



Effect of WhatsApp-based Tasks on Developing EFL Students' Writing Skills

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The emergence of task-based language teaching (TBLT) and the development of MALL technology have been two of the most significant trends in TESOL. However, investigating how MALL combined with TBLT can promote EFL learners' writing abilities is still lacking in the literature. In light of this, this study examines the effect of WhatsApp-based tasks on EFL learners' paragraph writing performance of 66 Moroccan secondary school students. The participants were randomly assigned to the control (n=32) and experimental groups (n=34). While the control group taught writing in the traditional method using the process writing approach, the experimental group were taught writing through tasks in a WhatsApp-based instruction mode where participants chatted, shared and commented on each other tasks for one semester. To collect data, a writing test was used as a pre- and post-test to assess the participants' performance in both groups. The findings, based on Independent T-Tests (SPSS-26), indicated that the experimental group outperformed the control group in the overall writing performance as well as in the five targeted writing subskills: content and ideas, appropriate organisation, variety of vocabulary, accurate use of language, and accurate use of mechanics (Reid, 1993; Brown, 2006). As a result, this suggested the pedagogical impact of MALL and TBLT, as an innovative mode of delivery challenging traditional structure-based models, on EFL learners' paragraph writing performance.

Keywords: MALL, paragraph writing performance, pedagogical role, TBLT, WhatsApp-based tasks

INTRODUCTION

Writing remains a central topic in second language acquisition. It is a critical element of learners' personal experiences and is frequently used to assess their mastery of the language (Hyland, 2009). Developing essential writing skills gives learners the tools to organise their thoughts and adequately process the material. Thus far, writing

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effectively has become an essential objective for all foreign language learners (Manchon, 2009). Nevertheless, when writing in a foreign language, it becomes considerably challenging. EFL learners lack ideas, misuse writing mechanics, have a limited vocabulary repertoire, and encounter grammar difficulties (Ibnian, 2017; Phuket, 2015). Learners also face organisational problems and lack confidence while writing (Muamaroh et al., 2020). Moreover, adopting inappropriate methods of teaching writing is another major challenge for EFL learners (Ibnian, 2017).

Seeking to address the aforementioned difficulties, it is crucial to design innovative approaches utilising modern technology to facilitate learners' challenges and improve the teaching quality of writing. Correspondingly, it is believed that combining mobile-assisted language learning (MALL) with task-based language teaching (TBLT) is a promising model for teaching writing. According to Stockwell (2016), mobile devices are advantageous for two reasons. First, they can be carried around anytime and anywhere, enabling learners to access the needed material whenever and wherever they want. Second, the possibility of interacting with the surroundings through a global positioning system (GPS). In addition, what distinguished MALL from other technologies is "its use of personal, portable devices that enable new ways of learning, emphasising continuity or spontaneity of access and interaction across different contexts of use" (Kukulka-Hulme & Shield, 2008, p. 273).

Mobile technologies have many functionalities that distinguish them from other technologies, thus providing an excellent opportunity for language learning (Beatty, 2013; Chinnery, 2006). They include a variety of inbuilt software that can be used for learning, including e-dictionaries, flash card software, quiz software, voice recording, listening to audio and audio-visual materials like podcasts, playing games, and social media applications including Facebook, Instagram, and WhatsApp (Çakir, 2016; El Hariry, 2015). These new tools, with their unique properties, are valuable for enhancing overall language ability, including proficiency in writing.

WhatsApp, for example, as a popular mobile app, allows learners to message freely, make video or voice calls, create group chats and enables sharing GIF updates (WhatsApp official site, 2023). Accordingly, WhatsApp remains one of the most effective methods for promoting second language learning and, more specifically, writing learning (Bataneh et al., 2018). Besides, WhatsApp can be used to enhance language learning skills and communication with students, build a positive social atmosphere, encourage students' dialogue and share authentic materials (Bouhnik & Dshen, 2014).

