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Effect of Computer-Mediated Technology on writing proficiency skills of ESL learners at Secondary Level in Pakistan

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Abstract- This paper investigates the effect of Computer-Mediated Technology (CMT) on the writing proficiency skills of English learners at the secondary level. Due to the vast usage of computers, their role in the field of education cannot be neglected. This wide scope of computers has motivated researchers to use it in the field of education. A country like Pakistan is a developing country, and here, still traditional methods of teaching have been used, whereas developed countries are using Computers in the field of education. This research is conducted to find out the impact of computer-mediated technology in enhancing ESL learner's proficiency in writing skills in the Pakistani context. The study especially looked into to what extent CMT gives positive feedback from learners in improving their ESL writing skills proficiency level in Secondary public schools. This study also aimed to motivate teachers towards the use of CMT in the EFL classroom. This study is based on a quasi-experimental model. In this study, two groups of ESL students have been set. Both groups consist of 30 English learners. One Group is a Controlled Group, and the other is the Experimental Group. The controlled group is treated with traditional teaching methods, and the Experimental Group is treated with CMT technology. It is eight weeks of treatment. After successful treatment, it is observed that the experimental group has performed significantly better than that of the control group. ESL learners, treated with CMT, secured better scores as compared to the controlled group, which proved that the use of CMT in ESL classroom is helpful in the teaching-learning process.

Keywords: Computer-Mediated Technology, CALL, English Writing Skills, ESL, Pakistan

I. INTRODUCTION

Language learning is a complex phenomenon. So, learning writing skills is a more complex phenomenon. Writing something is not an easy job. It requires the organization of thoughts and ideas of the mind. Then it needs the specific criteria and knowledge of the language. For becoming a successful writer, it is necessary to have a complete understanding of writing skills. Much work has been done in the past to make it easy to teach writing skills, and still, its development continues. In the 20th century, quick and rapid innovation in the field of technology had revolutionized the world. Digitalization has changed representational formats over the last 5,000 years. Digital technology has changed the life and other trends of the people (Hassan & Qureshi, 2020). The role of the Computer is indispensable in modern life. It has made life easy and convenient. One of the best inventions of this century is computers. It has been used almost in every field of life. Educationists and researchers also used computers in classrooms and found its impact and result better than the conventional teaching method. It may also be useful in ESL classrooms for teaching English language skills, i.e., Listening, Reading, Speaking, and Writing. This study is carried out to investigate the impact of Computer-Mediated Technology on ESL learners' writing proficiency skills at the Secondary level in Pakistan (Hassan, 2020b).

In the teacher-centered classroom approach, the Computer's use increases day by day due to its effectiveness in teaching, particularly in the ESL classroom. ESL teachers are eager to teach in ESL classrooms by using computers and students to show their interest in learning through the Computer. It is because of the dire need for teachers to assess the learning opportunities through technology. Moreover, with the development of the process of writing from pen and paper to a computer screen, it has been noticed that technology could function as a valuable instrument for writing.

Statement of Problem

Besides all the languages of the world, the English language has its worth. It is an acknowledged fact that English is being learned and taught due to its importance worldwide. EFL teachers and learners experience many issues in the classroom towards writing skills. ESL students find difficulty in mastering writing skills in the school through the conventional or traditional teaching method. Teachers find hurdles in teaching the English language through traditional methods, and learners find difficulty learning in an ESL classroom. Though much work has been done to solve these problems in the school with the development of science and technology, it is considered secure to develop a classroom environment for effective teaching and understanding. However, it is a dire need to investigate new ways to make language teaching and learning easy. Computer-mediated technology is being used all over the world to enhance students writing skills (Hassan, 2020b). It may prove useful in the teaching-learning process for improving writing skills in the EFL classroom. In Pakistan, there is a lack of computer-mediated technology to enhance students' writing skills proficiency. This research will be carried to check how much computer-mediated technology can help Pakistan improve students' writing skills.

Purpose of the Study

It had been observed that students are suffering many problems while learning EFL language learning, particularly in writing skills, within the Pakistani context. Though teachers are applying different methods and techniques to overcome these problems, there is still much need to do more. This study aims to check how effective the method of using Computer-mediated technology in improving the writing skills in the EFL classroom. This study was carried out to investigate whether CMT is helpful in teaching-learning writing skills or not.

