSONS ON UNDERGRADUATES' WRITING ACCURACY

KESAN PELAJARAN BERASASKAN WHATSAPP TERHADAP KETEPATAN PENULISAN SISWAZAH

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ABSTRAK

Walaupun terdapat peningkatan penyelidikan mengenai penggunaan alat media sosial dalam pengajaran dan pembelajaran Bahasa Inggeris terutamanya penulisan, kesan perbezaan pengajaran gabungan WhatsApp terhadap ketepatan penulisan pelajar masih tidak jelas. Oleh itu, kajian ini mengisi kekosongan dengan mengkaji bagaimana WhatsApp mempengaruhi ketepatan penulisan pelajar secara keseluruhan. Menggunakan reka bentuk kuasi eksperimen, dapatan kajian kaedah campuran ini menunjukkan potensi WhatsApp dalam meningkatkan ketepatan penulisan pelajar. Hasilnya terutamanya dikaitkan dengan keupayaan WhatsApp untuk mempromosikan persekitaran pembelajaran interaktif dan kolaboratif yang membantu dalam pembelajaran menulis. Walau bagaimanapun, beberapa cabaran telah dilaporkan, seperti pembetulan berlebihan dan pengeboman mesej teks. Implikasi untuk pedagogi penulisan dan kajian masa depan telah dibincangkan.

Kata kunci: Media sosial, WhatsApp, Ketepatan Penulisan Kerjasama

ABSTRACT

Despite the building up of research on the adoption of social media tools in teaching and learning of English especially writing, the differential effects of WhatsApp blended lessons on undergraduates writing accuracy remain unclear. Thus, this study fills in the lacuna by examining how WhatsApp affects undergraduates' overall writing accuracy. Using a quasi-experimental design, the findings of this mixed method study demonstrate the potentials of WhatsApp in improving students' writing accuracy. The results were primarily attributed to the ability of WhatsApp to promote an interactive and collaborative learning environment which is helpful in learning writing. Nonetheless, some challenges were reported, such as overcorrections and bombardment of text messages. Implications for writing pedagogy and future studies have been discussed.

Keywords: Social media, WhatsApp, Collaboration, Writing accuracy

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Introduction

An undisputed fact today is that technology is exercising an ever increasing impact on all human activities including educational ones (Bashori, 2018). By changing the face of the society and the world significantly (Avidov-Ungar & Amir, 2018) it has dominated almost all areas of the society (Scherer, Siddiq, & Tondeur, 2019). Therefore, in the current era, there has been a greater investment in digital learning technologies across almost all sectors of life (Mehta, Morris, Swinnerton, & Homer, 2019). This rapid technology proliferation has caused changes in instructional environment for language teaching with fast growing trend for incorporating Information Communication Technology (Li, Sun, & Jee, 2019). Consequently, the use of technology by teachers and pupils continues to evolve (Wakefield & Frawley, 2020). To get greater benefits from technology, the educators and teachers have been suggested to ruminate a better way to integrate technology in the process of learning language (Bashori, 2018).

One way of incorporating mobile technology into learning language is through social media (Alsulami, 2018). The current literature on social media technology supports the increasing adoption of these tools for educational and learning objectives in different geographical settings of the globe (Manca, 2020). The adoption of WhatsApp, in this study, was motivated by its popularity and widespread use among the youth in higher educational institutions in Pakistan. It facilitates the users with a large array of distinct features such as sharing, communicating, discussing and socialising.

