



## **EFL Learners' Reading Comprehension Development through MALL: Telegram Groups in Focus**

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The study aimed at investigating the effect of instruction through telegram groups on the learners' reading comprehension. Moreover, it investigated that whether there is any difference between two genders of the experimental groups in reading comprehension ability. For this purpose, 147 subjects were selected. To homogenize them, a standard placement test was used and the test results reduced the number of participants to 103 learners among which 55 ones were chosen randomly as the experimental group consisting of 29 females and 26 males. The rest were assigned as the control group including 26 females and 22 males. At the first session, a researcher-made reading comprehension test was applied as the pre-test. Twelve passages were taught through telegram groups for experimental groups and the same passages were taught in the classroom through the traditional way of reading comprehension instruction. In the last session, the same researcher-made reading comprehension test was administered as the post-test. The results portrayed that instruction through telegram groups has a significant effect on the Intermediate students' reading comprehension ability. Furthermore, it was determined that there was no significant difference between two male and female experimental groups in the terms of reading comprehension ability.

**Keywords:** MALL (mobile assisted language learning), social networks, online instruction, reading comprehension, telegram group

### **INTRODUCTION**

main objective for many of the authorities of education. In the period of globalization, the modern technologies related to mobile and such kinds of devices contribute to rapid promotion of learning and teaching process at the university level. Usage of mobile technology is considered as new channel to have more interactive, creative and innovative educational environment for students and make instruction more attractive and effective. The prominent goal of using technology in educational process is

**Citation:** Naderi, S., & Akrami, A. (2018). EFL Learners' Reading Comprehension Development through MALL: Telegram Groups in Focus. *International Journal of Instruction*, 11(2), 339-350. <https://doi.org/10.12973/iji.2018.11223a>

improving and developing cooperative learning independence of classroom learning. This experience of learning beyond the classroom environment motivates the learners to have their own process of learning with their own pace and get the communication skills for their future aims. In this field, a teacher has the primary role to encourage the learners to be self-learners and providers of related resources in technology-mediated education. The growth of technology promotes the new aspects of pedagogy (Yedla, 2013). Based on Ellis (1999), interaction is defined as a social behaviour which happens when one communicates with the other one. Social network as a new technology provides better interaction and cooperation among people and can be applied for EFL learners to have more and better learning opportunities. This kind of technology has some educational profits for both learners and teachers including more interaction with less limitation of time and place. Another profit is experiencing the new way of interaction and cooperation for the purpose of learning (Lampe, Wohn, Vitak, Ellison, & Wash, 2011). Recent attention to on-line learning by the use of the mobile devices requires the special ways of instruction and feedback.

According to McCray (2000), when the use of information technology is discussed, certainly, the use of the Internet, for education, with different aspects of online education often comes to the mind. Particularly, investigating the effectiveness and efficacy of computer mediated instruction in its different types has taken into account. On line courses and programs provide some educational opportunities for learners who cannot be limited by time and geographic constraints. Moreover, such kind of instruction can decrease the course-related expenses for educational institutions. Today, social networks are appropriate channels to have the effective and efficient communication. Recent easy access to internet, provides good opportunities for people around the world to have connection with each other beyond considering the actual distance between. This connection can be possible in different modes such as chat, call and video connection through various available types of social networks including telegram, WhatsApp, Viber, Imo and etc. Therefore, the possibility to have this kind of connection has made the teachers, researchers and educational authorities interested to apply it in education domain.

## **REVIEW OF LITERATURE**

### **Mobile-Assisted Language Learning (MALL)**

English learning is considered as an important factor in various professional successes and a channel for interacting in many communities and mobile devices can provide a convenient environment for this learning. There are many studies and developments in domain of using wireless technology for different dimensions of language learning (Mosavi & Nezarat, 2012). The mobile technology for learning is more helpful to do some tasks beyond the classroom. These tasks can make learning more directly related to the experiences in the real world. Furthermore, applying mobile devices for learning purposes beyond the classroom is beneficial for better using of learner's leisure time; even in motion (Kukulka Hulme, 2009).

Today, there are various kinds of mobile devices which are compatible to the users' different needs. Most of the mobile phones are capable of performing the basic activities

with the reasonable expenses and the learners with different abilities can use their customized mobiles for the learning purposes (Kukulka-Hulme & Shield, 2008). The injection of such technologies into education involves a gradual process, because it necessitates teachers and learners to comprehend how they can use these technologies efficiently and effectively in different types of learning environments (Kukulka-Hulme & Shield, 2008). Ogata, Yin, El-Bishouty and Yano (2010) claim that: “computer assisted mobile learning uses lightweight devices such as personal digital assistant (PDA), cellular mobile phones, and so on” (p.8).

