GENDER AND EFL WRITING:
DOES *WHATSAPP* MAKE A DIFFERENCE?[1]

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Abstract

WhatsApp is a potentially influential informal learning tool that may be used on the go. This study examines its potential utility in EFL writing with special reference to gender. The treatment encompasses a *WhatsApp*-based instructional program designed specifically to help develop writing performance, along the aspects of *content and ideas, organization and mechanics, vocabulary,* and *language use*, among 98 Jordanian eleventh-grade students. The participants were divided into two experimental groups, one male and one female, taught through *WhatsApp*. The data were collected by means of a pre-/ post-test whose analysis revealed improved writing performance, more for female participants than for their male counterparts.

Keywords: *WhatsApp*; gender; writing performance

1. Introduction and background

Gender parity has been a matter of controversy and a concern for educational practitioners and researchers alike. Despite abounding evidence that boys enjoy higher literacy rates than their female counterparts, the latter are reported (e.g. Levy, 2016; Mullis, Martin, Foy, & Drucker, 2012; Twist & Sainsbury, 2009) as better achievers in language and mathematics in almost all internationally competitive tests (e.g., Progress in International Reading Literacy Study (PIRLS), Trends in Mathematics and Science Study (TIMSS)).

More specific to the purpose of the current research, gender is believed to affect EFL writing performance (e.g., Cheng, 2002; Hedges & Newell, 1999; Jafari & Ansari, 2012). A growing body of research suggests that boys' dwindling literacy achievement (e.g., Alloway, 2007; Disenhaus, 2015; Hall & Coles, 1997; Klein, 2006; Martino & Kehler, 2007; Wallace, 2010; Watson, Kehler, & Martino, 2010) is partly attributed to the focus on print-based literacies rather than information and communication technology (ICT) and multi-media communication at which boys are known to excel (e.g., Alloway, 2007; Weaver-Hightower, 2008; Whitmire, 2010).

There is a plethora of research (e.g., Green & Oxford, 1995; Koivula, 2001; Pajares & Giovanni, 2001; Rudzinska, 2013) which suggests that gender differences, in addition to the stereotypical image that females are better language learners than their male counterparts, may readily explain reports that females surpass their male counterparts in language learning. Female language superiority is often attributed to factors such as the ability to remember lists of words, express empathy, develop interpersonal relations, and involve in emotional and artistic expression (Koivula, 2001). Males have further been reported as more anxious and apprehensive writers (Pajares & Giovanni, 2001). Moreover, learning style may also be a potential explanation, as females, unlike males, are reported to tend towards self-reflection rather than the spontaneity reported for males (Green & Oxford, 1995).

Several studies have been conducted on the effect of gender on language learning in general and writing in particular (Bacon & Finnemann, 1992; Cheng, 2002; Sajadi & Maghsoudi, 2016; Shang, 2013). For example, Bacon and Finnemann (1992), who examined gender differences in foreign language learning and authentic oral and written input among 938 Spanish university students, reported that females had a higher level of motivation, strategy use in language learning, and social interaction in the target language than their male counterparts. However, while Cheng (2002) reported that female students experience significantly higher levels of writing anxiety than male students, Shang (2013) reported that both male and female students experience writing anxiety, but more so for male than female students. However, Sajadi and Maghsoudi (2016) reported no gender effect on 112 Iranian EFL learners' success in English, as both male and female learners performed similarly on the test.

Moreover, the literature seems to suggest that boys have better access to technology than girls (e.g. Jenson & Brushwood Rose, 2003; Littleton & Hoyle, 2002; Schofield, 1995) attributing technology to a traditionally male paradigm and that girls also feel less technologically-inclined than boys (Charles & Bradley, 2006). In the current study, technology (viz. *WhatsApp*) is used to engage learners, boys and girls alike, without risking accommodating one at the expense of the other.

The literature seems to suggest that social networking websites constitute an integral part of teenage daily life (e.g. Ellison, Steinfield, & Lampe, 2006; Kuppuswamy & Narayan, 2010). However, research (e.g. Jackson, Zhao, Kolenic, Fitzegerald, Harold, & Von Eye, 2008; Kuppuswamy & Narayan, 2010; Odell, Korgen, Shumacher, & Delucchi, 2000) seems to attribute distinct purposes of technology use across gender. For example, Jackson *et al.* (2008) reported that gender differences figure in both the intensity and nature of technology

use. Males were the most intense videogame players whereas females were the most intense cell phone users. Odell *et al.* (2000) also reported that while a slight difference in the amount of time they spent online, male and female students' purposes were reportedly different, as more male students visited sex sites, researched purchases, checked news, played games, listened to music, and copied music whereas female students used the Internet for email and school research. Jackson *et al.* (2008) also reported that technology use affected academic performance, as the amount of time of computer and Internet use correlated positively with that spent playing videogames correlated negatively with academic performance.

