

Original Article**Effect of Distance Learning on Iranian EFL Students' Motivation with a Focus on Gender****Seyed Abdolmajid Tabatabaee Lotfi^{*1}, Matina Moaddab², Asghar Afshari³,
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Received: 2021/06/22**Accepted:** 2021/10/22**Abstract**

Distance learning in language education has gained more significance in recent years. The present study intended to investigate whether there was any statistically significant correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners. Furthermore, the study aimed to find out whether the participants' gender moderated the relationship between motivation and learning English through Shad and WhatsApp. To fulfill these aims, a correlational study was set up and data were collected from 169 male and female learners, some of whom were exposed to WhatsApp and the rest received Shad as their English language class platforms. Data elicited from the motivation questionnaire and English language test of the learners were analyzed through the Kolmogorov-Smirnov test, Pearson correlation, and Fisher's z transformation formula to come up with the results of the study. The findings revealed that there was a moderate, positive, and statistically significant relationship between motivation and English learning of the WhatsApp-group learners. Moreover, it was found that there was a weak, positive, and statistically significant relationship between motivation and English learning of the Shad-group learners, and gender did not have a moderating role in the relationship between motivation and English learning of the learners, neither in the WhatsApp nor in the Shad groups. The implications of the study are presented and discussed.

Keywords

English language learning, Gender, Shad, Motivation, WhatsApp.

Introduction

English language learning (ELL) through distance learning (DL) has gained an unprecedented attention as technology has penetrated into language classrooms (1, 2). Technology integration is no exception in the context of English as a foreign language (EFL) because it opens the doors to the input-rich environments, and promotes interactive language learning activities and opportunities (3, 4). Distance learning (DL) through computer-assisted language learning (CALL) is gaining recognition as there has long been a tendency on the part of many administrations to integrate computers into the curriculum (e.g., 5, 6). In the same vein, there has been a bulk of research studies, which have explored the impact of CALL on the language learning and teaching process (e.g., 1, 7). More specifically, CALL has been reported to boost the students' oral and aural proficiency (e.g., 8), help EFL teachers' augment learner autonomy (e.g., 9), and foster students' engagement, problem-solving skills as well as other higher-order thinking skills (e.g., 10).

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All the same, in virtual ELL process, motivation is necessary to energize, direct, and sustain learning. Dörnyei (11) has stated that “Motivation concerns the direction and magnitude of human behavior; that is, the choice of a particular action, the persistence with it and the effort expended on it” (p. 8). For Fredricks, Blumenfeld, and Paris (12), students' motivation is reflected in cognitive, emotional, and behavioral engagement in school activities. Dörnyei (11) developed a new approach to language learning motivation, known as the L2 motivational system, which links the learning of a language to one's personal core or identity. This has implications for learning a foreign language in that the learner develops self-maturity and thus self-motivation in acquiring the target language.

Most recently, a few researchers have studied motivation in CALL or DL contexts. To name a few, Alarcon (13) investigated the effect of technology on EFL students' motivation, Alibakhshi, Zeinali, and Bakhtiyarvand (14) studied the effects of using smartboards on Iranian EFL learners' motivation, and Bahari (15) reviewed the mainstream trends and outlined the future work on L2 learning motivation. However, these studies reveal that studies that examined language learning motivation in online settings were limited both in number and in scope (16). More importantly, it could be seen that the platforms used by high schools in Iran have not gone under scrutiny by previous researchers.

Review of the Related Literature

A few empirical studies have been done on the issues of motivation and technology-based language learning in Iran and abroad. Aljaraideh (17) identified the impact of digital storytelling (DST) on academic achievement of sixth grade students in English language and their motivation towards it in Jordan. The research used a quasi-experimental method. The sample of the study consisted of (50) male students who were purposefully chosen from public schools at Jerash governorate. They were divided into an experimental group which had 25 students learning English language through DST, and a control group which had 25 students. They are taught the same content in traditional way. The findings of the study showed that there were statistically significant differences in students' academic achievement and students' motivation towards learning English language due to teaching method in favor of the DST group.

Ratminingsih (18) conducted a descriptive study which aimed to explain teachers' perception of the effectiveness of an ICT-based interactive game, and the students' motivation and learning achievement after being taught with ICT-based interactive game. There were 30 primary school English teachers who participated in this study and were given a one-day in-service teacher training program on the implementation of ICT-based interactive game, which was further followed with three mentoring sessions to six representative schools determined by random sampling of two clusters. The result showed that the teachers had a very good perception on the program, in which the training was considered to help them increase their knowledge and skills in preparing lesson plans and conducting teaching. Furthermore, the students had a high motivation in learning English by the facilitation of ICT-based interactive games.