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 prefer. Computer-mediated technology can be useful for teaching in enhancing writing skills in the EFL classroom. These are essential parts of communication. Good writing skill allows someone to communicate one's messages with clarity and ease to a far larger audience than through face-to-face or telephonic conversations with the help of one's writings, i.e. (Application, letter, column, essay, story, report writing, press release, etc.). As this is the age of electronic and print media, writing skills have increased enormously. It can be stated that writing skills are ever more essential than ever. It has always been famous for professionals and academics to use proper grammar and communicate in the best way, but now, it is highly vital for more and more people to learn writing skills. The Internet has turned the world into a global village. People have developed their relations and business across the globe. In this respect, they send and receive their resumes, reports, draughts, business statements, news, etc., throughout the world in the English language. It has given more importance to writing skills for better and effective communication. One can develop ones' career by developing writing skills.

Research Questions

1. What is the impact of Computer-mediated technology on the writing proficiency skills of ESL learners?

Research Objectives

2. To investigate if computers and their various other components help enhance the learners' writing proficiency in ESL classrooms.
3. To enable the students to develop their writing skills employing computer technology.

II. LITERATURE REVIEW

It is an integral part of the research as it provides previous researchers to work on the topic and its results. It also helps the researchers to find out the gaps in the related research. The literature review provides the researcher with a direction and line of action of the study. In this literature review, a brief history and background of the research have been described. In this section, it is described how Computer-assisted language learning is a useful method of language teaching.

2.1 History of CALL

The Computer's invention was made in 1833, the first Computer named an abacus, and then it goes through many developments. As a result of these developments, its function and its use increased day by day. Now, it is used almost in every field of life. Subsequently, because of the advancement in computers and their software in the 1950s and 1960s, it was used in education when linguists used computers for text analysis (last, 1992).

One of the critical aspects of Computers is corpus linguistics. The corpus of Standard American English consists of one million-plus word called Brown Electronic Corpus Fotos and Browne (2004). In 1950 the first computer was used for learning in the USA, but very limited for language learning. The term Computer Assisted Language Learning (CALL) was developed in 1981 (Davies, 2005). The first time in TESOL Conference was an agreement to use CALL for the other language speakers in 1983.

Further, they decided on using CALL for teaching and learning by the use of technology (Chapelle, 2001) after the 1960 computer took more than 30 years to be used in teaching and learning. By the time and by the development of the Computer, the CALL was developed gradually. The development of CALL could be seared into three parts. First was Communicative CALL; Second was Interrogative CALL, and third was Behaviouristic CALL (Farrah & Tushyeh, 2010; Warschauer, 1996). The behaviouristic learning method was the first generation of CALL programs, in which computers were used only for drill (Warschauer & Healey, 1998). This phase was used for habit formation based on the audio-lingual method and structural linguistics, and this kind of program was used for support, not for the replacement of the tutor (Richards & Rodgers, 2001).

According to Richards and Rodgers, the second phase of the generation was taken place in 1970, in which the main focus was meaning rather than formal instruction (Richards & Rodgers, 2001). The main focus of the Supporters of this approach was emphasizing the development of the form's construction rather than type own-self (Richards & Rodgers, 2001). This remarkable lack of software was a deficiency in providing proper feedback (Kern & Warschauer, 2000).

In the third phase: the point that led to it was criticism on the CALL of communicative type, but by improving computers and programs, the way towards this was considered. In which the most famous was the integrative type of CALL developed in the 1990s`. Different models of the CALL programs were being developed in this phase; base on the model of cognitive and simulative learning in which "motivation, critical thinking, creativity, and analytical skills rather than the achievement of a correct answer or the passive comprehension of meaning"(Healey & Johnson, 1999; Richards & Rodgers, 2001).

In the last stage of integrative CALL, the process of learning was moved to the socio-cognitive by emphasizing the language used in a real and authentic context. Further, the four language skills were integrated into the real environment (Warschauer & Healey, 1998).

Several authors and researchers discuss the advantages and disadvantages or limitations of CALL. Ehsani and Knodt (1998) Defined CALL for the use of authentic learning for authentic communication. In which fearlessness and empowered learner for communication with others. By using CALL, necessary skills can be improved (Stepp-Greany, 2002). These programs also contributed to critical thinking skills and a better ability to recall. Learners can find and check the answers, and learning from their mistakes are the high impacts of this (Jayachandran, 2007). Language learners take motivation and learn by immediate feedback of CALL. Every learner can learn by his learning strategies and by free time and pace. One of the most required skills of this time is Computer Skills; a learner has to learn this skill by CALL as well.