The adoption of WhatsApp as an instructional tool emanates from the consensus that it offers an interactive environment, ensures students maximum participation and learning anytime and anywhere. Therefore, a considerable literature has sprung up around the use of WhatsApp as a potential tool for learning. The researchers have used WhatsApp to improve vocabulary of the learners (Bensalem, 2018; Cetinkaya & Sütçü, 2018; Hashemifardnia, Namaziandost, & Rahimi Esfahani, 2018; Jafari & Chalak, 2016), as an instructional tool for teaching EFL writing to second language learners (Justina, 2016; Susanti & Tarmuji, 2016), to learn English idioms (Şahan, Çoban, & Razi, 2016) and to motivate students for reading English as a Second Language (Khan, 2016). Many other researchers such as (Alqahtani, Bhaskar, Vadakalur Elumalai, & Abumelha, 2018; Alshammari, Parkes, & Adlington, 2017; Hamad, 2017; Hassan & Ahmed, 2018; Soria, Gutiérrez-Colón, & Frumuselu, 2020) adopted it as a tool for teaching and learning English, (Ahmed, 2019; Mbukusa, 2018; Ta'amneh, 2017) for reading and writing, (Haron & Rahmat, 2020; Khalil, 2019; Muthmainnah, 2020; Sari & Putri, 2019; Wahyuni & Febianti, 2019) for writing and collaborative writing, (Suhaimi, Mohamad, & Yamat, 2019) for narrative writing, (Songxaba & Sincuba, 2019), for writing essays, for university level English language education (Alqahtani et al., 2018), to reduce EFL speaking anxiety and improve speaking skill and interaction beyond classroom (Han & Keskin, 2016; Sherine, Seshagiri, & Sastry, 2020), to streamline perception and attitude of students towards English language teaching through WhatsApp (Aktas & Can, 2019), to defamiliarise foundation year English learners (Alsowayegh & Garba, 2019), to examine the effect of WhatsApp on critique writing proficiency and perception towards learning (Awada, 2016), and especially with the use of WhatsApp in classroom (Alshammari et al., 2017; Cetinkaya, 2017; Fattah, 2015; Hamad, 2017; Hassan & Ahmed; Sayan, 2016; Yavuz, 2016).

In addition to this, mobile learning offers students, communities and groups of learning a platform where they can form questions, discuss ideas, explore solution to the problems and reflection on thinking and experiences. In addition to this, collaborative learning is underpinned by socio cultural theory of learning (Stahl, Koschmann, & Suthers, 2006). Mobile technologies facilitate learners with instant feedback, communication and collaboration. It plays vital role

between tutor and tutee to ignite dialogue. This dialogue can occur within class walls or beyond classroom confines (MacCallum et al., 2017). Studies such as (Ilic, 2015) in Japan explore areas of collaborative learning and use of mobile phones as an aid to collaborative learning through an exploratory multiple case study approach involving both quantitative and qualitative data analysis. The findings uncover results in favor of collaborative learning through mobile phones which had observable effects on students. Likewise, Mwanza-Simwami (2017) study the link between mobile technologies and collaborative learning. The study finds that use of mobile technology to support collaborative learning in semi formal setting was based on the ways in which technological functions aid and improve social relations and practices. Mobile technologies offer an opportunity to both the learners and teachers for free discussion, analysis and collaboration (Hosseini et al., 2015).

Despite the building up of research in this area, particularly in teaching various skills of English language (Justina, 2016; Susanti & Tarmuji, 2016), the impact of social media on interaction/collaboration which may help the writing skill remains unclear. Moreover, little research has been done on how WhatsApp can be used as an additional tool to traditional pedagogy to foster interaction/collaboration that may impact descriptive essay writing, and little evidence of online interaction gains across writing skill has been provided as regards to its adoption.

To address the above research gaps, this study examines how WhatsApp can be used to foster online interaction that may be helpful in supporting writing. In this study, the researcher used WhatsApp as an additional tool to the traditional pedagogy to teach writing accuracy to the undergraduates for a few reasons. First, it is a popular yet an under-researched social media tool in the Pakistani context. Second, several studies have reported its effectiveness to teach English language (Bensalem, 2018; Cetinkaya & Sütçü, 2018; Hashemifardnia, Namaziandost, & Rahimi Esfahani, 2018; Jafari & Chalak, 2016). Finally, it has several affordances that could potentially improve L2 learners' writing skill (Suhaimi, Mohamad, & Yamat, 2019; Songxaba & Sincuba, 2019).