Kustini, Herlinawati, and Indrasary (19) aimed at finding out students' perceptions about the integration of technology to improve multi-literacies in EFL teaching. The study employed an explanatory sequential mixed-methods design in which the data were obtained through questionnaire, interviews, and classroom observations. The results indicated that a vast majority of the students supported the use of technology in the teaching and learning practices (90.6%) for the reasons that technology helped them acquire lots of resources in their learning (89.5%) and boost their motivation (86.5%). Regarding the students' perceived technology level, they believed that they had good skills in using word-processing, spreadsheet, and presentation program (50%). They also could use communication tools (56.3%), social media (61.5%), authoring tools (52.1%), desktop publishing (57.3%), and creating video (57.3%). In terms of the perceived barriers to integrating technology, the data indicated that the biggest constraint that the students

had was the lack of or limited internet access in their school environment (42.7%), followed by the limited to produce digital projects (39.6%). In addition, the findings showed that technology was utilized as a tool for accomplishing the tasks given by the teachers and helped the students gather information from online resources and provided them more understanding about the topic learned in the classroom.

Ushida (20) investigated the role of students' motivation and attitudes in second language (L2) study within an online language course context called Language Online (LOL). Students' attitudes and motivation were examined within a socio-educational framework (21), while learning contexts were examined based on Dömeysi's (22) components of foreign language learning motivation. Students' learning behaviors and learning outcomes were used as predictor and criterion variables in a series of quantitative and qualitative analyses. The results showed that students tended to have relatively high anxiety about the LOL course at the beginning of the semester, perhaps due to their lack of familiarity with the specific LOL learning environment. However, students' motivation and attitudes toward L2 study were relatively positive and stable during the course. The findings provided some evidence that motivated students studied regularly and productively to take every opportunity to perfect their language skills. It was also found that each teacher idiosyncratically implemented the LOL course, thereby creating a unique class culture and affecting students' motivation and attitudes toward studying the L2 in the LOL context. The findings reinforced the importance of students' motivation and attitudes in L2 study and, equally important, the continuing critical role of the teacher in technology-enhanced teaching.

Alarcon (13) implemented the use of technology in a primary school in Jujuy and used the technological tools that the school counted on in spite of limitations with the equipment. The study only focused on students' learning process. This study had a scope of limits in the use of computers and all the resources computers entail. For this purpose, classroom observations were made and a questionnaire was administered to a group of sixth graders. Findings showed that students' motivation increased if technology was used in an EFL classroom. Moreover, the different activities through technology fostered the practice of the language skills with important benefits on students' learning. Apart from that, findings showed that students' motivation to learn English increased even if they met limitations with the computer equipment.

Campbell and Varnhagen (23) contended that some computer applications in education such as self-paced tutorials may not work for the benefit of females who are more emotional and sensitive learners than males. In another study, Ono and Zavodny (24) investigated gender differences in information technology usage by making a comparison across genders in United States and Japan. They have also reported that there is no significant difference between male and female learners with regard to their attitudes toward technology usage in educational settings, as supported by data analysis in this study. In addition, our findings support the results reported by Ong and Lai (25), who examined gender differences in perceptions toward and acceptance of e-learning acceptance and concluded that gender does not play a role in this regard. In a more recent study on the matter, Yaokumah, Totimeh, and Kumah (26) have argued that males significantly differ in the use and preferences of ICT tools and devices (smart phones and tablets) from females. Moreover, they claim that females significantly differ in the use and preferences for online services (WhatsApp, text messaging, and library search engines) from males.

Given the preceding background, the current study intended to compare the effects of WhatsApp and Shad on the motivation of EFL learners. The reason for choosing these two platforms was that one of them was simply a social media application with high media sharing capabilities that is widely used, and the other was a platform designed especially for delivering content to students with weaker social capabilities. To that end, this study tried to find out if there was any statistically significant correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners. Furthermore, the

study aimed to investigate if the correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners was moderated by the learners' gender. In line with the objectives of the study discussed above, the following research questions and hypotheses were proposed:

RQ1: Is there any statistically significant correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners?

RQ2: Is there a correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners moderated by the learners' gender?