CALL's limitations and disadvantages are also there, as Lai and Kritsonis (2006) mentioned, financial barriers. The development of computer labs and other facilities is so much expensive. This is considered an obstacle that can stop its benefits, both for learners and institutions. The second barrier is that the training of faculty and staff is also much expensive. Further, the practice is required for learners as well. The lack of training is an excellent hurdle in achieving CALL's aims and objectives (Roblyer, 2003). The other demerits of CALL are the mode only visual. There is no use of physical modes like; gestures, postures, body language, and actions that motivate and inspire the learner to perform or copy. CALL is not performing at a standard level to improve the learners' speaking skills, as discussed by Warschauer (1996). In addition to that, by using CALL, learners show improvement and advancement in self-confidence, motivation in reading, and less anxiety than other teaching and learning methods. As Arafat had shown results of the study(Arafat, 2002) use of CDROM's software has a better impact on classroom learning than other methods. The level of achievement of CALL in reading skills is higher than in others. Coiro (2008) described the attitudes of adolescents about reading through CALL on the Internet. She analyzed a strong relationship between the attitudes of the language learner online and online reading comprehension.

Early studies on writing in CALL focused on two areas: developing word processing skills in learners and the use of text-based and later graphic organizers to support the writing process. Word processing was typical in CALL previously, but it is not any longer. (Pennington, 1996) notes that research in word processing showed positive effects in terms of writer attitudes, text length, text quality, and quantity and, in some cases, quality of revisions; virtually everyone now uses word processing for composing. Spell checkers and grammar checkers were brought in as useful tools in the development of second language writing. System-D for French (Noblitt, Sola, and Pet, 1987) was a CALL program that included aspects of vocabulary, grammar, and composition to create an integrated composing and editing environment. (Hirvela, 2007) explains that college writing is becoming more computer-based, and Computer is turning into a popular tool in writing instruction. So, it is necessary to learn about the world of electronics and the demands which are put on the shoulders of writers and readers. He continues that it is essential to introduce them to the idea of screen culture. (Slattery & Kowalski, 1998) maintain that there are two waves in Computer Assisted Language Learning. The first one started in the 1980s and early 1990s, which was related to using word processors and improvement in writing quality and even motivation, which the learners had with the new system of writing and typing. The second one is placed on computer-mediated communication (CMC), which appeared with the arrival of Internet and the role of hypertext, which links a related text to numerous texts. On the other hand, students can electronically communicate with each other.

2.2 Computer Applications helpful in writing.

The following are some computer applications that help improve writing skills.

2.2.1 Word prediction

Word prediction program is useful for ESL learners to improve their spelling in the ESL Classroom. Its function is beneficial for the learners as it predicts the words that students use frequently and repeatedly. When the student types the first few letters, the program lists often used words that start with those letters. In this way, it speeds up the typing process and improves spelling and vocabulary.

2.2.2 Speech-to-text

The speech-to-text program helps the students in typing words when students speak in a microphone. However, sometimes due to some disturbance noise and mispronunciation, it refuses to type a word or type of wrong spelled words. This fault can be covered by doing practice and by teaching them how to use the program. It helps increase speed from thought to text.

2.2.3 Text-to-speech

This program helps the students in listening when they write it. They can check the actual pronunciation of a word as well. Students can edit the wrong words by looking if a word is typed wrong.

2.2.4 Spell-checker

The spell checker program has unique quality features. It can help the students to identify misspelled words, and it corrects them automatically.

2.2.5 Thesaurus

It is another important program that helps learners find multiple words with the same meaning or concept. Students can replace similar expressions as a repetition of words that make text/language monotony and or vague. By using this program, learners can use a variety of words and increase their vocabulary.

2.3 Computer-Mediated Technology

Computer-mediated technology meant all those tools or resources that can be linked to Computer. These resources help to promote the standard of education by the link of computers. The following are some Computer-mediated tools.

2.3.1 Internet

The Internet is a crucial tool. It has turned the world into a global village. Without access to the Internet, all other sources and tools will be incomplete.

2.3.2 Social Software's

These are social software (e.g., wiki, blogs, Facebook, Twitter, Instagram) and technologies based on web communication (e.g., course management systems, chat, and web conferencing). Teachers and linguists upload essential educational material on this social software, and students can easily access their required materials. They can also learn and share their ideas through social software.

