ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

IMPACT OF WHATSAPP ON EFL LEARNERS' READING ABILITIES

Muhammad Mooneeb Ali*, Dr Muhammad Asim Mahmood**, Sabeen Qureshi***

ABSTRACT

This paper examines the effect of Whatsapp amongst university students in Pakistan under the concept of E and M learning. The objective is to evaluate learners' reading skills ability improvement in English as a foreign language (EFL) through Whatsapp usage. The researchers through pre and posttest assessment examined the performance of two groups. The population of this study comes from Punjab whereas the sample size was 120 students from Lahore. The outcomes suggested that Whatsapp tool has created a positive impact on the reading ability of the learners. The experimental group learners performed better than controlled group which reflected the efficacy of Whatsapp tool use in EFL readings.

Keywords: *m-learning, reading comprehension, Watsapp, University students, Pakistan*.

1. Introduction

This research is set in the context of recent theories on ubiquitous learning and the use of a mobile phone as a support tool for working alone on given tasks, as supported by experts like Lu (2008), Kennedy & Levy (2008), and Cavus & Ibrahim (2009). Based on Gu et al.'s (2011) guidelines, the study was organised according to the following design principles regarding (a) content, (b) activity and (c) usability. The content (a) has to be practical and micro; that is, it has to address a learner's practical needs. These self-contained learning objects have to fit into small slots of time. The activity (b) has to be micro and simple; that is, each activity should be made through one action "such as listening, reading or pushing a button to input feedback. The usability (c) of the mobile activities has to focus on the needs to keep learners' attention and to keep content fresh in their mind" (Gu, 2011:4). The guiding hypotheses were the following: i) learners find using a mobile phone for language learning motivating; ii) learners have a sense of on-going language acquisition when working on assigned tasks using their smartphones; and

The study was organized using the following design principles for content, activity, and usability: (a) content, (b) activity, and (c) usability. The content (a) must be practical and micro; that is, it must address the practical demands of the learner. These self-contained learning products must fit within limited time windows. The activity (b) must be tiny and simple; that is, each activity must be completed with a single action, such as listening, reading, or pressing a button to provide feedback. The usability (c) of mobile activities must prioritise the need to maintain learners' attention and keep knowledge fresh in their minds" (Gu, 2011)

*Department of English, Government Graduate College of science Wahdat road Lahore & Department of Applied Linguistics Government College University Faisalabad

**Dean Social Sciences, Government College University Faisalabad

***Department of Applied Linguistics Kinnaird College for Women University Lahore

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

2. Literature Review

Electronic Learning: E-learning

There is a rapid increase in Electronic learning (now onwards e-learning) in educational institutions. Institutes use e-learning in different disciplines to support the process of learning and instruction (Kim, Mims and Holmes, 2006). The online system of learning and teaching i.e. e-learning has a lot of advantages. It can work independently as a system or can work as a blended system of learning i.e. combined with traditional methods (Matheos, Daniel and McCalla, 2005). It also helps the institutions to give programs related to distance learning. Distance learning is learning which is formal in nature but it occurs when the instructors and learners are in isolation as far as location and time are concerned (Haverila and Barkhi, 2009).

2.9.1 Defining E-learning

Several definitions of E-learning are there in the recent literature. Begicevic and Divjak (2006) explained e-learning as a kind of learning which is supported by the use of interactive and communicative technologies and can increase learning and teaching quality. Rosenberg (2001) stated that e-learning is actually the use of technologies related to the internet, used for the delivery of improving performance and knowledge. A definition identical to Rosenberg's (2001) was given by Clark and Mayer (2003) and they stated that e-learning is taken as a type of learning which is delivered upon a computer while using DVD or a CD along with the internet for the purpose to support learning and teaching in an institution. Some other researchers narrow down this definition by saying that learning which is web and internet-enabled is called e-learning (LaRose, Mastro, & Eastin, 2001; Keller and Cernerud, 2002).