Methodology

In this study, there were two non-randomly selected groups of high school EFL learners, one of which had experienced WhatsApp and the other one had been exposed to Shad as the educational platform for their online studies; the two groups then received a motivation questionnaire regarding their experiences with WhatsApp and Shad. The design of the study was a correlational design, as the researcher aimed to find the relationships between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners and to investigate whether this could be moderated by the learners' gender. Sampling procedure did not entail randomization; one of the variables of the study was English language learning (through WhatsApp and Shad) and the other variable was the learners' motivation. In addition, gender was considered as the moderator variable in this research.

1. Participants

For the purpose of this study, 169 high school language learners from two male high schools two female high schools were asked to take part in this study. In one of the male high schools, the platform of instruction was WhatsApp while in the other male high school, it was Shad; this was also true of the female high schools which were chosen for this study. These high school students were 15 to 17 years old, and their first language was Farsi. In order to include homogeneous students in this experiment, an Oxford Quick Placement Test (OQPT) was given to them and the lower-intermediate ones, who scored between 30 and 39, took part in this study. The participants of the study were selected based on availability sampling procedure. That is, the high school students who were available to two male and two female EFL teachers who were distant relatives of the researcher were recruited as the participants of the study.

2. Instruments

The instruments which were used in the study included an OQPT and a motivation questionnaire. The OQPT is a standardized English proficiency test that has been widely used by researchers around the world. It consists of 60 items on vocabulary, grammar, and reading comprehension, and can place language learners in the right level of proficiency. Based on the scoring rubric of the OQPT, learners who receive a score between 30 and 39 on this test could be labeled lower-intermediate. The reliability and validity of this test have already been established by previous researchers. All the same, its reliability was once again calculated through the Cronbach's alpha formula and it turned out to be .88.

Motivational State Questionnaire was developed by previous researchers using scales from three studies (i.e., 27, 28, 29) it comprises items measuring both situation-specific motivational dispositions of language learners and their general attitudinal and motivational characteristics. The situation-specific portion of the questionnaire includes linguistic self-confidence, motivational intensity, and attitudes toward learning English. The first two scales are adapted from Guilloteaux and Dornyei (27) and the last one is adapted from Taguchi et al. (29). The general dispositional section, on the other hand, consists of the ideal L2 self and ought-to L2 self, which are also adapted from Taguchi et al. The two attitudinal scales (the ideal L2 self and ought-to L2 self) together with L2 learning experience are the constituent variables of the L2

Motivational Self System.

The questionnaire was first translated into Persian. Then three translation experts were asked to check the translated questionnaire. In the cases of discord, wordings of the items underwent modification. Finally, the Persian version of the questionnaire was piloted on students similar to the target sample and the Cronbach's alpha reliability of the questionnaire was found to be 0.74. The 35 statement-type items of the questionnaire are on 5-point Likert scales in which 5 indicates strongly agree and 1 indicates strongly disagree. The five variables included in this instrument are as follows:

1. Ideal L2 self, representing an ideal image of the kind of English user one aspires to be in the future;
2. Ought-to self, measuring the English-related attributes that one believes one should or ought to possess as a result of perceived duties, obligations, or responsibilities;
3. English learning experience, assessing the situation-specific motives related to English learning immediate environment and experience;
4. Motivational intensity, measuring the amount of effort learners are ready to put into learning English.
5. Linguistic self-confidence, representing the learner's confident and anxiety-free belief that the mastery of an L2 is well within his/her means.

To examine the relationship between motivation and learning English, the scores from an English test had to be used. For this reason, the scores of the final exam of the students (which was an achievement test), were used as an indication of their English language learning. Measures were taken to give all the students the same final exam. The test comprised 30 items on vocabulary, structure, language use and communication, as well as reading comprehension. This test was carefully scrutinized by the two teachers who taught the classes, and its reliability was calculated by means of KR-20 formula ($\alpha=0.85$), and its validity was confirmed by three other experienced teachers who reviewed and made comments on the test, which were incorporated in the final version of test that was given to the students.

3. Procedure

The steps in conducting this research are delineated in what follows. First, the intended participants of the study were accessed. Early in this study, the students were given an OQPT so that only lower-intermediate EFL learners served as the participants of the study and the outliers were left out from the study. After choosing the students from two male high schools and two female high schools, Motivational State Questionnaire was given to them at the end of their academic semester. Moreover, they sat for their final exam at the same time when their term came to an end.