Theoretical Underpinning

As social media is almost naturally aligned with Social Constructivist Pedagogies (Willems et al., 2018), it therefore, seems pertinent to be integrated in the current study (Vygotsky, 1980). In this theory, scaffolding, mediation and Zone of Proximal Development (ZPD) have special significance. Kaoropthai et al. (2019) define scaffolding in education as a process with which a teacher or more knowledgeable peer assists the other in improving learning or facilitating the mastery of tasks. In this theory, mediation holds the central position. This mediation occurs with the help of different tools such as language, writing instruments, books, computers and mobiles. In the present study mobile technology (WhatsApp) is used as mediation. Moreover, Vygotsky (1980) believes that learning at the individual level takes place within the Zone of Proximal Development which is defined as a learning space in which the learner needs assistance and support from others to move to a higher level of performance (Hsieh, 2020). In the present study, the more knowledgeable, either teacher or peer, is expected to help the less knowledgeable other through the WhatsApp platform in performing various tasks during the learning of writing.

In the present scenario of teaching practices, the educators and researchers are strongly in favour of constructivism which engages learners and improves their learning outcomes (Saini & Abraham, 2019). Social networking sites (interchangeable with social media in this

study) are theoretically linked with student-centred pedagogies and conceptually related with constructivism which recognises learning not as a passive process but an interactive one that provides learners with an opportunity of constructing meaning through cognitive, interpretive and social behaviours (Spender, 1996). Since, learner-centred pedagogies have been recognised significant for long within the post secondary education (Biggs & Tang, 2003; Prosser & Trigwell, 1999), using technology therefore, is a way to move away from teacher-centred approaches (Prosser & Trigwell, 1999) to the learner-centred one for productive results.

Research Objectives

The objectives of the study were as follows:

1. To examine the effects of WhatsApp-based lessons on EFL students' accuracy in writing.
2. To investigate EFL students' attitudes towards using WhatsApp-based lessons on accuracy.

Research Hypotheses

The hypotheses based on quantitative research question of this study are as follows.

H: There is significant difference in pre-test and post-test mean scores between undergraduates who are in the treatment groups (WhatsApp) and those who are in the control group in terms of writing accuracy.

H₀: There is no significant difference in pre-test and post-test mean scores between undergraduates who are in the treatment groups (WhatsApp) and those who are in the control group in terms of writing accuracy.

Research Questions

To see the effects of WhatsApp on undergraduates writing accuracy, the following research questions guided the current study:

1. What are the effects of WhatsApp-based lessons on EFL students' accuracy in writing?
2. What are EFL students' attitudes towards using WhatsApp-based lessons on accuracy?

This study hopes to shed light on the role of WhatsApp in improving L2 learners' writing accuracy within the context of the social media environment. It is also hoped that this study would provide insights as to how social media could be systematically integrated into the writing process for more efficient language learning.

Material and Method

Participants

The study adopted the quasi experimental (Creswell, 2012) mixed method approach which involved undergraduates from a public sector Graduate College in Punjab, Pakistan. They were second semester students enrolled in Mathematics and Zoology classes. They were in the age range of 19-21. Through convenience sampling, 54 students from two intact classes were chosen and assigned to the control group ($N= 25$) and treatment group ($N=29$) for the

intervention trial. Prior to the intervention, a pre-test was administered to establish the baseline knowledge. After the post-test twelve participants were interviewed to support the quantitative findings. The participants from both groups had at least 3 years of experience using WhatsApp and internet. They had different background of L1 (e.g., Punjabi, Saraiki and Urdu) and have been exposed to English as compulsory subject for at least 12 years. To minimise pedagogical differences, the same teacher served in both control group and intervention group. Finally, a consent form and permission were obtained from the head of the institution and the participants prior to their involvement in the study.