2.9.2 The use of E-learning in Education

The progress of different e-learning technologies related to information and communication has made remarkable differences in the traditional method of learning and teaching (Liu and Wang, 2009). Yang and Arjomand (1999) stated that the growth of e-learning technologies have given more options to the educational world of today. Now the institutions recognize and comprehend the value of e-learning in changing the skills, performance and knowledge of the learners and instructors. Henry (2001) also illustrated that e-learning is the modern trend of learning. E-learning has now been the most important aspect in institutions, especially in higher education. The variety of educational tools of e-learning introduced by the institutions has made different changes in the process of delivery of education (Dublin, 2003).

2.9.3 E-Learning Tools

The researchers (Dinevski & Kokol, 2005) and (Kumar and Gulla, 2011) provided some important classification of e-learning technologies into

- various systems related to the management of learning,
- numerous Online content and software,

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

- technology-based learning Like CALL which can help in discussion for communication, webinars and virtual sessions of classrooms (Desktop computers, mini-computers, work stations, personal computers, multimedia,
- m-learning technologies and MALL that enables anytime and anywhere learning. (Including IPADs, IPODS, Tablets, Mobile phones, Mp3 players etc.).

2.9.4 Advantages of E-learning

The concept of e-learning is a common feature in educational institutions around the sphere. It gives access with the flexibility to the material of learning and the learning process with the convenience of place and time for the learners. E-learning is a learner-centered instructional strategy that provides students with the opportunity for an in-depth investigation of a given topic. E-learning has two types of impacts i.e. it enable learners to give a uniform educational system and it can help in recording the learning designs for learners (Ashraf, Khan & ur Rehman 2016). It is a noticeable fact that e-learning is more influential and impressionable in teaching the subjects like Science, Mathematics and English and the significance of e-learning is obvious where the tools are specified to the use of the teachers in their daily teaching routine (Webb & Cox, 2004). One important feature offered by e-learning is distance learning. The quality of being flexible paves the way for distance learning (Willems, 2005). E-learning aids instructors, students and even the administration of the institutions in tracking the performance of the students, managing their grades and taking feedback from them (Caladine, 2008). Additionally, the facility of add, drop and updating the profiles are conducted through learning management system (LMS) (Caladine, 2008). Bates (2005) pointed out that there are different methods of teaching involved in the e-learning like information organization, creative cognitive and thinking, critical thinking, and collaborative process of learning and problem-solving.

Besides a lot of advantages provided by e-learning there are some disadvantages also explained and explored by some of the researchers.

2.9.5 Disadvantages of E-learning

Studies supported that e-learning possesses some disadvantages (Collins, Hammond & Wellington, 1997; Klein and Ware, 2003; Hameed, Badii & Cullen, 2008; Almosa, 2002; Akkoyuklu and Soylu, 2006; Lewis, 2000; Scott, Ken & Edwin, 1999; Marc, 2002; Dowling, Godfrey & Gyles, 2003; Mayes, 2002 as in Subramanian, 2016) all are of the view that though e-learning is a supportive and supplementary method as it is used for already existed learning methods and the personal interactions are minimalized between teacher-student and between students themselves. Moreover, the e-learning baseline is internet technology as it makes virtual classrooms so connectivity of the internet can be an issue. E-learning can destroy the socialized role of learners. The role of the teacher is also affected through e-learning. Cheating and other activities during tests cannot be monitored properly in virtual tests and lastly the tools can fail during lectures or tests (Young, 1998; Burdman, 1997).

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

Despite these limitations, e-learning is and has been the most revolutionary aspect in education and it has revolutionized the concept of learning and teaching in the world. It has encouraged authentic learning because learners can access real-world data that is not provided by textbooks (Aaron, Dicks, Ives & Montgomery, 2004; Nawaz & Kundi, 2010a; Nawaz, 2010; Nawaz, 2011).