In the high schools where WhatsApp was used as the medium of instruction, text messages, voice messages, videos, and pictures had been sent to the students by the teachers and they could access these materials both during and after the class was administered. In the other high schools, the teachers had taught and presented the materials to the students, but using the Shad platform. In these high schools, the teachers and their students had met regularly online at their class time. Instruction had taken place there, and if a student had problems turning up for a session, they could have let the teacher and the principal know so they could access the videos of the lesson later. In this study, these participants took Motivational State Questionnaire that had been sent to them online and submitted their answers within a week of receiving the questionnaire. They also took the English final exam, which was meant to be an indication of their language learning.

Statistical Package for Social Sciences (26.0) was used to analyze the data in the present study. Two Pearson correlations were used to answer the first research question of the study to see whether there is a relationship between motivation of the learners and their English language learning via WhatsApp, and once to see if there is a relationship between the motivation of the learners and their English language learning through Shad. Then, to answer research question two,

Fisher's z transformation formula was used twice: once to see if there is a difference between male and female students with respect to the relationship between motivation and English language learning via WhatsApp, and once to find out if there is a difference between male and female learners regarding the relationship between motivation and English language learning via Shad.

Results

Before conducting ANOVA and Pearson correlation, the normality assumption had to be checked. Thus, the results of the Kolmogorov-Smirnov test for all the tests used in this study are presented in Table 1.

Table 1. Dependent Variable: Post-Test

Groups	Gender	Tests	Kolmogorov-Smirnov			Shapiro-Wilk		
			Statistic	df	Sig.	Statistic	df	Sig.
WhatsApp Group	Male	OQPT	0.15	41	0.20*	0.91	41	0.13
		Motivation	0.14	41	0.20*	0.98	41	0.99
		English Test	0.13	41	0.20*	0.93	41	0.32
	Female	OQPT	0.13	47	0.20*	0.95	47	0.63
		Motivation	0.10	47	0.20*	0.98	47	0.99
		English Test	0.20	47	0.07	0.91	47	0.15
Shad Group	Male	OQPT	0.12	39	0.20*	0.97	39	0.95
		Motivation	0.21	39	0.05	0.93	39	0.27
		English Test	0.13	39	0.20*	0.96	39	0.81
	Female	OQPT	0.10	42	0.20*	0.96	42	0.79
		Motivation	0.10	42	0.20*	0.97	42	0.94
		English Test	0.19	42	0.13	0.89	42	0.08

The p values under the Sig. column of the Kolmogorov-Smirnov test (and/or the Shapiro-Wilk's test) have to be examined to see if the normality assumption is met for the OQPT, motivation, and English test of the male and female L2 learners in the WG and SG. Because a p value larger than the significance level of 0.05 indicates no violation of the assumption of normality, it could be concluded that the distributions for the OQPT, motivation, and English test used in this study had normality.

1. Results for the Quick Oxford Placement Test

To ensure that the male and female learners in the two groups of WG and SG were homogeneous at the beginning of the study, their OQPT scores were compared using a one-way between-groups ANOVA. Table 4.2 shows the results of the descriptive statistics for this ANOVA analysis.

Table 2. Descriptive Statistics for OQPT Scores of Male and Female Learners in the WG and SG

OQPT	N	Mean	Std. Deviation	Std. Error	95% CI for Mean	
					Lower Bound	Upper Bound
WG Males	41	35.13	3.83	0.98	33.01	37.25
WG Females	47	34.80	2.70	0.69	33.30	36.29
SG Males	39	34.93	2.05	0.52	33.79	36.06
SG Females	42	34.53	2.72	0.70	33.02	36.04
Total	169	34.85	2.83	0.36	34.11	35.58

The OQPT mean scores of the WG males ($M = 35.13$), WG females ($M = 34.80$), SG males ($M = 34.93$), and SG females ($M = 34.53$) were not found to be drastically different from one another. To find out whether the differences among the OQPT scores of these four (sub)groups of learners

reached statistical significance or not, the results of the ANOVA table had to be checked:

Table 3. One-way ANOVA for OQPT Scores of Male and Female Learners in the WG and SG Learners

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.85	3	0.95	0.11	0.95
Within Groups	470.80	165	8.40		
Total	473.65	168			

In Table 3, the p value under the Sig. column was found to be greater than the .05 alpha level of significance ($p = 0.95 > 0.05$). This indicates that the differences among the four (sub)groups of learners regarding their OQPT scores failed to reach statistical significance. Differently put, the learners were at a similar level of proficiency at the beginning of the study. Figure 4.1 also shows the fact that the learners were roughly the similar in terms of their proficiency level at the outset of this research study.