Equally important, Task-based Language Teaching (TBLT) is a teaching method that enhances students' language learning skills and motivation and challenges the traditional teacher-centred to a more modern learner-centred approach to language teaching (Fareh, 2010; Mulyadi et al., 2021; Norris, 2009). In this approach, using tasks is the central principle for planning and teaching language instruction (Richard & Rodgers, 2001). In TBLT, according to Willis (1996), the focus is on transferring meaning rather than developing particular linguistic forms, and the activity is goal-oriented communication with a clear objective. These activities for learners aim

primarily to use their communicative language skills to reach an agreed non-linguistic outcome.

However, a task differs from an exercise in at least four criteria (Ellis, 2009). A task is primarily based on meaning rather than form; it does not only focus on language production but should go beyond having a clearly defined learning outcome. Moreover, students in task-based instruction should be trained to vary their learning resources in three phases (pre-task, during-task, and post-task). Finally, a task should have a gap.

In a nutshell, boosting learners' writing performance remains among the primary objectives of MALL for foreign language learning. Moreover, recent evidence has demonstrated that TBLT is an effective teaching method capable of developing language skills and challenging the traditional teacher-centred approaches to language teaching. Nevertheless, investigating how MALL combined with TBLT can promote EFL learners' writing abilities still needs to be investigated in the literature. This research, therefore, provides an essential contribution to MALL research by examining the pedagogical effect of implementing WhatsApp-based tasks on EFL secondary school students writing skills.

Review of Literature

In recent years, there has been an increasing amount of literature on the use of MALL technology to enhance English language skills, including writing performance. In their experiment, Bataineh et al. (2018) investigated the effect of WhatsApp on improving 98 Jordanian eleventh-grade students' writing performance in four aspects: content and ideas, organisation and mechanics, vocabulary, and language use. The findings revealed that WhatsApp significantly improved the participants' writing skills, with better outcomes for females than their male counterparts. Fithriani et al. (2019) found that Facebook effectively enhanced Indonesian university students' writing proficiency, boosted their confidence while practising written English, and encouraged classroom participation. The authors eventually recommended the usage of Facebook as a supplementary education tool in higher education classrooms. Sabri (2019) carried out an experimental study to gauge the effect of WhatsApp on the writing skills of twenty Yemeni EFL university students. The pre- and post-test findings showed great improvement in students' reading and writing skills. In addition, the participants expressed their satisfaction with WhatsApp as an effective pedagogical tool that allowed them to practice English freely outside the classroom and motivated them to learn mutually as opposed to traditional classrooms.

Imelda et al. (2019) scrutinised the impact of combining video-based mobile learning and process writing approaches on high school students' writing performance in Indonesia. The experimental group taught writing via assignments on video-making projects assisted by mobile phones got better scores than the control group in the studied writing sub-skills: content, organisation, vocabulary, language use, and mechanics. Al-Shehab (2020) investigated the pedagogical role of mobile applications and websites such as Microsoft Word, dictionary apps, and other internet search engines in improving the writing skills of intermediate students at Kuwait University. Based on questionnaires, observation notes, and students' writing assignments, the findings

confirmed improving students' writing skills, boosting students' autonomy and motivation and increasing learners' peer collaboration. In a recent study, Afshar & Zareian (2022) examined the role of Telegram and strategy awareness-raising in enhancing 72 upper-intermediate English learners' writing performance and anxiety in Iran. The authors found that writing strategy awareness-raising using Telegram significantly enhanced the learners' writing accuracy in terms of planning, monitoring, evaluating, revising, retrieving, and compensating.

In a recent investigation, Yucedal (2023) studied the impact of implementing MALL on 60 university students' writing competence in Iraq. During 12 weeks of implementation, students in the experimental group had to write one essay every week. The findings, based on tests, questionnaires, and interviews revealed that MALL activities significantly improved students' grades, motivation, and general attitudes about learning English. In a similar study, Kaveh et al. (2023) conducted a study in Iran to test the effectiveness of mobile-assisted language learning concept mapping on 70 EFL learners' writing performance and motivation. Participants in the experimental group were instructed via mobile-based concept mapping, whereas students in the control condition were taught writing traditionally. The study's findings demonstrated that mobile-mediated concept mapping improved EFL students' writing fluency. Furthermore, the findings suggested that the implementation improved learners' writing motivation.