My intentions in this research are to view MALL in the perspective of m-learning so I am only confining my discussion here to the description of mobile learning and later on MALL. Beforehand let me explain some aspects of mobile Learning Hereafter m-Learning.

2.10 M-Learning (Mobile Learning)

The omnipresent quality of mobile devices has replaced the old ways of work, study and communication to newer ones. Now, mobile devices are convenient in usage and are effective instruments in the process of communication, information and entertainment. This situation is identical in the world of education particularly in and outside the classroom (Lin, Chen, & Liu, 2017; Sung, Chang, & Liu, 2016). These days, mobile devices are the most prominent tools in the educational sector and institutions (Hu & McGrath, 2011; Jin & Zhirui, 2017; Pegrum, Oakley, & Faulkner, 2013; Tekin & Soruç, 2017; Vazquez-Cano, 2014). The proliferation of mobile devices is constantly changing the way we interact and learn. So, any learning through mobile devices using the internet comes under the phenomena of Mobile learning. As Wang, Wiesemes and Gibbons (2012) define m-learning simply as learning anywhere, anytime through mobile devices. Ally (2009) proposed that m-learning actually permits individuals to have access to various materials of learning with the elasticity of place and time.

2.10.1 Brief History of M-learning

Initial studies conducted on m-leaning were in the 1980s where handheld device and the "Psion computer" (which was also handheld) were introduced and used in some of the schools and the latter was only confined to the classroom for teaching English (Kukulska-Hulme, Sharples, Milrad, Arnedillo-Sanchéz and Vavoula,2011). Later on in the mid of 1990s, m-learning perspective changed after observing the experiences of personal digital assistant called PDA which is a device identical to handler used for experiences in learning.

Preliminary features of mobile gadgets were that of individual, portable, modest and easy in usage (Kukulska-Hulme et al, 2011). The next generation of researchers conducted on m-learning (Burston, 2015; Kukulska-Hume, 2009; Traxler, 2013a) commenced with the inauguration of an event called as mLearn conference authenticating the MOBIlearn as well as some projects from the past few years. Along with that, some research journals started discussing the role of borders implied by the orthodox learning settings of classrooms (Kukulska-Hulme et al., 2011). It is still a major area of research as m-learning has not completely infused into the roots and practices of classrooms (Masters, Ellaway, Topps, Archibald & Hogue, 2016). Another important area was the conceptual frameworks and references were taken from the e-learning paradigm. But sooner the difference between the two was perceived by the subject experts while viewing the features of portability, ubiquity and mobility along with educational aspects (Vieira, Coutinho,Graca & Graca, 2014). Traxler (2013, p. 4) establishes that m-Learning "enhances,

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

extends and enriches the concept and activity of learning itself and expresses other interesting issues found in mobile learning: helping out-of-reach communities or eliminating geographical distances by the delivery of information to deeply rural areas too".

2.10.2 Difference between M-learning and Face to Face Learning

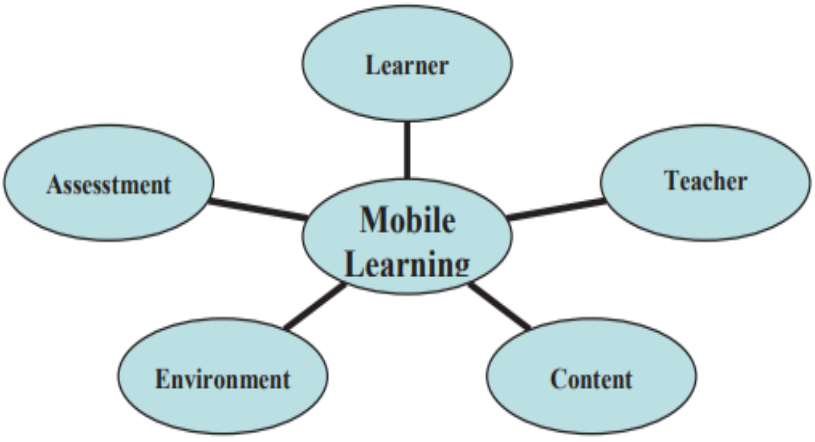
Table 2.1

Face to face learning	M-learning
Paper penciled based	Digital mode of learning
Learners are passive and receiver of knowledge	Learners are active and constructors of knowledge
Fixed with context	Flexible with context
Bound with time and place	No restriction of place and time
Teacher-centered approach	Learner-centered approach