2.3.3 Messengers

Messengers like Skype, IMO, Facebook, Yahoo, and Whatsapp, etcetera also used for educational purposes. A teacher instructs through these messengers to his students. Groups can be made on these

messengers to teach and guide the students through voice, text, or visually. Students can raise their issues and can share their ideas.

2.3.4 Multimedia Technology

Multimedia technologies (e.g., digital pictures, scanning, audio, and visual technologies) are also considered Computer-mediated tools. They are also helpful in education, particularly in language laboratories. They are used as audiovisual tools in the classroom. They help to communicate a message or instruction effectively. They also help the learners to make their concepts clear.

III. METHODOLOGY

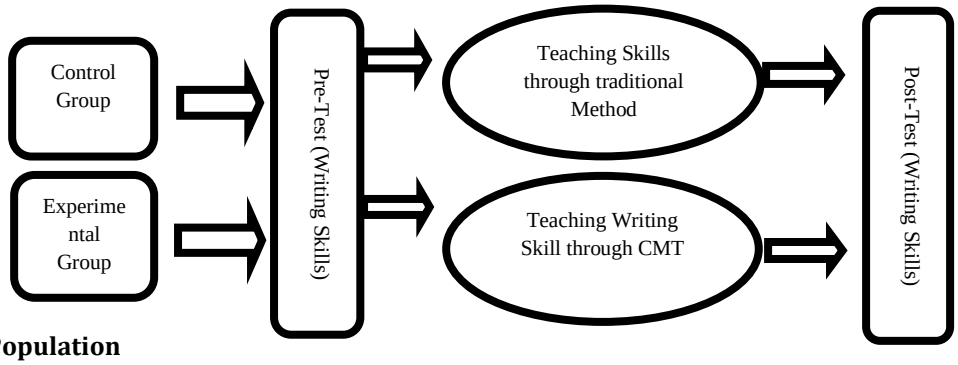
For researching, criteria have opted.

3.1 Research Design

The research design adopted for the present study was quasi-experimental with a pre-test, post-test control group, and experimental group design because the researcher is aimed to check CMT's impact on writing skills in the EFL classroom used by English teachers. This was purely experimental. In this connection, the research design was experimental. In this research, two groups of students were arranged. As it was blended approach research so, both qualitative and quantitative were used to carry this study.

i. Controlled Group
ii. Experimental Group

Treatment was conducted through Computer-mediated technology, so the technique or method used in this research using the Computer and its parts were independent variables. The writing proficiency of students was dependent variable as there was variation in it after teaching with CMT.



3.1Population

This study was conducted in the district Rahimyar Khan of Province Punjab in Pakistan. Boys Secondary schools from District Rahimyar Khan were the chosen as a population. The population included students from, and their average age was 14 to 16 years. The selection of boys would be made randomly.

Table: Population

City Name	Schools for Boys	Schools for Girls	Total Schools
Rahimyar Khan	12	10	22
Sadiqabad	10	9	19
Khanpur	9	8	17
Liaqatpur	9	8	17

District Rahimyar Khan consists of 4 Tahseels. They are Tehseel Rahimyar Khan, Tahseel Sadiqabad, Tahseel Khanpur, and Tahseel Liaqatpur. District Rahimyar Khan consists of four tahseels. They are Tehseel Rahimyar Khan, Tahseel Sadiqabad, Tahseel Khanpur, and Tahseel Liaqatpur. Tahseel Rahimyar Khan consists of 12 boys and 10 girls' schools, total 22 schools, Tahseel Sadiqabad consists of 10 boys' schools and 9 girls' schools, total 19 schools, Tahseel Khanpur consists of 9 boys' schools and 8 girls'

schools, total 17 schools, and Tahseel Liaqatpur consists of 9 boys' schools and 8 girls' schools, total 17 schools.

3.2 Sampling

As it was not easy for the researcher to work in the district's whole schools, the population was reduced and sampled. One boy's public secondary school from tehsil Sadiqabad of Rahimyar Khan was taken as a sample for this research.

3.3 Sample Size

Out of 19 from Tahseel Sadiqabad, only single boys' schools from Tahseel Sadiqabad was taken as a sample size. 60 students were selected randomly by convenient sampling. 30 students were chosen for the experimental group, and 30 students were engaged in the control group. It was made sure that they were all of the equal calibers. Their caliber and mental level were assessed by the middle standard examination result card conducted by Punjab Examination Commission.