Numerous calls have been made to bridge this gender gap and to catalyze boy's engagement in literacy. Scholars (e.g. Smith & Wilhelm, 2002; 2004; 2009) have put forth strategies for promoting boys' literacy engagement and motivation through authentic writing tasks, hands-on learning, problem-solving, and explicit discovery and analysis of texts. Furthermore, boys' rather well-documented greater engagement with technology (e.g. Jenson & Brushwood Rose, 2003; Littleton & Hoyle, 2002; Schofield, 1995) may be used as a catalyst for their literacy development, which is the major premise of this research.

Mobile devices have been reported as catalysts for autonomous learning (Hu, 2013) and optimal teaching and learning (Boy & Motteram, 2013). Not only can learners extend their learning beyond the physical boundaries of the traditional classroom to make use of the relatively unlimited online resources, but teachers can also benefit from these resources to catalyze effective teaching and learning.

WhatsApp is a popular mobile application, compatible with both iOS and Android operating systems, for exchanging both text and multimedia (viz. photo, video, audio) messages. With Internet connectivity, *WhatsApp* enables both synchronous and asynchronous collaboration among individual or groups of users through the following capabilities:

1. *multimedia* for exchanging text, photo, audio, and video messages with up to 256 people at once;
2. *document sharing* for exchanging PDFs, documents, spreadsheets, and slideshows up to 100 MB;
3. *unlimited messaging*;
4. *unlimited voice and video calls*;
5. *group chat* of up to 50 group members;
6. *end-to-end encryption* for secure communication;
7. *cross platform engagement* over multiple devices (viz., web, desktop) and various media;

8. *chat syncing* to a desktop computer (*WhatsApp* Official Site, 2017).

Research suggests that *WhatsApp* has become a platform for fostering accessibility, cooperation, and motivation among learners (Bouhnik & Deshen, 2014; Rambe & Bere, 2013). Examining the use of *WhatsApp* among South African tertiary-level students, Rambe & Bere (2013) reported positive student feedback, as *WhatsApp* is reportedly not only fun to use but also easier to communicate with teachers and peers alike. Similarly, Plana, Escofet, Figueras, Gimeno, Appel, and Hopkins (2013) reported a rise in motivation and enthusiasm for reading among Spanish EFL learners. Along the same lines, Amry (2014) found *WhatsApp* superior to face-to-face learning in the Saudi classroom.

Similarly, Bouhnik and Deshen (2014) reported that teachers can use *WhatsApp* groups not only as a learning platform but also as a means to communicate with students, nurture social atmosphere, and encourage dialogue and student sharing. Their participants reported that *WhatsApp* offers not only social but also educational advantages, such as a pleasant environment and stronger relations with fellow students, which reportedly culminated in gains in both the social (e.g. manner of conversation) and academic (e.g. access to learning materials, teacher availability, and learning beyond class hours). However, these advantages may be offset by challenges related to mobile phone ownership and teacher's potential annoyance by the flood of (sometimes irrelevant or meaningless) messages and students' assumption of his/her uninterrupted availability.

Once dubbed the neglected skill (e.g. Bani Younis & Bataineh, 2016; Duncan, 1991; Obeiah & Bataineh, 2015) and reportedly a complicated endeavor for second and foreign language learners alike (e.g. Duncan, 1991; Grabe & Kaplan, 1996), writing in general, and in the English as a foreign language (EFL) classroom in particular, has been the subject of extensive research in Jordan (e.g. Bataineh & Bani Younis, 2016; Obeiah & Bataineh, 2016) and abroad (e.g. Cumming & Riazi, 2000; Flower & Hayes, 1981; Hyland, 2003; Raimes, 1991; 1998). However, much attention has been given to seeking alternative measures for increasing the effectiveness of writing instruction, as writing is a major medium of communication in real life today (e.g. Defazio, Jones, Tennant, & Hook, 2010).

2. The study

2.1. The aim of the research

In Jordan, English, albeit taught as a foreign language, is significant in primary, secondary and tertiary education, not to mention the labor market and potential employment. The

Ministry of Education has initiated several reforms to improve English as a foreign language (EFL) instruction to foster proficiency in the four skills of which writing has been considered among the most challenging and anxiety-provoking activities for EFL teachers and learners alike (Cheng, Horwitz, & Schallert, 1999; Hyland, 2003).

To overcome such challenges in the writing classroom, different approaches, often with contrasting orientations, to teaching writing have been introduced. For example, the product approach focuses on language structure and essentially emphasizes rhetorical drills (Freedman, Pringle, & Yalden, 1987; Silva, 1990). In contrast, the process approach focuses on how a text is written rather than the written product (Flower & Hayes, 1981; Jordan, 1997).