The table above clearly reflects that the face to face learning and m-learning methods are entirely different. Face to face learning is paper penciled, teacher-centered and place and time-restricted in which learners are passive and only are the reviewers of knowledge and information. On the contrary, m-learning is flexible, learner-centered, digital and without the boundaries of time and place in which the learners actually construct their own knowledge.

M-learning is entirely a different concept from traditional face to face learning and the important pillars of m-learning according to Ozdamli & Cavus (2011) are the learners, teachers, content, assessment and environment.

Figure: 2.1



Model adopted from Ozdamli and Cavus, (2011)

The above diagram clearly reflects that in m-learning environment all the components are connected effectively. Here the most important place is given to learners and all other elements support learners (Makoe, 2010). Likewise, the teacher or an instructor has a major yet

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

different role in m- learning environments which is contrary to orthodox methods. The use of technology E-books, E-files and other E- tools have transformed the teaching methods and now the teacher is a facilitator**.** Ghaln (2011) also supported this argument that teachers are now presenter of information and their role is to mentor the learners. Similarly content is also an important factor on which learning relies. If the content is not relevant to the needs it can affect the outcomes of learning scenarios. So in m-learning, the content is flexibly connected with methodologies according to the pedagogical needs of learners (Siragusa, Dixon & Dixon, 2007). Importantly the environment has also a key role to play in m-learning situation which is usually online or face to face (Siragusa et al., 2007). It can be or cannot be a classroom. Learners can learn at a coffee shop, while travelling etc. and the environment has actually impacted immensely on the popularity of m-learning (Uzunboylu and Ozdamli, 2011). Lastly, the assessment mode in m-learning is also different as quizzes, assignments and examinations are either online or through different project-based assessments (Sharples, Taylor & Vavoula, 2005). Behera (2013) also supported that assessment and evaluation should be according to the convenience of learners and the basic feature of m- learning is the immediate feedback they receive which enables them to improve quickly.

2.10.3 Advantages of M-learning

Chen et al., (2002) and Seppälä and Alamäki (2003) stated that there are some advantages of m-learning which are unique for the learners, instructors, institutional administrations and other staff as well. These features provide benefits to the users engaged in the m-learning process. Some of these features are like, usability (Koole, 2009; Kukulska-Hulme, 2005), portability and ubiquity (Khanghah & Halili, 2015;Jones, Scanlon, & Clough, 2013) (Jeng, Wu, Huang, Tan & Yang, 2010), ease in the learning process (Bao & Castresana 2012; Peters,2007; Tao, Rosa Yeh & Sun, 2012; Traxler, 2010; Wang, Wu & Wang, 2009; Xie, Zhu & Xia, 2011; Yang, 2012; Zhang, Haisen, Song, & Burston, 2011), cost-effectiveness (Williams, 2009; Avraamidou, 2008;Aderinoye, et al., 2007), Improvement in communication and the social interaction (Aderinoye, Ojokheta & Olojede, 2007; Attewell, 2005; Kadirire, 2007; NESTA FutureLab, 2005; DuVall, Powell, Hodge & Ellis, 2007) lifelong and personalized learning (Bentley, 1998; Fischer, 2000; Sharples, 2000;Attewell, 2005), exclusion of Spatial and temporal limitations (Kambourakis, Kontoni, & Sapounas, 2004) (Alexander, 2004;Kukulska-Hulme, 2007;Checho, 2007; Motiwalla, 2005; Sharples, 2000), easy, secure, convenient learning ambiance (Caudill,2007; Fozdar & Kumar, 2007; Parsons & Ryu, 2006; Petrova, 2004; Georgiev, & Georgieva, 2004), the facility of collaborative learning (Parsons, 2014; Palfrey, Gasser, Simun & Barnes, 2009), the ease of learning context (Geddes, 2004; Chen, Chang & Wang, 2008), autonomous learning (Frohberg, Goth & Sshwabe, 2009; Herrington, Herrington, Mantei, Olney & Ferry, 2009), connectivity (Roschelle, 2003; Koole, 2009;Traxler, 2010), Mobility (Sharples, Taylor, Vavoula, 2005; Pachler, Bachmair, Cook, & Kress, 2010; Cavus & Ibrahim, 2009; Naismith, Lonsdale, Vavoula & Sharples, 2004), blended learning (Chao and Chen, 2009; Caudill, 2007; Ally 2009; Pieri and Diamantini, 2009). Some novel apps or mobile games also increase the engagement and motivation of the learners (Başoğlu & Akdemİr, 2010; Hayati, Jalilifar, & Mashhadi, 2013; Wang, Wu, & Wang, 2009).