Therefore, recent research in MALL confirmed the effectiveness of mobile technologies in enhancing EFL learners' writing skills. However, much of the latest investigation on the use of MALL in writing focused on implementing apps such as WhatsApp or Telegram without combining these apps with effective teaching approaches, such as TBLT. Therefore, this study sets out to obtain data that will help address this research gap by investigating the effectiveness of WhatsApp-based task instruction in enhancing secondary school students' writing skills. More precisely, the major objective of this study is to compare the writing pre- and post-test scores of the control and experimental groups and thus determine whether or not WhatsApp-based task implementation is more effective than traditional teaching of writing. To achieve so, this fundamental question was addressed:

1. Is implementing WhatsApp-based tasks more effective in enhancing students' writing skills than conventional teaching?

Accordingly, these hypotheses were formulated:

H0: Participants who received WhatsApp-based tasks showed no difference in the writing tests from participants who received conventional teaching.

H1: Participants who received WhatsApp-based tasks scored significantly higher on the writing tests than participants who received conventional teaching.

METHOD

Participants

The study involved 10th-grade EFL secondary school students (14-16 years old) studying at a high school in Morocco, all were beginners. A teacher-made writing placement test (designed by the researcher based on students' books) was used first to ensure the groups' homogeneity. Following the test's administration, 66 students randomly assigned to the experimental (n=34) and control groups (n=32) were the sample of this study.

Design and Procedure

A pretest-posttest design was used in this true experimental research. The experimental and control groups were assigned randomly. The study included two variables: one independent and one dependent. The independent variable was WhatsApp and TBLT (X1) for the experimental group and conventional teaching for the control group, while the dependent variable was students' writing performance (Y1).

The study lasted for one semester in the academic year 2022-2023. Both groups participated in the study with different teaching methods. The control group received traditional teaching using the process writing approach (planning, drafting, editing, revising, and publishing), while the experiment group received WhatsApp-based tasks following Ellis's (2003) task cycle. The experimental group had to perform a writing task every two weeks within a planned time schedule based on themes prescribed in their textbook. The descriptions of the six tasks are provided in Table 1.

Table 1
Description of WhatsApp-based tasks

Task number	Group Work	Individual Work: Each student should write a paragraph about the following:
Task 1	Designing a poster about classroom rules	Classroom rules
Task 2	Designing a brochure about free time activities	My free time activities
Task 3	Preparing an advertisement	The power of advertising
Task 4	Preparing a news report	Describing a news story
Task 5	Creating a documentary about recycling	The benefits of recycling
Task 6	Preparing a report on students' dream jobs	My dream job

In each WhatsApp-based task, students were required to perform a group task, such as designing a poster about classroom rules using their mobile devices and then working individually in writing a paragraph about the topic. It is also worth noting that during the different phases of the task, students had to share what they had achieved in the WhatsApp group, comment on it, and then provide feedback to their peers. However,

the researchers followed the instructional procedures presented in Table 2 to implement WhatsApp-based tasks effectively.

Table 2
The procedure of WhatsApp-based tasks

	WhatsApp Task Activities	Time
1. Pre-task (Individual work)	<ul style="list-style-type: none"> • In the WhatsApp group, students were asked to research the topic and share their findings. • Students listened to the learning materials provided by the instructor, answered the questions, and provided comments on answers. • The instructor assigned the writing topic and asked students to make plans. 	Three days before the first meeting
2. During Task	<ul style="list-style-type: none"> • The instructor confirmed learners' comprehension of the listening learning materials and their unfamiliar vocabulary and pronunciation and then explained the characteristics of writing a paragraph. 	First meeting (face-to-face)
Group work	<ul style="list-style-type: none"> • The instructor discussed with each group the purpose of the written task and the plans already decided in the pre-task phase. • Students worked in groups and did the written tasks. 	One week tasks
Individual work	<ul style="list-style-type: none"> • The group work tasks encompassed a) designing a poster about classroom rules; b) designing a brochure about free time activities; c) preparing an advertisement; d) preparing a news report; e) creating a documentary about recycling; f) preparing a report on students' dream jobs. • The instructor monitored each group's progress in completing the tasks online and provided necessary scaffolding in the WhatsApp group. • Each group shared the task in the WhatsApp group, while others commented. 	Second meeting (online) Three days tasks
	<ul style="list-style-type: none"> • The instructor asked students to write their paragraphs based on what they had done in the group work. • Students worked for three days to write their first drafts. 	Third meeting (online)
3. Post-task	<ul style="list-style-type: none"> • Students shared their first draft in the WhatsApp group, got feedback from the instructor and their peers, and provided comments on other writings. • Students were asked to reconsider their first draft by revising ideas and reformulating language. • Students shared their final draft in the WhatsApp group, got feedback from the instructor and their peers, and provided comments on other writings. • Students commented on the task and the learned language forms and got prepared for the next task. 	Fourth meeting (online)

