

INVESTIGATING AND COMPARING EFL TEACHERS' COMPUTER-ASSISTED LANGUAGE LEARNING SKILLS IN PAKISTAN

Asma Abdul Aziz

Email: eshmallinks@gmail.com

PhD Scholar of Applied Linguistics, SLCP, Universiti Utara Malaysia.

Mohd Hilmi Hamzah

Senior Lecturer, SLCP, Universiti Utara Malaysia.

Mohan Rathakrishnan

Senior Lecturer Universiti Utara Malaysia

Asma Abdul Aziz, Mohd Hilmi Hamzah, Mohan Rathakrishnan : INVESTIGATING AND COMPARING EFL TEACHERS' COMPUTER-ASSISTED LANGUAGE LEARNING SKILLS IN PAKISTAN-- Palarch's Journal of Archaeology Of Egypt/Egyptology 17 (11), 150-161. ISSN 1567-214x

Keywords: Higher secondary schools, EFL teachers, computer-assisted language instruction, Pakistan.

Abstract:

This study investigates the existing condition of EFL teachers in Punjab, Pakistan by exploring issues and challenges faced by them in using the computer for English Language teaching. The study was quantitatively based on a descriptive survey design. The questionnaire was constructed using a five-point Likert scale and data were collected from 150 English language teachers currently teaching at higher secondary schools in Pakistan at District Okara Punjab, Pakistan. The data were analysed via SPSS. The findings of the study revealed that EFL teachers face various issues and challenges like non-availability of computers and laptops, shortage of electricity, lack computer education, theoretically-based course work, lack of interest from senior teachers towards learning or using computers, and insufficient time for Computer-Assisted Language Instruction. Besides, many female English language teachers are unable to operate computers. They have to do domestic duties and cannot afford extra time for learning computers. The study concludes that, without addressing these issues, inculcating the use of Computer-Assisted Language Instruction is a complex phenomenon in Pakistan. Hence, policy makers, stakeholders and administrative staff should target these issues so that the advantages of Computer-assisted Language Learning may be provided to learners in higher secondary schools in Pakistan.

1. Introduction

The use of educational technologies has been in practice from the second half of the 20th century. In the educationally and economically advanced countries, technology has entered in the schools' life in the late 1950s and is still developing day by day. In the present era, use and availability of educational technologies is easier and more convenient for storing a large amount of data. Using advanced educational technology is effective in handling teaching practices and many other things. Using Computer-

Assisted Language Instruction (CALI) reshapes teaching practices especially at the end of the 20th century. With the help of CALI in foreign language teaching, learners are able to connect all over the world to achieve their global objectives in education. In this regard, computers and other CALI devices work as not only a tool for education (religious and formal) but also a good source of knowledge.

For the last two decades, the interest in the development of computer technology in language teaching has grown among researchers (e.g., Alderson, 2009; Fullan, 2011; Hargreaves, 2013; Murray, 2018; Wedell, 2009). The basic barriers in using CALI in EFL classes, according to Markee (1997), are divided into three groups: teacher-related, system-related, and school-related. Teacher-related barriers refer to teachers' lack of knowledge and understanding. That is, gender, age and experience are not in harmony with teachers' own beliefs and values. They may have negative opinions and considered CALI as additional workload. They may bind themselves to the existing and traditional practices and the new change becomes a threat to them. System-related barriers are due to the lack of mutual understanding and trust between providers and users, such as between administrators and teachers (Hassan & Sajid, 2013). Wedell (2009) has argued that there is a need to put the teachers in the hub of the technological process.

Likewise, Carless (2011) gives more emphasis on the contextually based approaches to the academic technology like computers, internet and multimedia. The extensive field of linguistics requires paying more attention to the importance of using computer technology that can contribute to language teaching (Waters, 2017). School-related barriers are mostly due to lack of a supportive culture for change in societies. There is also a very conservative atmosphere in educational institutions with dearth of supportive management and inadequate school resources.