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

2.10.4 Disadvantages of M-learning

Though some researches also mentioned some of the disadvantages, yet they can be controlled and with better management can be sorted out. An important one is the issue of distraction in which the user attention can be diverted and distracted and rather than learning they can use social media websites like Twitter and Facebook etc. (Orr, 2010; Tao et al., 2006; Terras & Ramsay, 2012; Traxler,2010) yet this new method is interesting also (Sølvberg & Rismark,2012). Another aspect is the factor of privacy of the user which can be broke down when public place learning is going on (Brown & Groff, 2011; Traxler, 2010) or sometimes on the internet, there are some channels that can reveal or attain private data of users (Brown and Groff, 2011). Furthermore, connectivity is also an issue sometimes as the use of the internet is connected with the speed of internet downloading and processing also. So, low internet speed can irritate the users (Lawrence, et al. 2008; Naismith, et al. 2004). It is important to mention here that both the above-mentioned modes of technologies i.e. E and m-learning are interlinked and interconnected and though they have some common feature so it is pivotal to state the difference between both in nutshell before moving on towards MALL.

2.10.5 M-learning and E-learning Comparison

Various researchers say that e-learning and m-learning are different from each other. El-Hussein and Cronje (2010) said that m-learning is a kind of learning that has the features of mobility in relation to technology, learners and learning. Looking at the definition the difference between e-learning and m-learning can be clearly seen. Different researchers claimed that m-learning is in contrast with e-learning (Caudill,2007; Georgiev et al., 2006; Korucu & Alkan, 2011; Peng et al., 2009; Peters, 2007). Kearney, Schuck, Burden & Aubusson (2012) recommended that the definition of m- learning may also have the inclusion of mobile phone usage for other educational needs like administration functions apart from learning and teaching which actually made m-learning different from e-learning. Though Pinkwart et al. (2003) and Doneva, Nikolaj and Totkov (2006) said that m-learning is an upgraded version of e-learning but researchers found out some differences between m-learning and e-learning which are related to the access of learners, technology and communication mode. Some difference regarding m and e-learning has been recorded observing some past literature. According to it m-learning is wireless, dependent upon mobile phones, IPADS and Tablets, etc., where the facility of learning is informal and learning can occur privately and through personal networks. The connectivity is through mobile devices, the communication is quick and spontaneous. The contact of learners is anytime and anywhere. On the other side in e-learning, the learning is wire dependent, occurs through laptops and computers that can be accessed anytime but not anywhere. The learning is always formal and distant also. The connectivity is through inter and intranet. The communication is either scheduled, delayed and the interaction between the learner with peers and teachers is time-limited and not flexible in nature (Attewell, 2005; Laouris and Eteokleous, 2005; Traxler, 2007; Abu-Al-Aish, 2014).