By conducting the current study, the researchers seek better understanding of the potential effect of *WhatsApp* on Jordanian EFL students' writing performance across gender. The current research combines the process approach and technology-based instruction (viz., *WhatsApp*) with a view to fostering writing performance among Jordanian eleventh-grade male and female students and, simultaneously, gauging potential gender differences amongst the participants. As the use of gender has been reported to make a difference, the study seeks to add to the literature on this issue either by corroborating or discrediting previous findings and, at the same time, establish whether or not *WhatsApp* affects writing performance. More specifically, this study seeks to answer the question: To what extent, if any, does *WhatsApp* affect Jordanian EFL male and female students' writing performance?

2.2. Design and procedure

The research adopts a quasi-experimental design through which a *WhatsApp*-based instructional treatment is used to supplement traditional writing instruction among Jordanian eleventh-grade students. Two intact sections, comprising 37 male and female students, were purposefully selected from Yarmouk University Model School, a private school in Irbid First Directorate of Education, in the first semester of the academic year 2016/2017.

To achieve the purpose of the research, a *WhatsApp*-based instructional treatment was designed by the researcher. The content of the treatment comprised Modules 1, 2, and 3 (viz., Starting Out, Celebrations, and Sport) of the prescribed textbook, *Action Pack 11*. The researcher analyzed the content of these modules prior to computerizing them in order to enable *WhatsApp* mediation. The treatment consisted of writing texts, lesson plans and writing worksheets, a self/peer editing checklist, and a self/peer revision checklist. The treatment was designed to allow the teacher to supplement in-class writing instruction by

monitoring, revising, reviewing and evaluating student work. Through the two *WhatsApp* groups, the students worked collaboratively, interacted and exchanged experiences with their peers.

A writing test, covering the writing aspects of *content and ideas, organization and mechanics, vocabulary,* and *language use*, constituted the instrument of the study. The validity of the test was established by a jury of ten Jordanian university professors in EFL, linguistics, curriculum and instruction, and evaluation and measurement. The jury's remarks were used to amend the test prior to its administration. To establish the reliability of the test, it was piloted on a sample of 12 students from the same school with a two-week interval between the two administrations. The correlation coefficient between the two administrations of the test amounted to 0.88, which is deemed appropriate for the purposes of the study.

Prior to the treatments, the two groups were pre-tested to identify any potential differences between them, as shown in Table 1.

Table 1. Independent sample t-test of the mean scores of the male and female groups on the pre-test

Writing Aspect	Group	Mean	SD	f	Sig.
Content and Ideas	Experimental 1 (Male)	11.38	2.36	2.31	0.06
	Experimental 2 (Female)	11.87	2.49		
Organization and Mechanics	Experimental 1 (Male)	10.85	2.30	2.02	0.12
	Experimental 2 (Female)	11.33	2.63		
Vocabulary	Experimental 1 (Male)	10.31	2.87	2.73	0.15
	Experimental 2 (Female)	10.97	2.93		
Language Use	Experimental 1 (Male)	9.38	3.04	2.25	0.09
	Experimental 2 (Female)	9.43	3.20		
Total	Experimental 1 (Male)	42.00	9.96	2.87	0.07
	Experimental 2 (Female)	43.73	10.77		

Table 1 shows no statistically significant differences at ($\alpha=0.05$) among the male and female groups, which denotes equivalence between these groups.

2.3. Experimental treatment

The researcher/instructor met the two groups three times prior to the commencement of the *WhatsApp*-enhanced instruction. At the onset of the experiment, the researcher met with the students and handed each a letter to his/her parents explaining the research and asking for their consent for their child's participation. The students were further encouraged to participate by addressing the potential role of technology in fostering and facilitating not only their learning but also their writing performance. The second meeting was meant for the students with signed parental consents to participate, which amounted to 100% of the students. At the second meeting, the researcher, who set up a mobile phone number exclusively for the experiment, exchanged phone numbers with the students, made sure all had *WhatsApp* on their mobiles, and held a quick review session to assess prior knowledge of pertinent aspects, such as paragraph development, essay writing, and peer review. At the same meeting, the participants were also acquainted with the ethics of group membership, such as language use, considerate comments, and respect of privacy.

In the third meeting, the students were introduced to the strategies of the process approach (viz., planning, organizing, writing, editing, revising and rewriting (henceforth, POWER), as the researcher demonstrated the use of each of these strategies in specific writing tasks. Later that day, two *WhatsApp* groups, dubbed *Amazing Writers* and *Smart Writers*, were created and students added. The teaching materials including videos, pictures and documents were stored in separate files as were the homework sheets, media, and voice files to be easily uploaded whenever needed.