After the treatment, the two groups were given the writing post-test to be compared with the pre-test, thus determining whether implementing WhatsApp-based tasks enhanced learners' writing skills more effectively than conventional teaching.

Research Instrument

To consider the impact of WhatsApp-based tasks on EFL learners' writing performance, a writing test was used as a pre- and post-test to assess the participants' writing abilities. The researcher designed the writing test. It was graded out of 20 following the scoring rubric provided by Reid (1993) and Brown (2006) that consisted of the following five components: content and ideas (30%), appropriate paraphrasing and organisation (20%), variety of vocabulary (20%), accurate use of language (20%), and accurate use of mechanics (10%). The test involved two sections. In section one, students had to complete a closed-form paragraph. Section two, on the other hand, targeted an open-form paragraph.

With regard to the test's validity, the writing test was given to five field experts: three MALL researchers, one English language supervisor, and one experienced English language teacher. However, the judges confirmed the validity of the test with some modifications that were changed accordingly.

To ensure the reliability of the test, two raters rated the pre-test and post-test. The findings of the Intraclass Coefficient Correlation (ICC) and Cronbach's Alpha, as presented in Table 3, were 0.898 and 0.930 in the pre-test and the post-test, respectively, indicating a high level of agreement between the raters.

Table 3

Intraclass coefficient correlation of the pre-test and post-test

	Pre-test	Post-test
Single Measures	.814 ^a	.869 ^a
Average Measures	.898 ^c	.930 ^c

Data Analysis

The analysis of the collected data began with ensuring a normal distribution of scores of each group in the pre-test and the post-test. Then the fulfilment of the homogeneity was checked in both tests. The results from the Kolmogorov-Smirnov and the Shapiro-Wilk tests confirmed a normal data distribution in the two tests. Besides, the control and experimental groups were homogeneous based on Levene's test results. Accordingly, parametric statistical analysis using independent sample t-tests were run to compare the two groups' writing pre-test and post-test scores.

FINDINGS

In order to answer the research question and prior to the implementation of WhatsApp-based tasks, an independent-sample t-test was applied to compare the writing pre-test scores between the control and experimental groups. The results are shown in Table 4.

Table 4
Descriptive statistics on the pre-test of the control and experimental groups

Groups	N	Mean	Std. Deviation	Std. Error Mean
Control	32	8,34	3,086	,546
Experimental	34	8,76	3,036	,521

From the data in Table 4, the control group got a mean score of 8.34 and a standard deviation of 3.086 compared to a mean score of 8.76 and a standard deviation of 3.036 for the experimental group. Thus, the two groups had an equal writing ability in the pre-test as the p-value was more significant than 0.05 (See Table 5).

Table 5
T-test on pre-test of the control and experimental groups

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed)	Mean Differ ence	Std. Error Differ ence	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	,169	,683	-,559	64	,578	-,421	,754	-1,93	1,085
Equal variances not assumed			-,558	63,61	,579	-,421	,754	-1,93	1,086

Data in Table 5 shows that the p-value of Levene's test was 0.683, which was higher than 0.05. In the t-test, the p-value (2-tailed) was .578, which was higher than 0.05 ($T=-.559$; $df=64$; $p>.05$). This suggests that there were no significant differences between the control and experimental groups in their overall writing performance before the intervention. Table 6 below presents the findings of the two groups' pre-test performance in the five targeted sub-skills.