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

2.1. Past researches towards Whatsapp usage

Whatsapp earlier was only utilized for communication and information, later it added on for entertainment and family or friends connections (Gasaymeh, 2017). Further, Mistar and Embi (2016) viewed that the major motivation of this app is uninterrupted and anytime anywhere communication. Etim, Udosen and Ema (2016) have also asserted that social grouping and collaborative learning are the hallmarks of Whatsapp.

Nitza and Roman (2016) explored in their study that learners are inclined to use WhatsApp for their academic communication. Likewise, a study by Amanullah and Ali (2014) also presented that Whatsapp has been the most preferred medium for collaborative learning. In an ESL context a study by Fattah (2015) ascertained that Whatsapp is effective in elevating learners in their performances, particularly in ESL learning situations. Likewise, Allagui (2014) also performed a study and found out that Whatsapp improved the learning and comprehension of the learners in English language learning classes. Baishya and Maheshwari (2020) investigated that learners found group meetings and discussion constructive on Whatsapp amongst teachers and themselves and it solved their learning issues. Moreover, Güler (2016) presented the vitality of Whatsapp for particular assessment of learners. All these researches showed the worth of WhatsApp in academic affairs.

3. Research Question

1) What is the impact of Whatsapp tool on Reading abilities of university learners?

4. Material and methods

a. Population for the study

The population for this study comes from Punjab, Pakistan including all the public sector universities students.

b. Sample of the study

The sample of the study is taken from the public sector universities of Lahore. Only 120 learners who were chosen randomly through pick and choose method were the part of the study. Both the learners were divided equally into controlled and experimental group.

c. Tool for the research

Pre and posttest were used as a tool for evaluating the performance of both the groups. Moreover to evaluate the performance of the learners SPSS 23 was applied.

d. The limitations of the study

This examination has some limitations. Only Punjab Pakistan was taken as the population of the study whereas Lahore was taken as the sample size. Only university students were the part of the study.The study's shortcomings included the use of SMS through whatsapp,

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

e. Procedure of the research

The participants consisted of 120 students who were studying English as part of their degree at different universities in Lahore. There were twelve chosen text for the experimentation process. The 12 texts were then divided into three sections, with a reading comprehension question for each. A variety of typologies were included in the exercises: 12 multiple-choice questions, 12 gap-fill questions 12 True/False, plus 1 open ended question, adding up to a total of 37. Three exercises were sent three times a week, on Mondays, Wednesdays, and Fridays, for a total of 12 weeks. Approximately half of the texts delivered featured two different types of exercises. The readings and comprehension questions were sent via Survey Monkey for simplicity of use. Students were given a link to the reading comprehension texts via a WhatsApp instant message usergroup, and all they had to do was click on the link to view the text, then click again to answer the comprehension question and check if the answer was correct, keeping learner input simple and quick to avoid discouragement (Gutiérrez-Colon Plana et al., 2012).Participants were handed an introductory questionnaire to gather information on their English reading habits. Following the conclusion of the trial, a final survey was conducted to gauge student satisfaction. In the following section we shall discuss some of the findings.

5. Discussion

a. Analyses for the comparisons of treatment conditions, preliminary assumptions

Prior to the inferential analyses for the comparisons of treatment conditions, preliminary assumptions were tested. In which skewness and kurtosis of the constructs were examined. Moreover, outlier analysis was also carried out by using box plot and Q-Q plots, while normality of the data was also ensured yielding Shapiro-Wilk test (Field, 2017).

Table 1.

Descriptive Statistics and Normality Test on Pre and Post Testing across Control and Experimental Groups (N = 120) (Experimental Group = 60), (Control Group = 60).