The progress in EFL teaching demands administrators to equip EFL teachers with the latest computer technology in Pakistan (Farooq & Soomro, 2018). In this regard, multimedia and computers with additional applications of internet may be helpful for English teachers. Being skilled in using technological equipment, teachers can be a powerful source to bring changes in the educational system by encouraging and applying these powerful devices in English language teaching in Pakistan.

In the globalized world, sometimes, government and policy makers are forced to adopt and borrow those technological innovations that other countries are applying (Rogers, 2015). In Pakistan, government and policymakers sometimes want to change this scenario, but the instability of political situations prevents the benefits of this system (Farooq & Soomro, 2018). In the Pakistani education system, English teachers are divided into two sections: (1) those who have no tendency to use computers in language teaching and want to continue using traditional methods of teaching; and (2) those who want to use computers for innovation in EFL teaching. From primary to secondary levels, all the teachers are provided with periodical training on using computers so that they can upload assessment or evaluation reports online to the administration. However, the focus on using computers for instructional purpose is entirely ignored. At a higher secondary level, EFL teachers do not have such opportunities to attend computer training organized by the district administration.

In all developed countries of Europe, America and South Asia, computer technology is being used to harmonize the education system with the latest technological progress (Tai, 2012). Several studies on CALI to improve students' oral and writing skills were conducted during the last two decades. For example, Chow and Ge (2011) in Taiwan, Khadria (2002) and Charmonman (2014) in Thailand, and Machnaik (2012) in Singapore have investigated gender-based differences in attitudes and the impact of age and experience on using computers in EFL classrooms. In Pakistan, some of the

researchers have explored the effectiveness of using computers in EFL class and revealed the differences of gender-based attitudes toward using computer technology at primary and university levels (e.g., Hussain, 2014; Lodhi et al., 2019).

The traditional educational systems are going to fluctuate day by day and students are appearing to be more active. Teachers use computer technology for educational purposes in their classrooms (Edwards-Groves, 2012). The use of mobile phones, tablets, smart-phone technologies, etc., has brought innovations in receiving and imparting education. In the present time, the educational technologies have turned more complex but useful than in the past (Levy, 2009). Use of educational technology gives an interesting way to have communication via online chat and discussion to meet their educational goals (Gill, 2011). Hence, computer knowledge in every field of life is being increased according to the increasing needs of teachers as well as students. It is up to teachers and students to choose which technology that is useful and efficient. Computer technology has also changed learning atmospheres because the use of mobile devices outside classroom is possible (Abdollahpour & Maleki, 2012).

It may be useful in improving four skills of language like speaking, writing, reading and listening for teachers and students in Pakistani Higher Secondary Schools in Pakistan. Knowledge can be transferred by using computers and other educational tools in the teaching of English as a foreign language from online data sources as a lot of online data are available for religious education. Learning with the help of computers and educational technology has a lot of advantages for both teachers and students of Pakistani Higher Secondary Schools in Pakistan. The Pakistani educational system is not advanced enough to meet the requirements of the international standard of education because the country is not as developed as other countries in Europe. In this context, using advanced technology like computers in the teaching of English is not an easy assignment especially in all educational institutions in Pakistan. Besides, a lot of issues involved in the way computer-assisted language learning is conducted in Pakistan. Teachers neglect the use of technology in the classroom because of personal and environmental reasons.