Table 6
T-Tests on writing sub-skills' pre-test of the control group and experimental groups

Sub-skills	Groups	N	Mean	Std. Deviation	Sig.
Content and ideas	Control	32	2,03	,933	
	Experimental	34	2,24	,699	,316
Appropriate paraphrasing and organisation	Control	32	1,53	,671	
	Experimental	34	1,59	,783	,753
Variety of vocabulary	Control	32	1,91	,734	
	Experimental	34	1,85	,558	,740
Accurate use of language	Control	32	1,63	,554	
	Experimental	34	1,65	,646	,882
Accurate use of mechanics	Control	32	1,25	,622	
	Experimental	34	1,44	,660	,231

Table 6 illustrates a p-value of .316, .753, .740, .882, and .231 in content and ideas, appropriate paragraphing and organisation, variety of vocabulary, accurate language

use, and mechanics, respectively. Therefore, these p-values were higher than 0.05, indicating no statistical differences between the control and experimental groups in these five writing sub-skills.

After one semester of implementing WhatsApp-based tasks, the post-test was administered to both groups. The results of the independent samples t-test are presented in Table 7.

Table 7
Descriptive statistics on post-test of the control and experimental groups

Groups	N	Mean	Std. Deviation	Std. Error Mean
Control	32	10,56	3,262	,577
Experimental	34	13,85	2,607	,447

The control group had a mean score of 10.56 and a standard deviation 3.262. In contrast, the experimental group's mean score was 13.85, and the standard deviation was 2.607. Therefore, unlike the pre-test values, it is apparent that these mean scores are not equal. However, to confirm if they are statistically significant, another independent sample t-test was conducted (See Table 8).

Table 8
T-test on post-test of the control and experimental groups

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed)	Mean Differ- ence	Std. Error Differ- ence	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1,50	,225	-4,54	64	,000	-3,29	,72	-4,74	-1,84
Equal variances not assumed			-4,51	59, 33	,000	-3,290	,730	-4,750	-1,831

The results of Levene's test showed (p-value= 0.225, with $\alpha > 0.05$), which confirms the assumption that the variances of the two groups were equal. In the t-test, the table illustrates a p-value (2-tailed) of .000, which was smaller than 0.05 ($T=-4.540$; $df=64$; $p>.05$). Overall, these results indicate the effect of implementing WhatsApp-based tasks on learners' writing performance after the treatment. Five independent samples t-tests were also applied to consider whether the implementation impacted students' writing sub-skills. The results are displayed in Table 9.

Table 9
T-tests on writing sub-skills post-test of the control and experimental groups

Sub-skills	Groups	N	Mean	Std. Deviation	Sig.
Content and ideas	Control	32	2,59	,615	
	Experimental	34	3,18	,626	,000
Appropriate paraphrasing and organisation	Control	32	2,06	,840	
	Experimental	34	2,74	,751	,001
Variety of vocabulary	Control	32	2,16	,677	
	Experimental	34	2,62	,697	,008
Accurate use of language	Control	32	1,94	,716	
	Experimental	34	2,79	,770	,000
Accurate use of mechanics	Control	32	1,81	,738	
	Experimental	34	2,59	,783	,000

Results in Table 9 demonstrate a substantial difference between the two groups in their post-test as the experimental group scored significantly higher in the five writing sub-skills with a p-value of 0.000 in content and ideas, 001 in appropriate paraphrasing and organisation, 0.008 in variety of vocabulary, and 0.000 in accurate use of language and mechanics. Accordingly, WhatsApp-based task instruction was more effective in enhancing learners 'overall writing and sub-skills.

Based on these findings, the null hypothesis was that participants taught writing using WhatsApp-based tasks performed no better on writing tests than participants taught writing conventionally. Meanwhile, the alternative hypothesis was that participants who were taught writing via WhatsApp-based tasks performed significantly better than those who were taught writing the traditional way. According to the study findings, the experimental group improved significantly more than the control group, hence the null hypothesis was rejected, and the alternative hypothesis was accepted.