Instruments and data collection

Prior to the beginning of treatment, both groups were exposed to orientation week. On top of this, the intervention group was trained on how to use WhatsApp to send a paragraph and get written corrective feedback from the teacher. All the students in the control group and treatment group sat for a pre-test on paragraph writing in the second week and post-test in the 7th week of the study. To maintain similarity in both the pre-test and the post-test, the participants were administered the same writing conditions such as text type, length, duration and setting. To account for the possible topic interest and familiarity (Yang & Kim, 2020; Yoon, 2021), the students enjoyed leeway to choose a topic of their interest and familiarity. However, in the post-test, a care was taken to avoid recursion of the topics already given in the pre-test and during intervention. Students in the control group and treatment group were subject to the similar in-class conditions in terms of course content, class time, instructor and writing approaches.

Results

Both quantitative and qualitative analyses were used to address the research questions. Specifically, the quantitative aspect of this study answered research questions 1, while the qualitative aspect addressed research question 2.

Quantitative Results

Table 1 below shows Mean and Standard Deviation (SD) before and after treatment. A two factor ANOVA was conducted to compare the effect of social media (WhatsApp) in comparison with the control group on undergraduates' writing accuracy. The Mean scores of students in the treatment group (WhatsApp) were before ($M=9.40$, $SD=2.507$) and ($M=13.00$, $SD=2.107$) after treatment. The Mean scores of the students in the control group, who received traditional treatment, was ($M=8.95$, $SD=2.076$) before, this value further decreased to ($M=8.70$, $SD=2.083$) after the treatment. The results of the two factor ANOVA that was made to see if the changes in the scores of students in two separate environments showed a meaningful difference are given in the next table.

Table 1: Descriptive statistics of pre-test and post-test scores

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Scores before treatment	WhatsApp	29	9.40	2.507	.458	8.36	10.24	5	13
	Control	25	8.95	2.076	.379	8.19	9.74	6	14
	Total	54	9.07	2.161	.228	8.61	9.52	5	14
Scores after treatment	WhatsApp	29	13.00	2.107	.385	12.11	13.69	10	17
	Control	25	8.70	2.083	.380	7.96	9.51	6	14
	Total	54	11.49	2.745	.289	10.91	12.06	6	17

According to the findings, the scores of the students in WhatsApp, and the control group show a significant difference before and after the treatment; in other words the common effect of being in a different learning environment and the factors of repeated measure on scores is significant as shown in table 2, $F(2, 87) = 46.22$, $p < .05$.

Table 2: ANOVA Results between groups and within groups

		Sum of Squares	df	Mean Square	F	Sig.
Scores before treatment	Between Groups	2.467	2	1.233	.260	.772
	Within Groups	413.133	87	4.749		
	Total	415.600	89			
Scores after Treatment	Between Groups	341.756	2	170.878	46.223	.000
	Within Groups	328.733	87	3.779		
	Total	670.489	89			

In order to find out the reason of the difference between groups, Tukey's honestly significant multiple comparison test, which is one of the post hoc test statistics and meets the assumptions was performed (Field, 2009; Stevens, 2007). The distribution of Tukey's honestly significant difference test comparison relating to the difference in pre-test post-test mean scores

between groups revealed that there was statistically significant difference between groups post treatment scores. That is, the post treatment scores were statistically significant. Therefore, it implies that the environment in which WhatsApp is used as support to the traditional environment can have a positive impact on undergraduates' writing. The students in the treatment groups (WhatsApp) are more likely to have overall better scores than those in the control group. Therefore, the study retained the alternative hypothesis.

Qualitative results

The qualitative results revealed that WhatsApp improved students' writing in terms of accuracy as the participants and teacher frequently provided corrective feedback on their writing. P 17 opined that: *Yes, my writing became better by discussing with my teacher on WhatsApp, because he rectified my mistakes if I committed somewhere. He set all the students to a unified purpose.* Another interviewee responded to a probing question: *Yes, it helped, I mean if there were some mistakes or there are some errors for example, wrong use of tense, or form of verb, our teacher pointed out and made them correct (P11).*