Teaching and learning has been changed by the integration of computer technology in the classroom (Hoopingarner, 2009). In Pakistan, most of the educational institutions are not using computer technology because they have some issues. Most of them have no interest in its use in the classroom. They are not able to purchase the technology by themselves. It is encouraging that the Government of Pakistan is taking initiatives for religious schools. Teachers in religious schools face a lot of barriers related to the use of technology. They have little time and some financial problems to have an access to technology. There is also a lack of technical staff in the implementation of the latest development in religious and formal educational institutions. To date, the critical question is to explore the challenges and barriers related to its use in the classroom. Studies found the difference and proved that students using computer-assisted instruction performed better than those who do not use this instruction (Grgurovic, Chapelle, & Shelley, 2013). Computerized tests take less time than traditional tests with paper and pencil and are more reliable (Madsen, 1991). Students can repeat their learning activities in schools and can improve their learning habits individually. Students can correct their pronunciation, intonation, etc. Learners can expand their access and explore a lot of knowledge by using online data sources. It is important to note that technology has changed the educational format especially with the arrival of computer in the teaching of English as a foreign language (Levy, 2009).

Choi and Lee (2008) conducted a study to know the current trends and issues related to learning in Asia. The study revealed that students are unable to improve their learning

effectively because of issues related to class hours, national curriculum and text books, English as a medium of instruction, political environment, etc. In this regard, Hani (2014) conducted a study about the benefits and barriers of computer-assisted learning and teaching in the Arab world. The study found out problems like an inadequate number of computers, teachers' training, time constraints, technological problems and high cost of computers. The study proved that use of computer in the teaching of English as a foreign language has enhanced the learning abilities and interests of learners with useful materials. Besides, Islam also emphasizes to use wisdom to bring out innovations in the education. Usman (2013) states that one of the unique features of the Islamic society is the way in which it combines the immutable and the flexible. It is a society that strictly adheres firmly to its fixed principles, but at the same time encourages its followers adopt those things which are beneficial to the society.

The Messenger of Allah (SAW) is reported to have said: "Wisdom is the lost property of the believer, wherever he finds it, he has more right to it." (Ahmad, 2010).

Regarding religious school education in Pakistan, Bhatti et al. (2014) carried out a study to explore the trends for CALI among English language teachers at Lodhran District located in the southern Punjab of Pakistan. His research findings revealed the lack of availability of educational technologies and load shedding issues in Higher Secondary Schools in Pakistan. Unavailability of CALI facilities were also revealed as one of the bigger issues. Another research scholar Haider (2013) and Hassan and Dzakiria (2020) explored teachers' perceptions and attitudes towards using CALI in Pakistani Higher Secondary Schools in Pakistan. The results of this research also revealed that teachers were inclined to use educational technologies and wanted the implementation of CALI in religious schools. The teachers mostly agreed that use of CALI would increase their efficiency and help to motivate the students. Besides, Hassan and Sajid (2013) and Hassan and Dzakiria (2019) also investigated the effectiveness of use of CALI in teaching and the problems faced by English language teachers in Punjab province in Pakistan. The results of this research also revealed that most of the teachers were interested in the integration of CALI in teaching and learning. However, this study found that there were many hurdles like lack of computer lab, lack of computer, lack of teachers' experience with computer-assisted teaching, and financial support.

1. Statement of the Problem

Computer technology is very significant for EFL learning, but unfortunately, most of the teachers are not able to use computers for language teaching. In the advanced world of technology, teachers have challenges to acquire the skill of using new technologies in language teaching. The Government and non-government organizations (NGOs) are trying to give awareness to teachers about using new techniques in the teaching of English. This issue is particularly critical in Pakistani Higher Secondary Schools in which Pakistani teachers need to facilitate their students with online data sources and online education.

2.1 Objectives of the Study

The objectives of the study are as follows:

- I. To explore issues and challenges faced by teachers for using CALI in Higher Secondary Schools in Punjab, Pakistan.
- II. To find out the teachers' skill for using of CALI in the teaching of English to students in Higher Secondary Schools in Pakistan.

2.3 Hypothesis

- I. There is no difference between male and female religious school teachers in using CALI in Higher Secondary Schools in Punjab, Pakistan.