Thus far, this innovative mode of instruction allowed students to effectively improve their writing skills more than conventional teaching did. Admittedly, WhatsApp allowed students to freely message in the given topics, anytime and anywhere. They were also able to exchange and send documents and ideas, making it easy to share learning. Besides, adopting task-based language learning, as a learner-centred approach to language learning, helped students in transferring meaning rather than developing certain linguistic forms. During the six WhatsApp-base tasks, students performed group tasks using their mobile devices and then worked individually in writing a paragraph about the topics. In this process, they had to share their learning, comment on it, and provide feedback to each other. This enabled them to build up new vocabulary items, gather and select appropriate ideas for their writings, learn how to organise their ideas, and learn how to use accurate language and mechanics.

DISCUSSION

In reference to the findings of this study, table 5 shows no difference between the two groups on the pre-test ($p=0.578>0.05$). However, table 8 shows a significant difference in the post-test ($p=0.000<0.05$). As for the five targeted writing sub-skills, the results of independent samples t-tests illustrate a substantial difference between the pre- and post-

writing tests, with a p-value smaller than 0.05 in content and ideas, appropriate paraphrasing and organisation, variety of vocabulary, and in accurate use of language and mechanics. This suggests that implementing WhatsApp-based tasks boosted learners' overall writing performance and sub-skills more effectively than conventional learning.

Accordingly, the current study supports previous studies on the effectiveness of MALL implementation in developing EFL students' writing performance (Afshar & Zareian, 2022; Al-Shehab, 2020; Bataineh et al., 2018; Fithriani et al., 2019; Kaveh et al., 2023; Sabri, 2019; Yucedal, 2023). This might be evident since students use technologies they are familiar with and hence find them more enjoyable and exciting (Staddon, 2023). As a result, integrating modern technologies, as in the case of mobile devices, in writing activities was proved to offer great potential to foster students' writing abilities.

Admittedly, the success of the implementation is the result of integrating two promising teaching methods: mobile-assisted language learning (MALL) and task-based language teaching (TBLT). This pedagogical combination allowed learners to freely practise their writing abilities anytime and anywhere in a learner-centred setting, which is the WhatsApp group where learners could chat, share, and comment on each other work. Moreover, the design of the tasks did not only focus on enhancing the learner's writing ability but also on building and strengthening goal-oriented communication. In these tasks, learners were introduced to a group activity wherein they had to collaborate, use their mobile devices, and use their communication language skills to accomplish the group activity. This later was the basis for writing paragraphs about the same topic. Hence, WhatsApp-based tasks moved from group work to individual work, allowing. As a result, learners generate ideas and practise their writing skills during the different phases of each task.

CONCLUSION AND PEDAGOGICAL IMPLICATIONS

This experimental study investigated the pedagogical impact of implementing WhatsApp-based tasks on enhancing the writing performance of Moroccan EFL secondary school students. The results show that this innovative mode of instruction helped improve students' overall writing performance as well as the five targeted writing sub-skills. Thus, combining mobile-assisted language learning (MALL) with task-based language teaching (TBLT) proved a promising innovative model for enhancing EFL learners' writing skills.

By considering the study's findings, students can utilise WhatsApp to enhance their writing skills with the guidance of their teachers. Educators can also take advantage of WhatsApp and combine it with other approaches, such as Task-Based Language Teaching (TBLT) and utilise these two approaches in writing classes. This speeds up language processing while helping in overcoming various writing challenges. By doing so, teachers bridge the gap between outside-of-class and classroom learning and revise their instructional methods and practices. Furthermore, the findings of the present investigation may encourage syllabus designers to integrate mobile technologies and social networks into classroom learning.

Even though the current study reached vital conclusions, some limitations were recognised. First, the study relied on quantitative data examining only the writing skill. Also, the sample size was small. Therefore, this study recommends that future researchers include large samples for better insights. Moreover, involving qualitative data such as interviewing learners is highly recommended for in-depth data analysis. In addition, to reinforce the present study findings, future research can include a five-point Likert scale survey to probe learners' attitudes toward combining MALL with TBLT.

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