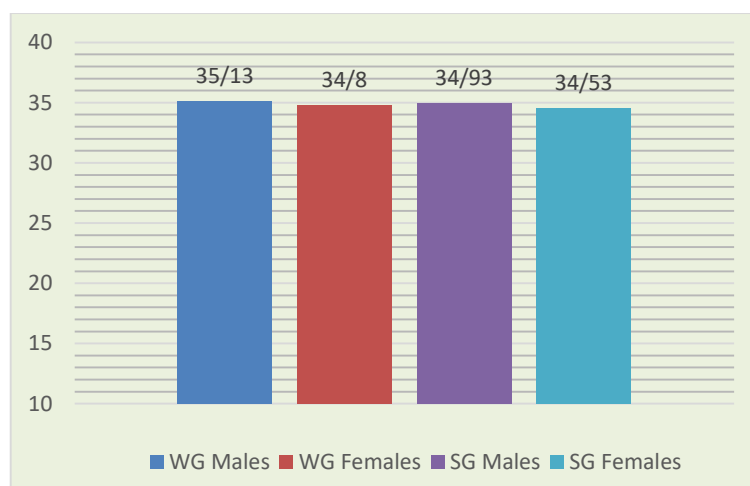


Figure 1. OQPT mean scores of male and female learners in WG and SG learners

1. Relationship Between Motivation and English Learning

To test the first null hypothesis of the study and answer the first research question, the motivation and English test scores of the learners were used to conduct Pearson correlation twice: once it was done for the WG learners and once for the SG learners. The results for these analyses are presented in the following tables and figures:

Table 4. Correlation Between Motivation and English Learning of the WG Learners

	English Learning	Motivation
English Learning	Pearson Correlation	1
	Sig. (2-tailed)	0.000
	N	88
Motivation	Pearson Correlation	0.61
	Sig. (2-tailed)	0.000
	N	88

It could be seen in Table 4 that motivation scores of the learners were positively correlated with their English learning test scores ($r = 0.61$), and that this correlation was statistically significant

($p = 0.000 < 0.05$). According to Brown (2005), a relationship which ranges from ± 0.01 to ± 0.50 is weak; one which falls between ± 0.50 and ± 0.80 is moderate, and a correlation coefficient greater than ± 0.80 shows a strong relationship. Thus, the relationship between motivation and English learning test scores of the learners in the WG was a moderate positive one, which (as it was mentioned above) could reach statistical significance. This relationship could be visually represented in a scatterplot, as shown in Figure 2.

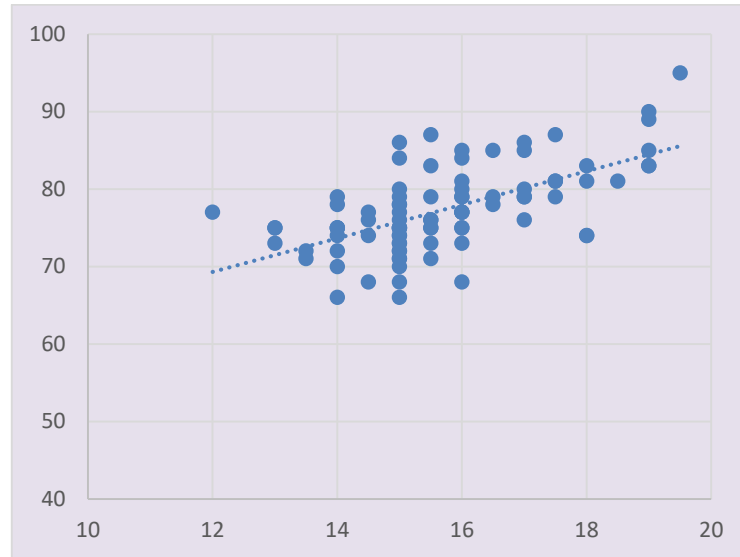


Figure 2. Relationship between motivation and English learning of the WG learners

The scatterplot in Figure 2 shows a linear relationship between the learners' motivation and English learning in the WG; as the line moves from the lower left-hand corner of the graph to the upper right-hand corner, it shows a positive relationship, and as it is rather steep, the relationship is found to be a moderate one. Table 5 deals with the relationship between motivation and English learning of the learners in the SG.

Table 5. Relationship Between Motivation and English Learning of SG Learners

	English Learning	Motivation	
English Learning	Pearson Correlation	1	0.38
	Sig. (2-tailed)		0.000
	N	81	81
Motivation	Pearson Correlation	0.38	1
	Sig. (2-tailed)	0.000	
	N	81	81

It could be observed in Table 5 that the motivation and English learning scores of the SG learners were positively correlated ($r = 0.38$), and that this weak, positive correlation was statistically significant ($p < 0.05$). This relationship is graphically represented through a line graph in Figure 3.

