



Effect of Computer-Mediated Technology on Vocabulary Skills at Elementary Level

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Abstract- This paper aims to investigate the impact of CMT (Computer-Mediated Technology) on the vocabulary skills of ESL learners at the Elementary level. Computer technology is used in education worldwide, but in Pakistan, no attention is given to CMT for education purposes. In his study, it has been examined that if CMT is helpful in the Pakistani context. Two groups were managed at the elementary level to conduct this study. The first group is the control group and the second group was the experimental group. The Control group was taught through the traditional method of teaching, whereas the experimental group was taught through CMT. Pre-tests and Post-tests were conducted before the teaching process and after teaching. It was noted that the experimental group's performance was much better than that of the control group. So, it is explored that CMT has a positive impact on the vocabulary skills of ESL learners at the elementary level, and the use of CMT must be encouraged.

Keywords: CMT (Computer-Mediated Technology), Vocabulary Skills, ESL learners

I. INTRODUCTION

Literacy experts agree that vocabulary competence and text comprehension are inextricably related and that a student's vocabulary breadth and complexity are a key predictor of his or her ability to comprehend a wide variety of texts, e.g. (Anderson & Freebody, 1981)). This is valid for both native (L1) and second (L2) English speakers (Stoller & Grabe, 1993). The acquisition of vocabulary in L2 is a pretty tricky and challenging process, and the majority of language learner wants to know which method of vocabulary learning or activity is more privileged or better. However, the answers vary, and there is no clear answer, although the studies relating to vocabulary acquisition have made many suggestions and conclusions. Vocabulary is considered an integral part of the language. Learning of language means learning vocabulary in the first place in contrast to other skills of a language. Teaching and learning vocabulary is challenging and demanding when learning every foreign language. Thus, students attempt to figure out the easiest or most helpful way of vocabulary study. Not unexpectedly, however, they want to memorize any phrase they do not remember.

Studies show that starters tend to learn the words individually, which means to use a list of words that they can save, while advanced students strive to learn the words in detail, despite some exceptions (Ellis, 1994, p.553). International students also strive to learn a foreign language to engage with a new culture and society while still achieving academic attainment. Vocabulary learning is the most critical activity in an ESL class because it links individual understanding sentences and remembering most of the book's words. As a result, ESL teachers often inquire about making ESL classes more interactive, communicative, and enjoyable (Zenotz, 2012). In reality, students who excelled in reading class gain higher academic success throughout their education (Chiu, 2013). Experts in ESL believe that computer-assisted language learning will improve the acquisition of foreign language skills to keep ESL students motivated and involved by using computer technology (Shahzad, Sarwat, & Kabir, 2021). Furthermore, it has been discovered that technology and modern instructional methods increase student satisfaction (Vernadakis, Giannousi, Tsitskari, Antoniou, & KIOUMOURTZOGLOU, 2012).

Significance of the Study

Computer technology has made it possible for students to convey their information, their feelings, and ideas. Technology-based language teaching and learning has imbued the world of education with revolutionary doctrines. It has made it possible to tower the classroom walls and learn in a new style. Now

there is a need to explore the benefits and potentials that this media has to offer. Computer-mediated technology can be helpful for teaching in enhancing writing skills in the EFL classroom. These are essential parts of communication. Good vocabulary skill allows someone to communicate one's messages with clarity and ease. Learning vocabulary is one of the essential but most challenging tasks for ESL learners. They cram as well as memorize and forget. The use of CMT (Computer-mediated technology) may help teach and learn vocabulary in ESL classrooms in the Pakistani context, specifically in public sector schools.

Research Questions

- i. What is the impact of Computer-mediated technology on ESL learners' vocabulary learning skills at the elementary level?

Research Objectives

- i. To investigate if computers and their various other components enhance the learners' vocabulary learning in ESL classrooms.
- ii. To enable the students to develop their vocabulary skills employing computer technology.

II. LITERATURE REVIEW

(Levine, Ferenz, & Reves, 2000) found that the computerized education system contributed even more to the growth of EFL-critical literacy skills than traditional learning conditions as they examined the development of EFL-critical reading skills in computer networks. The computing world affected the relationship between teacher and student and changed EFL teachers' behavior and EFL students' role in the academic reading class. Simultaneously, the computers are incredibly successful as Levine et al. (2000) say the networked computer system blends the language study classroom's protection and assistance with an introduction actually to read the content. The computerized setting allowed teachers to help only when needed and required without interfering with the choice of materials and students' speed of work. This empowerment of readers results in freedom in use, well outside the language learning classroom, of computerized tools (Peterson, 1997)

(Johnson & Heffernan, 2006) stress the need to make students from exposure to graded materials to genuine ones, a recent online practice combined with English Trailers that were carried out in the online reading world of the Short Readings Project (www.english-trailers.com). The authors argue that developing a pleasant, trust-building environment is mainly based on relatively short yet comprehensive content fragments, frequent interactions between students with the vocables needed, and adequate strategies.