Many researchers became interested in this domain because of many advantages of mobile use in education including availability, flexibility, reasonable price, small size and they are investigating the way of applying mobile devices to improve language learning and teaching (Huang, Huang & Lin, 2012). Although mobile devices are considered as the development for learning in new type of environment with new facilities, they will not substitute for previous teaching and learning instruments; since all education objectives, content and tasks are not suitable for mobile devices. This type of learning is characterized by its potential in the context of learning, being available, personalized, spontaneous and ubiquitous. Such learning can be appealing for people who do not have enough free time because of working for long hours. In this kind of situation, busy people prefer to use portable devices for learning new materials instead of taking part in traditional classroom-based courses (Gay, Stefanone, Grace-Martin, & Hembrooke, 2001).

### **MALL and EFL Setting**

Chang and Hsu (2011) investigated the role of individual and collaborative task of extensive reading by the use of technology. The result of their study did show that students in collaborative groups were more successful in the final reading comprehension test than others who acted individually. Chiang (2012) studied the effect of Kindle-eBook on 43 EFL students' motivation to read literature. Although the effect of technology is over-emphasized in different papers, the survey administered in the study did show that the effect of technology utilization is not significant.

In a study by Huang and Lin (2011), EFL students' preference for reading via mobile and hard-copy was discussed. The result of the researcher-made questionnaire did reveal that students preferred hard-copy for the long tests while they preferred mobile as the best tool of reading of shorter texts. Motallebzadeh, and Ganjali (2011) carried out a study on the effect of SMS as a mobile interaction on vocabulary retention. Their study showed that those students who received the vocabulary set through SMS had better vocabulary retention in comparison to the group that enjoyed the traditional way of receiving vocabulary.

## **METHOD**

### **Research Design**

The design of the present study is quasi experimental, since the participants were selected from the intact classes which were assigned to 4 groups including two control

classes (one with 26 females another with 22 males), and two experimental groups (29 females in one group and 26 males in another one).

### **Participants**

To ensure that the subjects of the study are at almost same level of English proficiency, the researchers applied the 'Interchange/Passages Objective Placement Test' (Lesly, Hasen & Zukowski, 2005) at the first session. Based on the test results, 103 EFL learners were chosen out of total 147 learners. Among these participants, 86 ones had intelligent mobile phone and 17 ones did not have, 55 learners who were more capable of working with intelligent mobile phone and especially with telegram were chosen out of 86 as the experimental group consisting of 29 females and 26 males. The rest were divided to two control groups consisting of 26 females and 22 males. The participants were the university students whose English proficiency level was intermediate. They were selected from three majors, that is, agriculture, architecture and veterinary. Their ages varied from 19 to 46. The experimental participants' experience amount of working with social networks ranged from 4 to 60 months and their experience amount of working with telegram were from 2 to 12 months.

### **Instrumentation**

For this study, 3 instruments were used: 1) The English proficiency test, 'Interchange/Passages Objective Placement Test' (Lesly, Hasen & Zukowski, 2005), to make the learners' language proficiency homogenized. It is a multiple choice test for the intermediate level including 70 items in 3 parts: listening 20 items (15 minutes), reading 20 items (20 minutes), and language use 30 items (15 minutes). 2) A researcher-made reading comprehension test for pre-test and post-test to investigate the differences in reading comprehension ability among participants before and after the treatment, which was adopted from the book of "Select Readings, intermediate level". This test includes 10 matching items, 10 multiple choice items and 10 cloze items. The allotted time for taking this test is 60 minutes. The test was piloted with 22 intermediate students and the reliability was calculated through Cronbach's alpha (0.745). 3) The book whose twelve passages were taught to the participants is "Select Readings, intermediate level" (Linda Lee & Erik Gundersen, 2001). This book includes 14 passages before which some pre-reading questions have been provided and following each passage there are some related comprehension questions in different formats (ordering the events, multiple chose items, and cloze items). There is a part for each passage which is called reading skill and provides some useful reading strategies for reading comprehension.