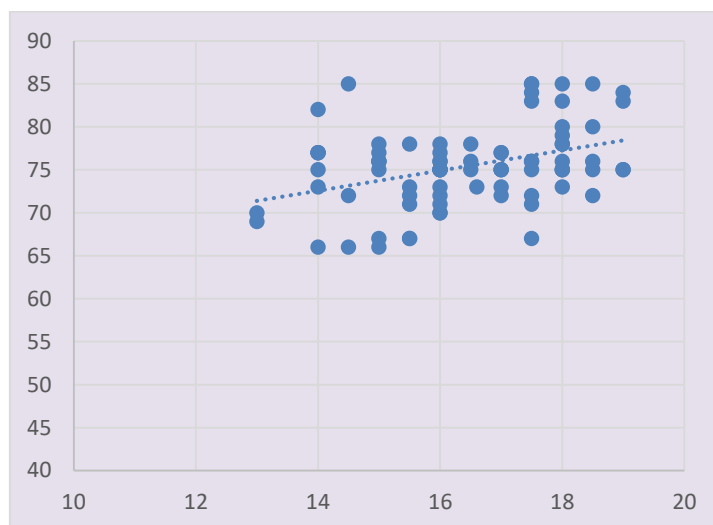


Figure 3. Relationship between motivation and English learning of the SG learners

The line graph in Figure 3 displays a linear weak, positive relationship between SG learners' motivation and their English learning scores.

2.Motivation and English Learning: Gender in Focus

Through the second research question, attempts were made to find out whether gender could be a moderating factor for the relationship between motivation and English learning of the language learners in the WG and SG groups. For this reason, first in the relationships between motivation and English language learning of male and female learners in the SG are presented and the difference between them is examined using the Fisher's z transformation formula. Then the same procedure was conducted for the male and female learners in the SG.

Table 6. Relationship Between Motivation and English Learning of Male and Female WG Learners

		Motivation (Males)	Motivatio n (Females)	Fisher's z	Sig.
English Learning	Pearson Correlation	0.67	0.63	0.35	0.36
	Sig. (2-tailed)	0.000	0.000		
	N	41	47		

It is shown in Table 6 that the correlation between motivation and English learning of the male participants in the WG ($r = 0.67$) is not very different from the correlation between motivation and English learning of the female learners in the WG ($r = 0.63$). The results of the Fisher's z test also verified that the difference between male and female learners with regard to the relationship between motivation and English learning was not significant ($p = 0.362 > 0.05$) (Figure 4).

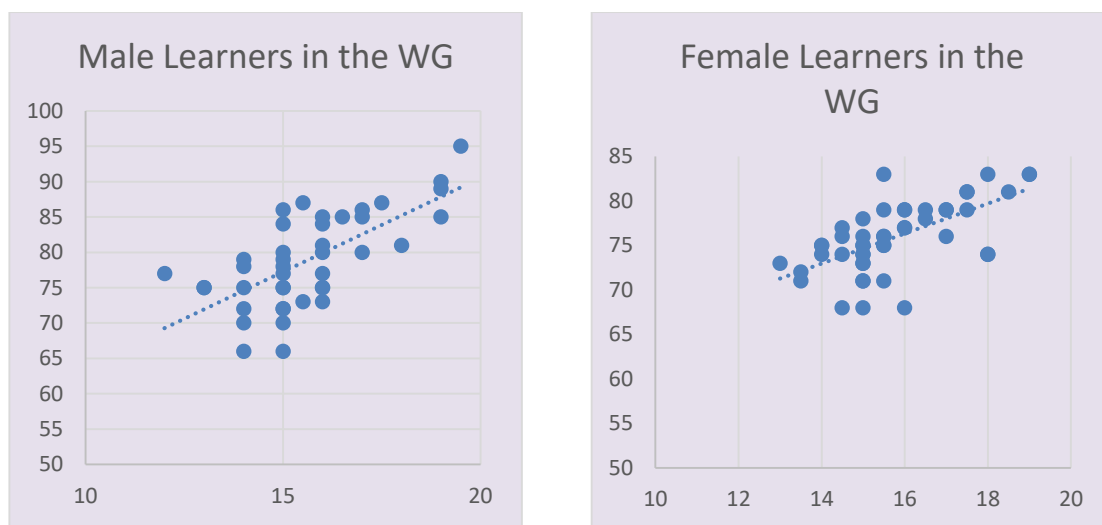


Figure 4. Relationship between motivation and English learning of Male and Female WG learners

Figure 4 reveals that the positive relationship between motivation and English learning is a bit higher for female learners in the WG, but the difference between males and females is not considerable.