Multimedia vocabulary learning experiences can take various forms, depending on the learner's background and needs. As a visual organizer, (Chun & Plass, 2005) merged video with a note on each vocabulary composed of visual and verbal knowledge in their research.

CALL's Tutorial (Tozcu & Coady, 2004) enable the students to add words to an individualized list for research or make recollections that support words through synonym, enclosures, translations, or paraphrases. They aim to enable individualized vocabulary practice. (Sun & Dong, 2004) showed the importance of an appealing vocabulary study framework (a popular cartoon of Disney) when writing a vocabulary for young people, however, noting that the appeal of the learning environment is not guaranteed without including proper learning support (e.g., in the form of sentence-level translation and goal warming) Chun and Plass (1997) also caution against a lower level of mental activity than static picture readers for multimedia-assisted reading understanding and vocabulary learning, which results in students using text and image annotations being more effective in following a test than students who have used text and video annotations (Chun & Plass, 1996).

Today, adult learners have introduced and adopted multiple methods to acquire more English skills and experience. The use of a computer as a learning medium has inspired many adults and has been an important language learning element since the last century (Uberman, 1998). Research into the promise of interactive language learning games through computerized technology in this century has grown quite rapidly year after year. The perceptive learning of English (Huyen & Nga, 2003) in online games through CMT (Computer-Mediated Technology) is the example (Sahrir & Alias, 2012), gameplay and simulation (Akilli, 2007), games, and online vocabulary (Sahrir & Alias, 2012), computer games language learning (Lee, Cheon & Key, 2008) and interactive game learning (Whitton & Langan, 2018). For, e.g., computer games may be an effective means of enhancing the atmosphere for language learning (Mich, Betta, & Giuliani,

2004). This is because players must learn simple English to play these games (Smith & Mann, 2002), and they would later improve their understanding of English when playing the games. A well-planned game enables learners to practice various English language skills, often vocabulary. Besides, video games can provide students with inspiration and enjoyment while they are charged with learning materials that students can try (Ang & Zaphiris, 2008), especially to study subjects and contents that are most challenging or difficult to teach (Prensky, 2001).

III. RESEARCH METHODOLOGY

Subject

The study was conducted in Govt Elementry School 26/NP of tehseel Sadiqabad. It is a public school situated in the rural area where Govt provided a newly established computer lab.

Population and Sampling

This study was conducted at the elementary level total population of the school was 365, out of which 102 students are enrolled in the elementary section. For this study, 60 students were selected from class 8th.

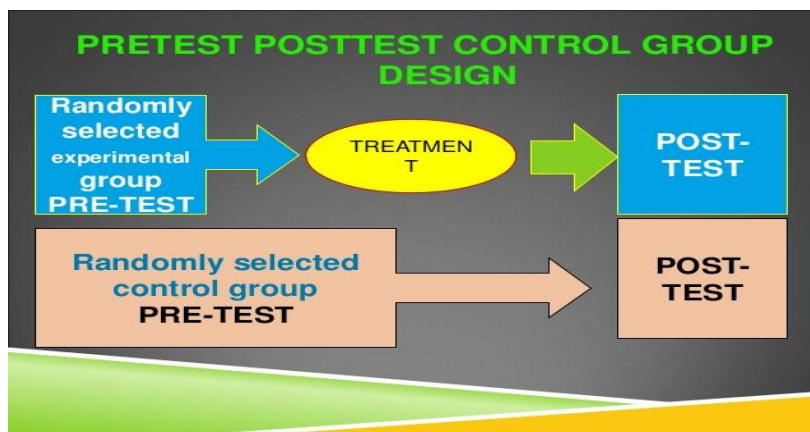
Research Technique

This study was pure experimental in nature. Two groups were arranged, one group was given the name control group, and the second group was given the name as the experimental group. 60 students from the 8th class were picked randomly through convenient sampling. 30 students were specified for the control group, and 30 students were specified for the experimental group. A pre-test was conducted from both groups to examine the learners' present knowledge before conducting the teaching session. After that control group was taught without using any specific technique, i.e., only a traditional method was used, and the experimental group was taught with CMT technology. Activities used in this study for the experimental group were adopted from vocabulary.com.

Tools for data collection

A pre-test and post-test were conducted to collect the students' data for analysis and check the impact of CMT on the learner in learning vocabulary. It has 5 contents, and each content carries 10 marks, which means 5 questions carry 50 marks overall.

The following figure interprets the whole methodology.



IV. DATA ANALYSIS AND DATA INTERPRETATION

Table 1 Paired Sample T-Test analysis of Pre-Test and Post-Test of Controlled Group

Test	N	M	SD	d	t	Effect Size
Pre-Test	20	5.47	0.96	19	-16.82	0.50
Post-Test	20	12.80	1.34			

$\alpha=0.5$

In table 1, paired sample t-test of the controlled group of pre-test and post-test is explained. In this test, the pre-test value of M is 5.47, and the post-test value is 12.80. SD value is 0.96 and 1.34, respectively.

T value is -16.82, and Effect Size is 0.50, which is greater than 0.5, which means that there is no significant difference between these tests. So, Students obtained score is close for both the tests.