### **Procedure**

As mentioned before, 147 university students from three majors (agriculture, architecture and veterinary) were selected. To homogenize the subjects, the placement and evaluation package of the interchange book (3rd Edition) was administered at the first session. Based on the results of this test, the number of participants reduced to 103 students as two control classes (one with 26 females another with 22 males), and two experimental telegram groups (29 females in one group and 26 males in another one). In the next session, a researcher-made test was conducted as a pre-test to evaluate learners'

reading comprehension ability. During the term, which took about 14 sessions, six passages of the “Select Readings” book were taught through telegram groups for experimental groups. In teaching through telegram group, once a week a time span (two and half an hour) was determined for female experimental group and another time span (two and half an hour) was determined for male experimental group to teach the passages. This time span was chosen because the time duration of the general English class in the university is two and half an hour and the same duration was assigned for teaching through telegram group as well. All students had to be on line at that time. First the teacher wrote some important and key vocabularies of the passage with their synonyms, then the pre-reading questions were asked and the students shared their ideas in the group with the supervision of the teacher. After that a short time was given to the students to read the text for themselves and share the main idea of the text with each other. The teacher sent the audio file of the text in the group and the students could listen to it. Finally, the following comprehension questions and related exercises were answered in group with students' cooperation and teacher supervision. The students were supposed to share their related questions, ideas and problems just in the group not in private. They could chat with each other about the passage out of that time span but without receiving any feedback from their teacher. At the next session, the teacher controlled what had been shared in the group including some questions, answered the questions which were related to the previous session and corrected the students if it was needed and then started teaching of the new passage. The same passages were taught in the classroom for the control groups by the same teacher through the traditional way of reading comprehension instruction (teacher- centered instruction) at the same time span (two and half an hour). At the last session of the term, the very researcher-made reading comprehension test was again administered to both the experimental and control groups as a post-test to investigate the presumable variations on their reading comprehension ability due to the instruction through telegram groups they experienced.

## FINDINGS

To carry out the present study, the data were collected through the posttest and the pretest. The related statistical analyses were applied to the data. To fulfil that, (SPSS), version 19, was applied and the level of significance was set at 0.05.

At first, Table 1 summarizes the descriptive statistics of the experimental and control groups in reading comprehension ability at the pre-test, post-test and gain scores.

Table 1

Descriptive statistics of the experimental and control groups in reading comprehension ability at the pre-test, post-test and gain scores.

		N	Min	Max	Mean	SD
Pre-test	Experimental	55	1	15	6.70	3.30
	Control	48	2	15	6.52	3.18
Post-test	Experimental	55	7	20	15.59	3.45
	Control	48	4	20	12.83	4.02
Gain score	Experimental	55	3.50	13	8.88	2.26
	Control	48	2	11	6.33	2.19

To ensure the scores' normality of the distribution in each variable, a Kolmogorov-Smirnov test was used.

Table 2

Test of normality for the experimental and control groups in reading comprehension ability at the pre-test, post-test and gain scores

	Group 1	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
Pretest	experimental	.112	55	.082
	control	.119	48	.085
Posttest	experimental	.159	55	.001
	control	.163	48	.003
Gain score	experimental	.116	55	.062
	control	.165	48	.002

The results revealed that there was normal distribution of scores in each group ( $p > .05$ ) except for the post-test reading comprehension of the experimental and control groups and the reading comprehension gain scores of the control group. ( $p < .05$ ).

To compare the mean scores of the experimental and control groups' reading comprehension ability at the pre-test, an independent-samples t-tests was applied.

Table 3

Independent-Samples T-Tests for the Experimental and Control Groups' reading comprehension ability at the Pre-Test

	Levene's Test for Equality of Variances					t-test for Equality			
	F	sig.	t	df	sig.	Mean	std. Error	95% confidence interval of the Difference Lower Upper	
Pretest									
Equal variances assumed	.030	.863	.324	101	.747	.20909	.6451	-1.070	1.488
Equal variances not assumed			.325	99.85	.748	.20909	.6438	-1.068	1.486

The result indicated that there was no significant difference [ $t(101) = .324$ ,  $p = .747$  (two-tailed)] between the mean scores of the experimental ( $M=6.70$ ,  $SD=3.30$ ) and control ( $M=6.25$ ,  $SD=3.18$ ) groups' reading comprehension ability at the pre-test. The p-value (.747) was higher than the significance level of .05. Therefore, the participants were homogeneous and appropriate for a quasi-experimental research in the terms of reading comprehension ability ( $p > .05$ ).