3.4 Procedure of the Research

In this study, the Controlled Group was taught by the traditional method through books and black/whiteboard, and the experimental group was taught by available Computer-mediated technology, i.e., CPU, LCD, Microphone, Speakers, Headphones, Internet, SNSs, etc. The pre-test had helped check present knowledge, and Post-test had helped make a difference in both teaching methods for both groups. The duration of the study consisted of 6 weeks for both groups.

3.5 Methodology

This research was carried out by making two groups of Matric class. The study was based on two stages. First of all, a pre-test was conducted to check the present knowledge of the students. Then in the first stage control group was treated through a standard method of teaching for 8 weeks. After this, the experimental group was treated through Computer-mediated technology for 8 weeks. Researchers used related computer technology, applications, and software to give instructions and for learners' practice. Learners' were first given orientation for one week, and in this period, they were introduced to CMT and its usage. The researcher had used Multimedia, a projector, and PowerPoint slides with the Computer's help, aided with Mic and speakers, etc. Learners' were instructed to practice by using the applications mentioned above and software, including MS-Word. MS-Word software has many features like spell checker, grammar checker, word predictor, etc., which are helpful in English writing skills. A specific syllabus was designed for this study from the course syllabus of the secondary class. It was made sure that a proper time table was scheduled, and each lecture was consisting of 40 minutes while teaching both the groups. Both groups were assessed by conducting a post-test. Their results had shown how much effective would-be Computer-mediated technology on learning.

3.6 Tools for Data Collection

Two forms of tools were subjected to data collection. i.e., tests and questionnaires. Two tests were subjected. i. Pre-test and ii. Post-test. Pre-Test was conducted to check the present knowledge of the students. The post-test was conducted after teaching with both different methods. Both the tests were developed by keeping in view for monitoring the writing skills of the students.

3.7 Tools for Data Collection

Two tests were administered as a tool for measuring collected data. Pre-test and Post-test were developed to check the variance between computers mediated technology in and use of the Traditional Method.

3.7.1 Pre-test

As previously mentioned, the pre-test was arranged based on Questions based on writing skills taken from board papers. It was made to show up in a configuration of numerous choices. This organization was regarded as fitting because it would expand test-takers' chances to review the importance of the actual words decently. For every target word, a carrier sentenced was developed intimations to its significance on account of the various decision design. The students utilized the hints to pick the right reply from the choices given. The pre-test in this manner arranged was indicated to administrators, associates, teachers, and test specialists for remark and substance legitimacy and thoroughness before it was put to utilize. The remarks made were used to enhance both the tests.

3.7.2 Post-test

The post-test was arranged from selected items to assess CMT techniques for experimental and control groups. The learners of the experimental group were given the treatment of 8 weeks. They were taught different writing skills with the CMT method. For every situation, the post-test was developed in such a way that it would test the improving ability of participants.

3.8 Validity and Reliability

While developing the test, it was made possible that the test should be valid and reliable, so, contents of the tests are selected from the previous papers of the Examination Board of Intermediate and Secondary Education Bahawalpur. After these tests were discussed with experts and educationists, they were made valid and reliable under their guidance.

IV. Data Analysis of Experiment

4.1 Control Group Results

Following is the description of control group.

Table 4.1

4.1.1 Comparison of Pre-Test and Post-Test of Control Group

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	4.13	0.77		
MCQs					-16.15	0.00
	Post-Test	30	5.03	0.71		

(α=0.05)

In this table 4.1 difference level of pretest and posttest pertaining to MCQs of control group has been shown. T- Value is -16.15. The data clearly show that significance level (P- value .000) is lower than 0.05 i.e., level of significance. The means show that there is a significant difference between the results of pretest and posttest of control group. The mean score of posttests (M=8.1, SD=0.7) as compared to pretest (M=6.8, SD=1.1), has shown better results in control group.

Table 4.2

4.1.2 Comparison of Pre-Test and Post-Test of Control Group(Category: Short Questions)

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	6.8	1.1		
Short Questions					-5.6	0.000
	Post-Test	30	8.1	0.7		

(α=0.05)

In this table, 4.2 difference level of pre-test and post-test pertaining to Short Questions of control group has been shown. T- Value is 5.6. The data clearly shows that the significance level (P-value .000) is lower than 0.05, i.e., level of significance. The means show that there is a significant difference between the results of the pre-test and post-test of the control group. The mean score of post-tests (M=4.13, SD=0.77) compared to pre-test (M=5.03, SD=0.71), has shown better results in the control group.