Another interviewee stated that his structure improved on the WhatsApp platform since it provided him an opportunity of corrective feedback: *Yes, WhatsApp helped me improve my writing because it is a better platform for interaction and there is a strategy of corrective feedback from the other participants, each and every participant encourages in rectifying errors of tense (P13).* During the intervention, the students encouraged each other on producing mistakes-free writing. To this end, they provided corrective feedback if anyone did any grammatical mistake in any writing task. A respondent said that: *On this platform, if someone committed any mistake somewhere, other classmates guided him towards the correction. This corrective feedback led us towards better writing. Moreover, I learned grammar because teacher gave us feedback on our writing in the form of correct use of verb, or article or tense (P 17).*

On WhatsApp, the learners came to know their weaknesses of language which were rectified where necessary. Multiple students stated that rectification of subject-verb agreement was the biggest benefit they obtained from students as well as the teacher on WhatsApp. For example, P 9 said that: *Yes, when I shared my writing with my classmates on WhatsApp, it definitely improved my writing. My classmates mostly rectified my mistakes of on subject-verb agreement. For example, I learnt use of third form with has, have and had. More specifically, I leaned the use of s or es with the first form of verb.*

Comparing one's own writing with that of others on WhatsApp helped students in learning better grammar. One interviewee stated: *Yes, I think, uh, by discussing with my classmates on WhatsApp group, my writing became better because I could compare my writing with others. So, after getting some good ideas and good sentences from my friends I could write a good task (P23).* The teacher and classmates made learning of grammar easier on social media platforms, because they provided help wherever it was needed. An interviewee stated: *Yes, it helped me a lot because whenever I made some mistake on the use of article or preposition, my teacher and some of my friends not only highlighted my mistakes but also rectified them, thus, they made writing easier (P11).* Another respondent stated that: *Yes, because, uh, my friends pointed out my grammatical mistakes. So, it improved my writing (P 14).* P 9 expressed almost the same experience: *Yes, sir they highlighted my mistakes of verb, tense or any other and they told me about my other grammar mistakes which helped me have more accuracy in my writing.*

The students gave some comments/suggestions on others' writing which also helped them in improving grammar. P7 stated that: *Yes, my writing became better because they commented on our writing and gave suggestions which improved our grammar* (P9). In face-to-face classroom, a respondent reported, it was not possible to practice grammar on daily basis, but WhatsApp made it possible. Moreover, both the teacher and students rectified the error of language. P 23 responded: *Yes, when we practise writing continuously on WhatsApp, it makes that better. in face-to-face classroom, it is not possible for us to practise grammar on daily basis. But when we have an activity on WhatsApp, we can practise writing on daily basis which brings accuracy in our writing.* Interviewee 14 stated that WhatsApp was a better source in learning of grammar: *Yes sir, WhatsApp helped me learn writing because it gave me opportunities to talk with others about writing, it improved our grammar. It also encouraged us to revise our work.*

The accounts of these students indicated that WhatsApp provided the students with an interactive environment in which they freely provided corrective feedback on mistakes and errors. This formative feedback shows the potential of these tools that they can bring improvement in their writing. The students may not enjoy this free feedback in face-to-face classroom where they feel their self-respect is at stake but in an online environment they feel confident and relaxed.

However, as with other technology tools, WhatsApp is not free from challenges. Some students raised concern about WhatsApp overcorrections and text bombardment which sometimes leads to frustration. For instance, P 11 said that, *'I felt frustrated when almost every student participant sent text messages when I shared my written task. Text messages appeared like bomb shells that drop one after another.'* A few respondents reported mental overload due to many correction that were made on their shared writing tasks.

Discussion

The current study examined the effects of WhatsApp on L2 learners' writing accuracy. The findings indicated that the students who were exposed to WhatsApp lessons blended with classroom lessons have significantly improved their writing accuracy during the post test and outperformed those from the control group.

These findings do not come as a surprise since previous studies such as (Bataineh et al., 2018; Kaid Mohammed Ali & Rashad Ali Bin-Hady, 2019; Noyan & Kocoglu, 2019) suggest that WhatsApp chatting support students writing skills in English. In addition to this, Post hoc Tukey HSD test results also revealed that the post-treatment scores were statistically significant between WhatsApp and control group. This indicated that WhatsApp had a positive impact on undergraduates' writing and they are more likely to have better scores than those in the control group.