Due to the fact that the distribution of students' scores at the post test was not normal for both experimental and control groups, for comparing mean scores of these groups at the post-test, Mann-Whitney U test from non-parametric tests was run.

Table 4

Mann-Whitney U for the experimental and control groups' reading comprehension ability at the post-test

Test Statistics <sup>a</sup>				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Post-test scores	791.500	1.968	-3.509	.000

a. Grouping Variable: group

The p-value (.000) was lower than the significance level of .05 ( $p < .05$ ). Hence, it can be concluded that there was significant difference [ $U=791.500$ ,  $Z=-3.509$ ,  $p=.000$ (two-tailed)] between the mean scores of the experimental and control groups' reading comprehension ability at the post-test scores. Thus, the effect of reading comprehension instruction through telegram groups on the intermediate university students' reading comprehension ability was positively significant. The effect size was .34 and this magnitude indicated the moderate association between the dependent (post-test scores of reading comprehension) and independent (teaching reading comprehension through telegram groups) variables (Dornyei, 2007).

To compare the mean scores of the experimental and control groups' reading comprehension ability at the gain scores, again Mann-Whitney U test from non-parametric tests was applied because its distribution of scores was non-normal.

Table 5

Mann-Whitney U for the experimental and control groups' reading comprehension ability at the gain scores

Test Statistics <sup>a</sup>				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
reading comprehension gain scores	551.500	1.728	-5.115	.000

a. Grouping Variable: group

The table indicates that there was significant difference [ $U=551.500$ ,  $Z=-5.115$ ,  $p=.000$ (two-tailed)] between the mean scores of the experimental and control groups' reading comprehension ability at gain scores. It can be concluded that teaching reading comprehension ability through telegram groups has significant effect on the intermediate university students' reading comprehension ability. The calculated effect size was .50 and this magnitude revealed that the difference between experimental and control groups was strong.

Table 6 represents the descriptive statistics of the males and females of experimental groups in reading comprehension ability at the pre-test, post-test, and gain scores.

Table 6

Descriptive statistics of the males and females of experimental groups in reading comprehension ability at the pre-test, post-test, and gain scores.

		N	Min	Max	Mean	SD
Pre-test	Male	26	2	13	7.61	3.073
	Female	29	1	15	5.89	3.35
Post-test	male	26	10	20	16.65	2.51
	Female	29	7	20	14.63	3.91
Gain score	Male	26	6	12	9.03	1.96
	Female	29	3.5	13	8.74	2.52

A Kolmogorov-Smirnov test was run to ensure the normality of the scores distribution of the males and females of experimental groups in reading comprehension ability at the pre-test, post-test, and gain scores.

Table 6

Test of normality for the males and females of experimental groups in reading comprehension ability at the pre-test, post-test, and gain scores

	Group 2	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
Pretest	male	.123	26	.200*
	female	.128	29	.200*
Posttest	male	.140	26	.200*
	female	.149	29	.097
Gain score	male	.163	26	.075
	female	.125	29	.200*

The results indicated that there was normal distribution of scores for both males and females of experimental groups in reading comprehension ability at the pre-test, post-test, and gain scores. ( $p > .05$ )

To compare the mean scores of the male and female of experimental groups at the pre-test an independent-samples t-tests was applied.

Table 7

Independent-samples t-tests for the male and female of experimental groups' scores in reading comprehension ability at the pre-test

	Levene's Test for Equality of Variances					t-test for Equality			
	F	sig.	t	df	sig.	Mean	std. Error	95% confidence interval of the Difference Lower Upper	
Pretest									
Equal variances assumed	.143	.707	1.974	53	.153	1.718	.870	-.027	3.465
Equal variances not assumed			1.984	52.969	.152	1.718	.866	-.019	3.456

The results of the table shows that there was no significant difference [ $t(53) = 1.974, p = .153$  (two-tailed)] between the mean scores of the male ( $M=7.61, SD=3.073$ ) and female ( $M= 5.89, SD=3.35$ ) in reading comprehension ability at the pre-test scores ( $p= .153, p> .05$ ). According to this result, it can be concluded that the reading comprehension ability of male and female students in experimental groups were not significantly different at the beginning of the term.

Again an independent-samples t-tests was run for comparing the mean scores of the male and female of experimental groups at the post-test.