Table 4.3

4.3.1*Comparison of Pre-Test and Post-Test of Control Group*Category: Picture Description

Category	Test Type	N	Mean	SD	T-Value	Sig.

	Pre-Test	30	3.66	0.66		
Picture Description					-1.6	0.000
	Post-Test	30	4.66	0.66		

(α=0.05)

In this table, 4.3 difference level of pre-test and post-test about Picture Description of the control group has been shown. T- Value is -1.6. The data clearly show that the significance level (P-value .000) is lower than 0.05, i.e., level of significance. The means indicate a significant difference between the results of the pre-test and the post-test of the control group. The mean score of the post-test (M=3.66, SD=0.66) compared to the pre-test (M=4.66, SD=0.66) has shown better results in the control group.

Table 4.4

*4.4.1 Comparison of Pre-Test and Post-Test of Control Group (*Category: Essay Writing)

Category	**Test Type**	**N**	**Mean**	**SD**	**T-Value**	**Sig.**
	Pre-Test	30	6.86	1.07		
Essay Writing					-4.61	.0.000
	Post-Test	30	8.06	0.90		

(α=0.05)

In this table 4.4 difference level of pretest and posttest pertaining to Essay Writing of control group has been shown. T- Value is -4.61. The data clearly show that significance level (P- value .000) is lower than 0.05 i.e., level of significance. The means show that there is a significant difference between the results of pretest and posttest of control group. The mean score of posttests (M=6.86, SD=1.07) as compared to pretest (M=8.06, SD=0.90), has shown better results in control group.

Table 4.5

*4.1.5 Comparison of Pre-Test and Post-Test of Control Group*Category: Total (all items)

Category	**Test Type**	**N**	**Mean**	**SD**	**T-Value**	**Sig.**
	Pre-Test	30	21.46	1.99		
Essay Writing					-11.96	0.000
	Post-Test	30	25.90	2.82		

(α=0.05)

In this table, 4.5 difference level between pre-test and post-test pertaining to complete categories of the control group have been shown. T- Value is -11.96. The data clearly show that the significance level (P-value .000) is lower than 0.05, i.e., level of significance. The means show that there is a significant difference between the results of the pre-test and post-test of the control group. The mean score of post-tests (M=21.46, SD=1.99) compared to pre-test (M=25.90, SD=2.82), has shown better results in the control group.

4.2 Experimental Group Results

Table 4.6

4.2.1 Comparison of Pre-Test and Post-Test of Experimental Group(Category: MCQs)

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	6.90	1.06		
MCQs					-14.82	.000
	Post-Test	30	10.73	1.25		

(α=0.05)

In this table 4.6 difference level of pretest and posttest pertaining to MCQs of experimental group has been shown. T- Value is -14.82. The data clearly show that significance level (P- value .000) is lower than 0.05 i.e., level of significance. The means show that there is a significant difference between the results of pretest and posttest of control group. The mean score of posttests (M=6.90, SD=1.06) as compared to pretest (M=10.73, SD=1.25), has shown better results in control group.

Table 4.7

4.2.2 Comparison of Pre-Test and Post-Test of Experimental Group(Category: Short Questions)

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	4.26	1.01		
Short Questions					-17	.000
	Post-Test	30	8.30	0.65		

(α=0.05)

In this table 4.7 difference level of pretest and posttest pertaining to Short Questions of experimental group has been shown. T- Value is -17. The data clearly shows that significance level (P- value .000) is lower than 0.05 i.e., level of significance. The means show that there is a significant difference between the results of pretest and posttest of control group. The mean score of posttests (M=4.26, SD=1.01) as compared to pretest (M=8.30, SD=0.65), has shown better results in control group.

Table 4.8

4.2.3 Comparison of Pre-Test and Post-Test of Experimental Group(Category: Picture Description)

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	3.63	0.61		
Picture Description					-40.8	.000
	Post-Test	30	7.86	0.68		

(α=0.05)

In this table, 4.8 difference level of pre-test and post-test about Picture Description of the control group has been shown. T- Value is -1.6. The data clearly show that the significance level (P-value .000) is lower than 0.05, i.e., level of significance. The means indicate a significant difference between the results of the

pre-test and the post-test of the control group. The mean score of the post-test (M=3.66, SD=0.66) compared to the pre-test (M=4.66, SD=0.66) has shown better results in the control group.