Table 2 Paired Sample T-Test analysis of Pre-Test and Post-Test of Experimental Group

Test	N	M	SD	d	t	Effect Size
Pre-Test	20	5.47	0.816	19	-26.34	0.32
Post-Test	20	15.55	1.420			

$\alpha=0.5$

In table 2, paired sample t-test of the experimental group of pre-test and post-test is explained. In this test, the pre-test value is 5.47, and the post-test value is 15.55. SD value is 0.816 and 1.420, respectively. T value is -26.34, and Effect Size is 0.42, which is less than 0.5, which means that there is a significant difference between these tests. So, students' scores in the experimental group for post-tests are better, which means students achieved vocabulary skills.

Table 1 Table 4 Independent Sample T-Test analysis of Pre-Tests of Control Group and Experimental Group

Test	N	M	SD	d	t	Effect Size
CG Pretest	20	5.47	1.00	19	0.174	0.68
EG Pretest	20	5.52	0.827			

$\alpha=0.5$

In table 3, the independent t-test of pre-test of the controlled group and experimental group is interpreted. In this test, the pre-test of the control group is 5.47, and the M value of the pre-test of the experimental group is 5.52. SD value is 1.00 and 0.827, respectively. T value is 0.174, and Effect Size is 0.68, which is greater than 0.5, which means that there is no significant difference between these tests.

Table 4 Independent Sample T-Test analysis of Post-Tests of Control Group and Experimental Group

Test	N	M	SD	d	t	Effect Size
CG Posttest	20	10.55	1.70	19	-10.29	0.25
EG Posttest	20	15.55	1.43			

$\alpha=0.5$

In table 3, the independent t of the post-test of the control group and experimental group is interpreted. In this test M value of the post-test of the control group is 10.55, and the M value of the post-test of the experimental group is 15.55. SD value is 1.70 and 1.43, respectively. T value is -10.29, and Effect Size is 0.25, which is less than 0.5, which means a significant difference between these tests. This shows the students' achievement is much better in the experimental group by using CMT.

V. CONCLUSION

The study was carried out to investigate the impact of CMT on vocabulary skills teaching techniques used by EFL teachers at the elementary level. In his research, CMT in vocabulary skill teaching played a significant role in learning and improving the vocabulary skill of students at the elementary level. In investigating teacher's beliefs and practices concerning effective CM techniques and their role in comprehension, the researcher gathered information from different sources.

- The result in the present study shared that student's proficiency and vocabulary skills increased through this technique.
- The first compulsory thing to enhance students' vocabulary was to make students centered on rich and lively instructions and techniques.

- The aim was to make students excited about learning vocabulary skills, and the students were able to understand effective vocabulary techniques, but they also realized that their teachers should have to practice it in classrooms.
- It was realized that CMT techniques have a remarkable effect on students learning.
- Thus, this national excitement about teaching had ruled off on students making learning a fun and rewarding experience.
- Despite the importance of English as a foreign language (EFL) in Pakistan, the level of acquisition of many learners remains crumbly.
- EFL teaching in Pakistan fails to promote are less proficient in English.
- Teachers remain to fail to achieve their goal towards target language.
- Much is required to improve the EFL status in the classroom.
- Research Questions have been discussed in detail.

VI. RECOMMENDATIONS

The concede recommendations are exhibited for the individuals why should willing to add to the present study by leading studies on the utilization of vocabulary skill upgrade procedures in ESL teaching at the elementary level.

- Students at other language proficiency levels, i.e., Elementary, Intermediate, or advanced, can be subjects for another experiment besides vocabulary skills.
- The setting, which was made for this study, was a public school. The same technique could be used in another setting, For example, language institutes, public schools, and universities.
- English as a Foreign Language can be examined in the new research.
- Other interested researchers can investigate the impact of other types of alternative techniques on language skills. It would be fruitful to investigate the relationship between teachers and students' enthusiasm and retention.
- English language acquisition is significant for the students because of its extensive role in society so, teachers should use different methods and techniques to get the required results.
- The teacher should be familiar with the proper usage of vocabulary skill techniques in the classroom. Vocabulary skills techniques stimulate the students to develop their learning.
- Students also assimilate motivation, courage, confidence, and self-assurance through vocabulary skills techniques.
- Proper treatment through vocabulary skills enhancement technique is much effective and value able in vocabulary skills enhancement. The teachers should be evaluated on a regular basis pertaining to their understanding of the English language. The higher authorities of the education department should keep an eye upon the performance of English teachers to check whether the teachers are imparting indispensable material relevant to the English language in general and vocabulary skills in particular. The government should ensure the implementation of technology at the elementary level. Proper understanding should be provided to the teachers regarding modern technology usage at the elementary level by higher authorities. Government teachers should be given awareness and realization about the significant impact of rendering technology to improve students' writing skills at the elementary level.
- Teachers' training should be devised to make them cognizant of technology at the elementary level to enhance student's vocabulary skills.
- With the collaboration of higher authorities and school heads, meetings and seminars should be conducted to enliven the spirit of the teachers related to the importance of CMT and vocabulary skills.

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