3. Methodology

The current study was descriptive and based on a survey design. To collect quantitative data, questionnaires with close-ended statements were developed with a five-Likert-type scale (agree, strongly agree, neutral, strongly disagree and disagree). The population consisted of intermediate English language teachers in Punjab, Pakistan. A simple random sampling technique was used to collect the data. The sampled population was selected from six schools (three male and three female Higher Secondary Schools in District Okara, Pakistan). A random sampling technique was used to approach the target population.

4. Data analysis and findings

The data were analysed to extract the responses of both samples of population by using Statistical package for Social Sciences (SPSS). To measure the statistical difference between male and female English language teachers, the significance 0.05 level was achieved.

Table 1
Level of Agreement from Five Point Rating Scale Questionnaire

Levels of agreement	Standards
Highest	4.50 - 5.00
Higher	3.50 - 4.49
Average	2.50 – 3.49
Lower	1.50 - 2.49
Lowest	0.00 - 1.49

Table 2
Issues and Challenges Faced by Teachers in Higher Secondary Schools in Pakistan

No.	Teachers' opinions	St. Deviation	Mean Score	Mean Values
1	There are some problems in using computer technology.	1.22	4.78	Highest
2	I have financial problems in purchasing computer in teaching English.	1.24	4.76	Highest
3	Learning computer technology requires extra time.	0.60	4.40	Highest
4	Energy crisis is a barrier in having the regular assistance of computer.	0.69	4.31	Higher
5	Computer-Assisted Language Instruction facility is not available in Higher Secondary Schools in Pakistan.	0.74	4.26	Higher
6	I know how to use talking tutors on Computer.	0.70	4.30	Higher

The above table shows the responses on issues and challenges using CALI. Statement 1 in the above table shows the problems of teachers. The arithmetic mean score of the

teachers' response is 4.78, showing the highest level of agreement among the teachers. The results reveal that English language teachers have serious issues related to the use of advanced technology like computers in the teaching of English due to lack of knowledge. Statement 2 in the table shows the financial problems among EFL teachers. The mean score of English language teaching is 4.76, showing the highest level of agreement. The result reveals that English language teachers have financial problems or they have no extra money to purchase computers or laptops to facilitate the class. Statement 3 explores the issues related to time management. The arithmetic mean score of EFL on this statement is 4.40, showing again the highest level of agreement. From the results, it can be deduced that learning to use computer to facilitate students requires extra time. Statement 4 in the above table reveals the teachers' issues related to the load shedding or barriers of energy. The mean score of their agreement related to this issue is 4.31, showing a higher level of agreement. The results indicate that energy crisis is a barrier in implementing the use of computer and educational technology in the teaching of English as foreign language in Pakistan. Pakistan has been seriously facing energy crisis for the last many years. The short fall of electricity is also affecting the progress of education as well. Statement 5 gauges information on the problems arising from lack of CALI environment at higher secondary education. The mean score for this statement is 4.26 which also indicates the higher level of agreement. This shows that the institutions have insufficient facilities on CALI for English language teachers. Statement 6 shows the problems of teachers about knowledge of computer-related programs. The mean score is 4.30. The results reveal that teachers have knowledge about talking tutors and electronic dictionaries to be used in Higher Secondary Schools in Pakistan. The data prove that many English language teachers face a lot of problems and issues in using computer as a tool for teaching English at an intermediate level. Energy crisis, lack of knowledge about the use of computer, and financial problems are the most important issues. As a result, teachers think that the use of CALI cannot be successful in the teaching of English at a higher secondary level in Pakistan.