Table 4.9

4.2.4 Comparison of Pre-Test and Post-Test of Control Group(Category: Essay Writing)

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	6.80	1.24		
Essay Writing					-17.6	.000
	Post-Test	30	11.26	0.73		

(α=0.05)

In this table 4.9 difference level of pretest and posttest pertaining to Essay Writing of experimental group has been shown. T- Value is -17.6. The data clearly show that significance level (P- value .000) is lower than 0.05 i.e., level of significance. The means show that there is a significant difference between the results of pretest and posttest of control group. The mean score of posttests (M=6.80, SD=1.24) as compared to pretest (M=11.26, SD=0.73), has shown better results in control group.

Table 4.10

4.2.5 Comparison of Pre-Test and Post-Test of Experimental Group(Category: Total)

Category	Test Type	N	Mean	SD	T-Value	Sig.
	Pre-Test	30	21.60	2.44		
Essay Writing					-41.69	.000
	Post-Test	30	38.16	2.11		

(α=0.05)

In this table 4.10 difference level of pretest and posttest pertaining to complete categories of experimental group have been shown. T- Value is -41.69. The data clearly show that significance level (P-value .000) is lower than 0.05 i.e., level of significance. The means show that there is a significant difference between the results of pretest and posttest of control group. The mean score of posttests (M=21.60, SD=2.44) as compared to pretest (M=38.16, SD=2.11), has shown better results in control group.

4.3 Test Control Group and Experimental Group Comparison

Table 4.11

4.3.1 Pre-test Control Group and Experimental Group

Category	Test Type	N	Mean	SD	T-Value	P-Value
	Pre-Test	30	6.73	1.2		
MCQs					-.65	0.517
	Post-Test	30	4.13	0.77		
	Pre-Test	30	4.26	1.01		
Short Questions					-1.16	0.255

	Post-Test	30	6.90	1.06		
	Pre-Test	30	3.66	.66		
Picture Description					1.00	0.326
	Post-Test	30	3.63	.61		
	Pre-Test	30	6.86	1.07		
Essay Writing					0.441	0.662
	Post-Test	30	6.80	1.24		
	Pre-Test	30	21.46	1.22		
Total					-.486	0.631
	Post-Test	30	21.60	1.06		

(α=0.05)

In table 4.11, all the pre-test questions of the control group and experimental group, category wise have been compared. In MCQs, it has been observed that mean values in the pre-test of control and experimental groups are (M=6.73, SD=1.22) & (M=6.13, SD=0.73), respectively, which are very close to each other. The difference between them can be neglected. Their T-Value is -.65, and P-value is .517, which is more than 0.05 hence. There is no static difference between them. In Short Questions, it has been observed that mean values in the pre-test of control and experimental groups are (M=4.26, SD=1.01) & (M=6.90, SD=1.06), respectively, which are very close to each other. The difference between them can be neglected. Their T-Value is -1.16, and P-value is .255, which is more than 0.05hence. There is no static difference between them. In the same way, In Picture description it has been observed that mean values in the pre-test of control and experimental groups are (M=3.66, SD=.66) & (M=3.63, SD=0.61), in Essay Writing, (M=6.86, SD=1.07) & (M=6.80, SD=1.24) and in Total of all the categories (M=21.46, SD=1.22) & (M=21.60, SD=1.06) respectively, which are very close to each other. The difference between them can be neglected. Their T-Values are -1.00, .441 & -.486 and P-value are .326, .662 & .631 respectively, which are more than 0.05hence there is no statically difference between them.

4.4 Comparison Post-test (Control Group and Experimental Group)

Table 4.12

4.4.1 Post-test (Control Group and Experimental Group)

Category	Test Type	N	Mean	SD	T-Value	P-Value
	Pre-Test	30	8.13	0.77		
MCQs					-11.16	0.00
	Post-Test	30	10.73	1.25		
	Pre-Test	30	5.03	0.71		
Short Questions					-19.72	0.00
	Post-Test	30	8.30	0.65		

	Pre-Test	30	4.66	0.66		
Picture Description					-28.72	0.00
	Post-Test	30	7.86	0.68		
	Pre-Test	30	8.06	0.90		
Essay Writing					-43.08	0.00
	Post-Test	30	11.26	0.73		
	Pre-Test	30	25.90	2.82		
Total					-33.04	0.00
	Post-Test	30	38.16	2.11		