Table 7. Relationship Between Motivation and English Learning of Male and Female SG Learners

		Motivation		Fisher's z	Sig
		Males	Females		
English Learning	Pearson Correlation	0.358	0.411	-0.26	0.39
	Sig. (2-tailed)	0.000	0.000		
	N	39	42		

It is shown in Table 4.7 that in the SG group, the difference between the coefficients for males ($r = 0.35$) and females ($r = 0.41$) was not of statistical significance ($p = 0.39 > 0.05$). The lack of a significant difference between males and females in the SG with respect to the relationship between motivation and English learning could also be seen in Figure 5.

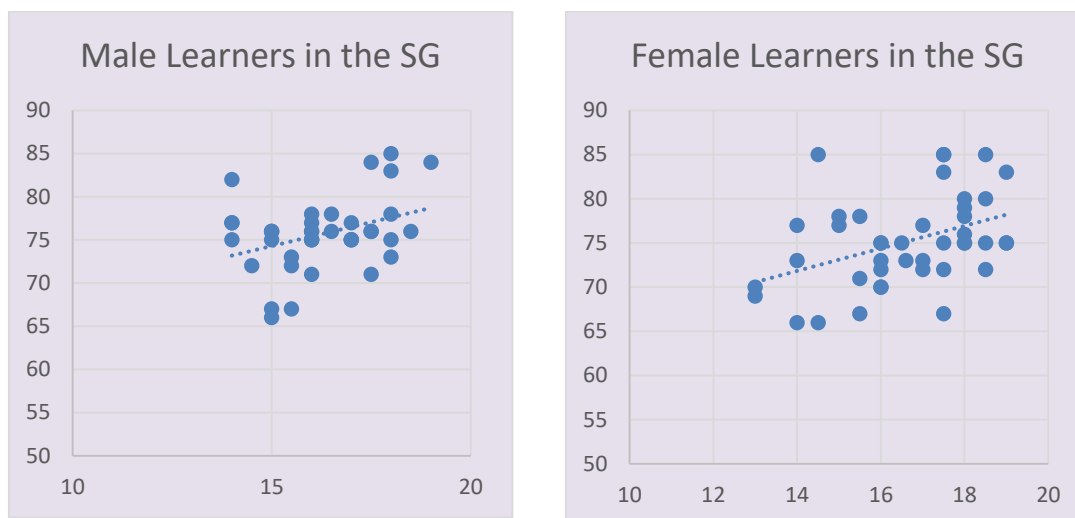


Figure 5. Relationship between motivation and English learning of Male and Female SG learners

Figure 5 shows that the difference between male and female learners in the SG with respect to the relationship between motivation and English learning was a very slight one. The results of the data analysis stage of the present study were presented above. It was concluded that (a) there was a moderate, positive, and statistically significant relationship between motivation and English learning of the WG learners, (b) there was a weak, positive, and statistically significant relationship between motivation and English learning of the SG learners, and (c) gender did not have a moderating role in the relationship between motivation and English learning of the learners, neither in the WG nor in the SG group. The results obtained above are discussed in the following chapter where the conclusions of the study are also presented.

Discussion and Conclusion

In order to pursue the objectives of this research, the first research question of the study was raised (i.e., Is there any statistically significant correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners?) The results showed that there was a moderate, positive, and statistically significant relationship between motivation and learning English through WhatsApp. In addition, it was found that there was a weak, positive, and still statistically significant relationship between motivation and learning English through Shad by Iranian high school English learners ($r = 0.38$, $p < 0.05$). In other words, the first null hypothesis of the study was rejected, proving that using WhatsApp and/or Shad was significantly correlated with the motivation of lower-intermediate high school EFL learners.

The results of this study are consistent with findings in the previous literature on the relationship between technology-enhanced language teaching methods and integration of mobile phones applications, such as WhatsApp in language teaching and learning (30, 31, 20). In line with other studies, one justification for students' high motivational levels in using applications such as WhatsApp is learners' empowerment. In other words, students felt that the MALL context helped to enhance their personal power and made it less threatening to learn a foreign language (32).