Table 8  
Independent-samples t-tests for the male and female of experimental groups' scores in reading comprehension ability at the post-test

	Levene's Test for Equality of Variances					t-test for Equality			
	F	sig	t	df	sig.	Mean	std. Error	95% confidence interval of the Difference	
								Lower	Upper
Posttest									
Equal variances Assumed	8.70	.107	2.241	53	.092	.821	.899	.211	3.82
Equal variances not assumed			2.249	52.969	.088	.820	.888	.249	3.78

The results revealed that there was no significant difference [ $t(53) = 2.241, p = .092$  (two-tailed)] between the mean scores of the male ( $M=16.65, SD=2.51$ ) and female ( $M=15.83, SD=2.91$ ) in reading comprehension ability at the post-test.

The researcher used an independent-samples t-test for comparing the mean scores of the male and female of experimental groups at the gain scores.

Table 9  
Independent-samples t-test for the male and female of experimental groups' scores in reading comprehension ability at the gain scores.

	Levene's Test for Equality of Variances					t-test for Equality			
	F	sig	t	df	sig.	Mean	std. Error	95% confidence interval of the Difference	
								Lower	Upper
Gain scores									
Equal variances assumed	1.021	.317	.482	53	.632	.2970	.6160	-.938	1.532
Equal variances not assumed			.489	52.038	.627	.2970	.6077	-.922	1.516

Based on the results of this independent-samples t-test, it can be concluded that there was no significant difference [ $t(53) = .482, p = .632$  (two-tailed)] between the mean scores

of the male ( $M=9.038$ ,  $SD=1.969$ ) and female ( $M=8.741$ ,  $SD=2.527$ ) in reading comprehension ability at the gain scores.

## **DISCUSSION AND CONCLUSION**

The availability of computers, mobile phones and the invention of the Internet have provided some opportunities for the educational system to go beyond classroom to virtual online situations. Due to the accessibility of the Internet, online instruction has changed into an attractive channel for teaching and learning (Rumble, 2001). Online instruction has achieved certain popularity among teachers, learners, parents, educators, educational authorities and the public (Ronsisvalle & Watkins, 2005). With the development of online learning, many research studies have been carried out to investigate the effectiveness of online instruction and learning. In online instruction, some criteria should be taken into account including the quality of education, effective interaction, appropriate chances to practice the related skills, proper assessment and assignments (Lim & Kim, 2003; Gaytan & McEwen, 2007; Oliver, 2008; Pomales-Garcia & Lui, 2006; Young, 2006).

The present study was carried out in an attempt to investigate the effect of instruction through telegram groups on the learners' reading comprehension ability and to determine the difference between male and female learners of the experimental groups in terms of reading comprehension ability after fulfilling the telegram instruction. For this purpose, 12 passages were taught through telegram groups of university students and the effect of this kind of instruction on the students' reading comprehension ability was examined by comparing the mean scores of the experimental and control groups' reading comprehension ability at the post test and gain scores. Also, the final results of the male and female students' reading comprehension ability were compared with each other and the results revealed that instruction through telegram groups had a significant effect on the Intermediate students' reading comprehension ability. Furthermore, it was determined that there was no significant difference in terms of reading comprehension ability between males and females of the experimental groups.

The findings of this study corroborate the previous researches about effectiveness of the using new technologies in education, also on line learning and instruction. This result is in line with the upshot of Motallebzadeh and Ganjali's (2011) study in which the effect of SMS as a mobile interaction on vocabulary retention was examined and the results showed that those students who received the vocabulary set through SMS had better vocabulary retention in comparison to the group that enjoyed the traditional way of receiving vocabulary. Also the finding of this study jibes with Hunang and Lin's (2011), study which investigated the EFL students' preference for reading via mobile and hard-copy. The result did reveal that students preferred mobile as the best tool of reading of short texts.

As the available literature review of the different types of learning and instruction through new technologies demonstrates, many researchers are interested in gauging the related effects of the novel inventions and technologies on different learners' and teachers' skills and abilities. In this study, the positive significant effect of the instruction

through telegram groups on the learners' reading comprehension ability was shown at the results of the data analysis. It can be concluded that using the new technologies of mobile phone including social networks such as telegram is helpful for teaching reading comprehension.

Nevertheless, the results of this study need to be proved through replication by considering some elements which may be neglected by the researcher. Moreover, this study can pave the way for investigating the effect of the instruction through telegram groups on the other learners' skills and abilities or the learners with different levels of English proficiency. The findings of this study can be beneficial for the teachers, syllabus designers and educational authorities to include new technologies and social networks in teaching process.

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