(α=0.05)

In table 4.12, all the post-test questions of the control group and experimental group, category wise have been compared. In MCQs, it has been observed that mean values in the post-test of control and experimental groups are (M=8.13, SD=.77) & (M=10.73, SD=1.25), respectively, which are very close to each other. The difference between them can be neglected. Their T-Value is -11.16, and P-value is .000, which is less than 0.05. In Short Questions, it has been observed that mean values in the pre-test of control and experimental groups are (M=5.03, SD=.71) & (M=8.30, SD=.65), respectively, which are not close to each other. The difference between them cannot be neglected. Their T-Value is -19.72, and P-value is .000, which is less than 0.05. In the same way, In Picture description it has been observed that mean values in post-test of control and experimental groups are (M=4.66, SD=.66) & (M=7.86, SD=0.68), in Essay Writing, (M=8.06, SD=.90) & (M=11.26, SD=.73) and in Total of all the categories (M=25.90, SD=2.82) & (M=38.16, SD=2.11) respectively, which are not close to each other. The difference between them cannot be neglected. Their T-Values are -28.72, -43.08 & -33.04 and P-value are .000, .000 & .000 respectively, which are less than 0.05hence there is no statically difference between them.

V. Interpretation of Research Questions

Research Questions have been discussed in detail.
Question No.1.What is the impact of Computer-mediated technology on writing proficiency skills of ESL learners?

Due to the increasing rate of the latest technology, researchers have conducted many studies to investigate the effect of computers and its related technology on language teaching and language learning. Many results and finding from these studies provided positive evaluation and feedback. A variety of programs have been developed, and various online ESL programs revolutionized the field of English teaching. This successful research has shown impact if CMT on writing proficiency skills of ESL learners is very positive. EFL learners have shown more progress in learning all writing skills rather than the Traditional Method. They are much motivated and excited by learning through CMT technology. It has opened their minds and made easy to understand complicated concepts and gave new passion and zeal towards learning and understanding.

VI. Conclusion

The research was carried out to investigate CMT's effect on writing skills teaching techniques used by EFL teachers at the secondary level. It has been investigated in his research that CMT in writing skill teaching played a significant role in learning and improving the writing skill of students at the secondary level. In examining the teacher's beliefs and practices concerning effective methods of CM techniques and the role it plays incomprehension, the researcher gathered information from different sources.

The result in the present study shared that student's proficiency and writing skills increased through this technique.

- The first compulsory thing to enhance students writing skills was to make students centred vibrant and lively instructions and using techniques.
- The aim was to make students excited about learning writing skills. The student was able to understand effective writing 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, many learners' level of the acquisition remains crumbly.
- EFL teaching in Pakistan fails to promote and is less proficient in English.
- Teachers remain to fail to achieve their target towards target language.
- Much is required to improve the EFL status in the classroom.
- Research Questions have been discussed in detail.

VII. RECOMMENDATIONS

The concede recommendation is exhibited for the individuals because they should be eager to add to the current study by leading studies on the utilization of writing skill upgrade procedures in ESL teaching at the secondary level.

- Learners at new language aptitude skills, i.e., Secondary, Intermediate, or advanced, can be subjects for another experiment besides writing skills.
- This study was conducted in a public boy's secondary school. The same study can be conducted in another setting, i.e., public primary, elementary or private institutions or at university and college level.
- English as a Foreign Language can be observed in the new study.
- Other involved academics can inspect the effect of different types of substitute methods on language skills. It would be fruitful to investigate the relationship between teachers' and students' enthusiasm and retention.
- Teachers should develop computer-related skills for upcoming new trends of teaching.
- The ESL teachers are advised to get motivation from this study and change their method of teaching from traditional to new and innovative methods of teaching by using CMT to make their teaching useful and exciting.
- English language acquirement is essential for learners because of its massive role in society.
- A teacher should use different methods and techniques to get the required results.
- The teacher should be acquainted with the proper treatment of writing skill techniques in the classroom. Writing skills techniques stimulate the students to improve their education.
- Pupils also integrate enthusiasm, courage, confidence, and self-assured through writing skills techniques.
- Teachers' training should be devised to make them aware of technology at the secondary level to enhance students' writing skills.

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