Table 3

Teachers' Skill for Using computers in Higher Secondary Schools in Pakistan

No	Teachers' Opinions	St. Deviation	Mean Scores	Mean Values
1	I know how to tackle functional problems of computer.	1.84	3.16	Average
2	I have enough time to manage Dini Higher Secondary Schools in Pakistan.	1.57	3.43	Average
3	I can install English learning Software myself.	1.52	3.48	Average
4	Dini Higher Secondary Schools in Pakistan have sufficient technical support regarding computer application at Higher Secondary Schools in Pakistan.	1.60	3.40	Average
5	The skill in computer application helps teachers in schools in teaching English.	1.08	3.92	Higher

6	I have interest in learning and using computer for teaching English.	1.04	4.96	Highest
---	----------------------------------------------------------------------	------	------	---------

The above table shows the information on teachers' skill for using CALI. Statement 1 shows how to tackle functional problems of computer by English language teachers. The mean score of this statement is 3.16 which shows the average level of agreement. That is, all teachers are not able to solve the functional problems of computer. The second statement shows the time management of the teachers in schools related to using computer. The mean score is 3.43 which also shows the average level of agreement. That is, teachers are not able to manage the extra time to use CALI. Statement 3 shows the teachers' skill related to using computer. The mean score on this statement is 3.48 which shows the average level of agreement. It indicates that many teachers in schools have no sufficient skills to undertake the installation of language programs. Statement 4 is to gauge information if Higher Secondary Schools in Pakistan have sufficient technical support regarding computer application. The mean score of this statement is 3.40 which shows a higher level of agreement. The result reveals that many institutions have no sufficient technical support in using computers in Higher Secondary Schools in Pakistan. Statement 5 finds out if teachers in schools have good skills in using computers for the benefit of learners in teaching English. The arithmetic mean score of this statement is 3.92 which shows a higher level of agreement. The result reveals that English language teachers know well that computer skill is very helpful for them. Statement 6 shows the interest of Higher Secondary Schools teachers in Pakistan in using computers. The mean score of this statement is 4.96 which reveals the highest level of agreement. It shows that the teachers are very much interested in learning and using computers for teaching English.

Most of the statistical results in this study reach the average level. Only two statements reach the higher level of agreement. The results are not significant though, which proves that many English language teachers are unable to handle computer-related issues. On top of that, they are unable to handle issues due to limited time specified at Higher Secondary Schools in Pakistan. They are also unable to do the installation of computer. But, the higher level of agreement reveals that there are some teachers who can use computer and they know that the use of computer can give them ample understanding into the latest knowledge about teaching techniques and methodologies.

Table 4. *Mean, Standard Deviation & T- Value for the Scores of Issues and Challenges Faced by Teachers in Religious School*

Variable	Gender	N	Mean	SD	T	P
Challenges & barriers in Computer use	Male	100	13.67	1.29	2.11	0.035***
	Female	50	14.69	1.19		

(df=118, ***p<0.01)

The statistical results in the above table indicate that the t-value for both male and female teachers at higher secondary level is 2.11, which is obviously greater than the standard normal value of 1.96. This statistical analysis reveals that teachers (both male and female) have to almost equally face the challenges and barriers related to the use of computer-assisted language learning. The results also point out that both male and female teachers face challenges and issues in using CALI technique during the teaching of the English language. Female teachers face problems a little more than male teachers because female teachers face the problem of distance from their home to the computer learning institutions. They also face time problems because almost all female teachers have to manage their domestic responsibilities. So, they are interested in using

computer technology, but they face a lot of challenges. The p-value $***0.035$ which is less than 0.05 shows the important and accepted hypothesis that both male and female face same issues and barriers when using CALI for teaching English as a foreign language. The comparison between mean scores for male and female teachers reveals no significant difference (Male: 13.67 and female: 14.69), showing that both male and female teachers face the same level of problems for using computer and other educational technology for teaching English as a foreign language in Pakistan.