Treatment Condition		*M*	*SD*	*Skewness*	*Kurtosis*	*Shapiro-Wilk*
Control Group	Pre-test	9.18	1.28	0.54	0.56	2.93
	Post-test	11.82	1.07	0,12	0.36	2.91
Experimental	Pre-test	9.85	1.28	-0.16	-0.65	2.93
Group	Post-test	16.83	0.98	0.23	-0.26	2.14

Note. *M = Mean, SD = Standard deviation.*

The above table showed the descriptive statistics including mean and standard deviation of the pre and post-test assessments of control and experimental groups. Moreover, the evidence of skewness and kurtosis of the distribution showed that the values fall under the acceptable ranges of normal distribution. Bryne (2010) argued that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7. While, Shapiro Wilk test was found to be non-significant, which also validated that the distributions of pre and post-test assessments across control and experimental groups were normality distributed.

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

Investigators (Haye, 2013; Hesterberg, 2011; Haukoos, & Lewis, 2005) suggested the use of bootstrapping in order to attain reliable estimates even having a small sample size. Bootstrapping is a method that estimates the sampling distribution by taking multiple samples with replacement from a single random sample for the original dataset. These repeated samples are called resamples.

So, all analyses including independent sample t-test and paired sample t-test were carried out by using 5000 bootstrapped sample (Haye, 2013).

b. Pretest Results of Independent Sample T-test (Controlled and Experimental Group)

Table 2.
Independent Samples t-test Comparing Pre-test Assessment across Experimental and Control Groups (N=120)

Variable	Experimental Group (n = 60)		Control Group (n = 60)				95% CI		Cohen's
	M	SD	*M*	*SD*	*t (118)*	*P*	*LL*	*UL*	*d*
Pre-Test	9.85	1.29	9.18	1.28	-2.84	.007	-1.13	-0.20	0.52

Note. CI = Confidence Interval, *LL*= Lower Limit, *UL* = Upper Limit.

The assumption of homogeneity of variance was found to be assumed as F = .494 p > .05 which indicated that the variance of pre-test was found to be invariant across both groups i.e., experimental and control. The above table-4.14, revealed that there were significant differences of pre-test was found in experimental and control groups (t = -2.84, p<.01). This showed that that the mean score of experimental group on pre-test (M = 9.85, SD = 1.29) was higher than the mean score on control group (M = 9.18, SD = 1.28).

Furthermore, effect size (magnitude of the differences) for the pre-test assessment across the experimental and the control group was 0.52. The Cohen's d value showed that, the size of effect was fall under the range of medium magnitude of differences (Cohen, 1988).

c. Post-Test Results of Independent Sample Test (controlled and experimental group)

Table-3.
Independent Samples t-test Comparing Post-test Assessment across Experimental and Control Groups (N=120)

Variable	Experimental Group (n = 60)		Control Group (n = 60)				95% CI		Cohen's
	M	SD	*M*	*SD*	*t (118)*	*P*	*LL*	*UL*	*d*
Post-Test	16.83	0.98	11.82	1.10	-26.88	.000	-5.38	-4.65	4.94

Note. CI = Confidence Interval, *LL*= Lower Limit, *UL* = Upper Limit.

The assumption of homogeneity of variance was found to be assumed as F = .051 p > .05 which indicated that the variance of pre-test was found to be invariant across both groups i.e.,

ISSN Online : 2709-4030
ISSN Print : 2709-4022
Vol 5 No.4 2021

experimental and control. The above table-4.15, revealed that there were significant difference s of pre-test was found in experimental and control groups (t = -26.88, p<.001). This showed that that the mean score of experimental group on pre-test (M = 16.83, SD = 0.98) was higher than the mean score on of control group (M = 11.82, SD = 1.10).

Furthermore effect size (magnitude of the differences) for the post-test assessment across experimental and control group was 4.94. The Cohen's d value showed that the size of effect fall under the range of large magnitude of differences (Cohen, 1988).