The participants started writing according to POWER, as the researcher and the class teacher observed and facilitated their *WhatsApp* utilization for learning to write. Eight weeks later, at the conclusion of the treatment, the post-test was administered to both groups, marked, and scores tallied and compared to detect potential improvement, or lack thereof, across gender.

3. Findings and discussion

To answer the research question, which seeks to identify any potential effect of *WhatsApp*-based instruction on Jordanian male and female EFL students' writing performance, an independent sample t-test was used to check for potential *WhatsApp* effects across gender, as shown in Table 2.

To determine the potential effect of *WhatsApp* per gender, means and standard deviations of the post-test scores were calculated, as shown in Table 2.

Table 2. T-test of the effect of *WhatsApp* on male and female performance on the post-test

Writing Aspect	Gender	Mean	SD	t	Sig.
Content and Ideas	Experimental 1 (Male)	11.03	3.41	-2.24	0.03*
	Experimental 2 (Female)	12.31	2.25		
Organization and Mechanics	Experimental 1 (Male)	10.54	3.64	-2.50	0.01*
	Experimental 2 (Female)	12.05	2.34		
Vocabulary	Experimental 1 (Male)	9.62	3.39	-3.13	0.00*
	Experimental 2 (Female)	11.48	2.47		
Language Use	Experimental 1 (Male)	8.41	3.19	-2.46	0.02*
	Experimental 2 (Female)	9.98	3.01		
Total	Experimental 1 (Male)	39.54	13.09	-2.75	0.08
	Experimental 2 (Female)	45.82	9.49		

*Significant at $\alpha=0.05$

Table 2 shows a statistically significant difference in the male and female participants' writing, as female participants scored higher than their male counterparts across the four aspects of the test and on the test as a whole. Even though male and female participants scored significantly differently across the four aspects of the test, writing seems to have developed significantly on all writing aspects.

The findings revealed that female students invariably outperformed male students on all the components of the writing test and on the test overall. This superior performance, which is consistent with previous research accounts, may be attributed to a host of factors. It has been reported that while female students tend to use the Internet for communication with family and friends and for school research and academic purposes, male students tend to use the Internet for leisure and entertainment (Jackson *et al.*, 2008; Odell *et al.*, 2000).

Female students may be more apt in the use of the Internet for educational purposes than their male counterparts, who tend to use the Internet for entertainment. This aptness may afford the former an advantage in effective *WhatsApp* use for learning, which may also account for their superior writing performance following the treatment. Furthermore, that most male students use the Internet for entertainment is associated with poorer academic performance since using the mobile phone for activities, such as gaming, chatting, and random search, constitutes a potential distraction from learning (Kuppuswamy & Narayan, 2010).

Another factor that may account for the male participants' inferior writing performance to that of their female counterparts is their distinct genre preferences. Essay

writing may not be the genre of preference among male students who, unlike their female counterparts, are reported to prefer factual writing to letter writing and poetry (e.g. Gorman, White, Brooks, MacLure, & Kispal, 1988; Lakoff, 1975).

Furthermore, male EFL writers tend to be more apprehensive than their female counterparts (Jebreil, Azizifar and Gowhary, 2015; Pajares & Giovanni, 2001). In the current study, even though *WhatsApp* utilization has afforded both teacher and students an informally relaxed learning environment, anxiety may have been at play, which may have been compounded by reports (e.g. Pajares, 2003) of male students' reluctance to write and lack of confidence, putting them at a disadvantage relative to their female counterparts (e.g. Cheng, 2002; Hedges & Newell, 1999; Jafari & Ansari, 2012).

4. Pedagogical implications and conclusions

The findings have shown that *WhatsApp* is a potential catalyst for writing performance across gender, more so for female students than their male counterparts. As mobile devices are finding their way into the language classroom, many learning opportunities are unlocked for male and female learners alike.

Language educators should take advantage of the capabilities afforded by technology for teaching not only writing but also listening, speaking and reading. The findings, albeit small-scale in sample and duration, are hoped to provide insights into the utility of integrating mobile technologies into foreign language teaching and learning.

However, the role of mobile technologies in the language classroom should not be overstated, as technology, albeit a catalyst for innovation, is not a fix-it-all for all learning dilemmas and in all learning contexts. The success of mobile learning is contingent upon a conducive learning environment and a diligent teacher who is willing to take risks and venture beyond the boundaries of traditional instruction.

It is the recommendation of this research to conduct larger-scale research, in terms of sample and duration, for better generalizability of its findings, for even though this study is sound in method and design, further research into the usability of mobile learning across diverse populations and skills would contribute largely to bridging an existing gap in the literature.

Note

1. This manuscript is an extension of the second researcher's PhD thesis per the regulations of Yarmouk University

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