The positive relationship between using WhatsApp and Shad for language learning and EFL learners' L2 motivation can be rooted in the fact that social media help students share, keep in touch with each other, and fosters a constructivist learning environment in which audio and video materials can be easily exchanged. The finding that students in this study showed significant relationships between motivation and using WhatsApp/Shad can be explained in accordance to the fact that these applications have entertainment purposes for most Iranian learners in addition

to their educational benefits. This finding may also lend support to results reported by other researchers, confirming that the impressive developments in audio, video, and computer-mediated communications and language learning programs offer many possibilities for learners and teachers to boost the L2 learning and teaching process (30). On the contrary, the latter finding runs counter to the findings of other researchers who claim that not all the information in multimedia and not every type of MALL application can support learning since for learning to occur the resources need to be designed using sound educational principles and need to be purposefully integrated into the learning experience by the teacher (e.g., 33).

The purpose of the second research question of the study (i.e., Is the correlation between motivation and learning English through Shad and WhatsApp as perceived by Iranian high school language learners moderated by the learners' gender?) was to find out whether gender brought about any differences in the relationship between lower-intermediate learners' motivation and learning English through WhatsApp and Shad. As such, a Fisher's z transformation formula was conducted to help the researcher test this hypothesis. The results of data analysis showed that gender did not moderate the relationship between L2 motivation and learning English for the learners exposed to instruction through neither WhatsApp nor Shad.

The findings related to the second research questions in this study are in line with findings of other researchers, who have claimed that both genders equally contribute to the integration of technology in language. The finding of the second research question is in opposition to those reported by other studies such as that of Ono and Zavodny (24) who claimed that technology has traditionally played a gendered role in the western society.

In response to the first research question of the study, it was concluded that there is a moderate, positive, and statistically significant relationship between L2 motivation and language learning through WhatsApp. It was also found that there is a weak, positive, but still statistically significant relationship between English learning through Shad and L2 learning motivation. This conclusion was also supported by findings of other researchers who have confirmed social networking applications such as WhatsApp and Shad can boost learners' L2 learning motivation and positive attitudes toward learning (e.g., 34, 20).

Moreover, the results of data analysis on the second research question of the study revealed that gender does not have a moderating role in the relationship between learning English through Shad/WhatsApp and Iranian high school language learners' motivation. Put it simply, it was found that gender did not cause any significant changes in the relationship between L2 learning motivation of Iranian EFL learners and L2 learning through WhatsApp and/or Shad. This conclusion has been supported by other researchers who have examined gender-related differences and their roles in L2 learning motivation of EFL learners (35).

Regarding the correlation coefficients obtained, it can be argued that WhatsApp, as a very popular mobile phone application in Iran, is more correlated with Iranian EFL learners' L2 learning motivation in comparison with its locally-designed counterpart (i.e., Shad). Furthermore, in the Iranian context, cross gender differences do not lead to any significant changes in the L2 learning motivation of the learners experiencing L2 learning on WhatsApp or Shad.

The findings of the current study have certain implications for EFL learners, teachers, materials developers and practitioners in second language acquisition studies. Furthermore, the findings of this study could enrich the literature in the area of foreign language learning especially Iranian EFL learners' L2 learning motivation and its relationship with integration of various forms of technology such as mobile phone applications in EFL classrooms. Moreover, the finding of the study can be used by language practitioners and curriculum developers to consider EFL students' needs, wants, and preferences for language learning in the technology era, providing the chance for EFL learners to benefit from different types of technology-enhanced forms and methods of language learning. In fact, for choosing the instructional materials for EFL classes those which enjoy employing technology in language teaching and can lead to higher levels L2 leaning

motivation among learners can be used to create a better educational context.

It is also hoped that the findings of the present study will encourage EFL teachers to pay closer and more consummate attention to integrate technology-enhanced language learning tools such as WhatsApp and Shad into their EFL classrooms and materials. In fact, considering the beneficial impacts of drawing learners' attention to certain benefits of using technology in language learning is a main responsibility of EFL teachers; they are in fact expected to invest more time and energy in familiarizing their learners with the role and application of technology in improving language learning.

To conclude, there are still a large number of EFL teachers that place great emphasis on and devote almost all of their attention in the EFL classroom to traditional means of language teaching, considering no place in their lesson plan for technology. Accordingly, as demonstrated by previous studies in the literature, the role of technology in language teaching remains a marginal component of L2 instruction, receiving only negligible attention by some EFL teachers. This being so, EFL teachers are expected to take the findings reported by empirical studies like this into account and integrate technology into their lesson plans more than before.

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