These results are supported by the findings of the study conducted by Bataineh et al. (2018) in which they researched the impact of WhatsApp-integrated approach to teaching writing skills. Although this study was conducted with special reference to gender, it indicated a positive correlation between WhatsApp and the writing performance of female students as compared to their male counterparts in terms of content, ideas, organisation, grammar, vocabulary, and language that is parallel to a similar study conducted by (Noyan & Kocoglu, 2019). In their study, they researched the impact of WhatsApp on the writing acquisition of university freshmen and concluded that the intervention students who studied writing skills through WhatsApp outperformed those in the control group in the post-test. The results of our study are also supported by those of some other studies such as (Haron et al., 2017;

Khodabandeh & Naseri, 2020; Linda & Ri'aeni, 2018b; Mulyasari & Putri, 2020; Okocha et al., 2017; Suhaimi et al., 2019) which indicate that WhatsApp has the potential of supporting writing skills.

Qualitative results also supported the quantitative findings. Both the students and teacher provided comments whereby mistakes and errors were pointed out and rectified. The formative/corrective feedback from the teacher as well as students proved useful in supporting writing accuracy. Our participants believed that WhatsApp was better platform for writing accuracy. This platform was useful for them in the form of the appropriate use of the word, the correct form of verb, subject-verb agreement and so on to support the learning of writing accuracy. These findings are consistent with Suhaimi et al. (2018) and Soria et al. (2020) who believed that WhatsApp was an easy and convenient platform where peers could offer feedback which helped them learn the language(grammar). The findings are also aligned with Vygotsky's (1978) sociocultural theory, the current study demonstrated the importance of social media assisted mobile learning environment. Based on sociocultural paradigms, the investigation of social media tools adds to our knowledge of and brings new insights into how knowledge of L2 writing is co-constructed by the learners working interactively on a WhatsApp platform to complete writing tasks. During intervention, the participants' various activities on WhatsApp reflected social constructivism environment in which scaffolding and collaboration hold crucial importance.

The challenges that students experienced in using WhatsApp tool in the writing classrooms also add up to the earlier findings reported by Wang et al. (2013) and Li and Li (2017). A comprehensive view of these challenges would help L2 writing teachers in developing interventions for more efficient adoption of these tools.

Conclusion

This study investigated the effects of WhatsApp blended lessons on the writing accuracy of L2 learners. Overall findings suggest that students who were exposed to this kind of feedback outperformed those from the control group, making WhatsApp a potential pedagogical tool in L2 writing classrooms. These results were primarily attributed to the ability of WhatsApp to promote interaction and provide collaborative learning environment. As such, the data suggests that the restriction free learning environment prompted the gains in accuracy. Nonetheless, some challenges were reported, such as overcorrections and bombardment of text messages. Several implications can be drawn from the study. Theoretically, the findings expanded our understanding of the role of WhatsApp in L2 writing classrooms by shedding light on the factors and affordances that are crucial to the efficacy of WhatsApp as a language learning tool, particularly in the writing classrooms. Pedagogically, the current study provided information on how WhatsApp can be systematically integrated into the teaching of writing. Specifically, it can be used as an additional tool to the traditional pedagogy. Methodologically, this study contributes to the conclusiveness of findings regarding the efficacy of social media tools (here WhatsApp) in facilitating the development of writing accuracy. Since preliminary data suggests that learners are influenced by affordances differently, future research may examine the differential effects of these affordances on students' writing accuracy. Some limitations of this study need to be acknowledged and addressed in future studies. First, the study involved a relatively small sample size (i.e. 54) from undergraduates and used intact groups in the experiment. To obtain more generalizable findings, future studies may increase the number of participants from different learning contexts and select them through random sampling. Second, future studies may investigate the pedagogical affordances of social media tools from

teachers' perspectives. In this way, we will obtain a clearer view of the potentials social media tools for language teaching and learning.

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