The results of this study reflect that there is a vivid difference in the performance of the students of experimental group as compared to controlled group students. Though, the performance of the learners is higher in the post test results of both the groups but significant difference can be viewed while comparing the post-test values of both groups. The outcomes of the study are similar to the investigation conducted by (Thornton and Houser, 2005; Sole and Neijmann, 2010; Baleghzadeh and Oladrostam, 2010) who were of the view that mobile phones actually develop a constructive relationship with the learning of language. Zhao (2005) also pointed out that M-learning makes the perfect ambiance for language learning purposes. The outcomes reflect that controlled group learners though do have a difference in the performance of pre and post-test yet the difference is not significant. That may be that ESL learning in a traditional classroom environment becomes uninteresting for the learners and the overall process of learning becomes monotonous. Wang (2010) supported this view that some English language lessons are unable to make an impact on the learners and resultantly demoralize the learners thus making them uninterested in the learning process. The results collected from this study also explained the fact that M-learning which has been a common practice in teaching and learning in western classrooms and educational institutions is equally liked and appreciated by the Pakistani learners and teachers.

4. Conclusions

Regarding the actual process of implementing this reading comprehension reinforcement method, what prominently stood out was the need to create a teacher-independent application to automatically send all the text messages and exercises to avoid relying on a teacher's constant availability to send the messages according to a set schedule. Concerning the use of the instant messaging system, in order to avoid creating a WhatsApp group with all the subjects (120 users), which might have encouraged learners to divert from the focus of the method and interact amongst themselves regardless of the experiment.

To conclude, despite the various limitations, the students in the experimental group performed significantly better than to the controlled group which can be due to the high level of motivation as well. This experience had also reflected a positive impact on their reading habits, and had resulted in more regularity and confidence.

6. REFERENCES

Arnó Macià, E. et al. Quantum LEAP Learning English for Academic Purposes. Available from http://www.quantumleap.cat. Last accessed 03/06/2013.

Baleghizadeh, S., & Oladrostam, E. (2010). The effect of mobile assisted language learning (MALL) on grammatical accuracy of EFL students. *MEXTESOL Journal*, 34(2), 1-10.

Cavus, N. and Ibrahim, D. (2009). M-Learning: An experiment using SMS to support learning new English language words. British Journal of Educational Technology, Vol. 40, No. 1: 78-91. Council of Europe (2001).
Common European Framework of Reference for Languages. Cambridge: Cambridge University Press. Gu, X., Gu, F. and Laffey, J.M. (2011). Designing mobile system for lifelong learning on the move. Journal of Computer Assisted Learning.
Gutiérrez-Colon Plana, M., Pere Gallardo Torrano, P. & Grova, M.E. (2012) "SMS as a learning tool: an experimental study", The EUROCALL Review, 20(2). Retrieved from http://eurocall.webs.upv.es/index.php?m=menu_00&n=news_20_2#sms on 03/06/2013.
Levy, M. and Kennedy, C. (2005). Learning Italian via mobile SMS. In A. Kukulshka-Hulme and J. Traxler (eds.), Mobile Learning: A handbook for educators and trainers. London: Routledge. 76-83.
Lu M. (2008). Efectiveness of vocabulary learning via mobile phone. Journal of Computer Assisted Learning, 24: 515-525. Macmillan ELT. OneStopEnglish. Available from http://www.onestopenglish.com. Last accessed 03/06/2013. SurveyMonkey. Available from http://www.surveymonkey.com.

Sole, R. C, Calic, J., & Neijmann, D. (2010). A social and self-reflective approach to MALL. *ReCALL, 22(1),* 39-52.
Thornton, P., & Houser C. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning 21*, 217-228.
Wang, Y. S., & Huang, T. C. (2009). The relationship of transformational leadership with group cohesiveness and emotional intelligence. *Social Behavior and Personality: An International Journal*, *37*(3), 379-392.
Zhao, Y. (2005). The future of research in technology and second language education. In Y. Zhao (Ed.), *Research in technology and second language learning: Developments and directions* (pp. 445- 457). Greenwich, CT: Information Age Publishing, Inc