Table 5

Mean, Standard Deviation & T- Value for the Scores of Comparisons of Teachers' Skill for Using Computers in Teaching English

Variable	Area	N	Mean	SD	T	P
Teachers' Skill in using computers	Male	100	14.47	1.51	3.34	0.021***
	Female	50	10.87	2.74		

(df=118, $***p<0.01$)

The statistical results in the above table reveal that the t-value for both male and female teachers at higher secondary level is 3.34 which is obviously greater than the standard normal value of 1.96. This statistical analysis supports the hypothesis about teachers (both male and female) who have great tendency towards using computers in teaching English. The results also signify that, comparatively, female teachers have problems related to skills for using computer technology in the classroom. They lack the knowledge related to computer use according to their lesson plans. They also show a lack of interest in learning computer skills because they do not want to go outside their homes after their working hours. The p-value $***0.021$ which is less than 0.05 represents highly noteworthy and established hypothesis that female teachers have lower skills in the use of computer. The comparison of mean scores between male and female teachers reveals that there is a significant difference (Male: 14.47 and female: 10.87). This result reveals that both male and female teachers have a different level of skills for using computers in teaching English.

The box-plot shows the comparison of attitudes and CALI skills among male and female higher secondary school teachers towards computer-assisted language technique in the teaching of English as a foreign language in Pakistan.

5. Discussion

5.1 Phase I

The results reveal that both male and female English language teachers at higher secondary level face the issues and challenges for using computer technologies in the classroom. Mahdi (2013) reported the issues of computer-assisted learning such as technical, pedagogical, personal, institutional and socio-cultural issues. In Pakistan, most of the English language teachers are not financially strong enough to buy their own laptops (Aziz, Hassan & Dzakiria, 2018). They also have insufficient money to spend on getting trainings individually on their own. The results also point out that both male and female teachers face challenges and issues in using CALI during teaching because they do not have their own laptops to practice at home. Female teachers face the problem of distance from their home to the computer learning institutions because training institutions are not near to home and they found it difficult to go there after teaching hours. They also found time management problems because almost all female teachers have to work and manage their home as well. Unlike male teachers, they have limited free time to go outside their home to learn computer skills. So, they are interested in using computer technology but they face a lot of challenges to get the

benefits from this technology. Hassan and Sajjid (2013) investigate the challenges and barriers related to the use of advanced technology like computers in the teaching of English in the higher secondary schools of Pakistan. They found financial, technical and institutional problems. Time factor is also very important because teachers remain tired after teaching hours. Most of the institutions have limited CALI facilities. So, teachers remain helpless in getting latest updates about their teaching. The teachers lack the knowledge of computer skills in the teaching of English as a foreign language in Pakistani higher secondary schools.

5.2 Phase II

Results of this study also reveal that female teachers have lesser knowledge of using computer for academic and general purposes. They do not have even as much knowledge of using computers that they are able to install simpler programs by themselves. But the recent trend shows that teaching and learning has been changed by the integration of computer technology in the classroom (Hoopingarner, 2009; Hassan & Aziz, 2019). This shows that learning computer skill for women in Pakistan has not been their major interest. It was found that some institutions support computer applications and provide trainings to their teachers but they remain unsuccessful because of shortage of computer availability. Besides, institutions do not provide trainings to their teachers. Age factor also is important because young teachers have the interest to use computer technology related to their subject but senior teachers show lack of interest and knowledge about using CALI in the teaching of English as a foreign language in Pakistan. Female teachers were also found having lack of knowledge and confidence. So, they remain shy and careless about the use of educational technology. Findings of this study revealed that the use of advanced technology like computers in the teaching of English has good and flourishing impacts on students' e-learning in Pakistani Higher Secondary Schools in Pakistan. The skilful use of CALI for language teaching can broaden the teachers and students' outlook towards religious education and modernization. It is a fact that English language teachers face serious issues like lack of financial support, English language difficulty, lack of skills in using computer technology, and embarrassment in using information technology. Besides, unwillingness of the teachers, economic problems, safety of equipment, extreme breakdown of electricity, lack of administrative support, lack of training, lack of inspiration, age factors are also issues faced by English language teachers in Pakistani Higher Secondary Schools in Pakistan.

6. Conclusion

The present study has explored issues and challenges faced by English language teachers and revealed the usefulness of CALI in the teaching of English as a foreign language at higher secondary schools in Pakistan. The revolutionary interest from the Government of Pakistan for the significance of using computer technology in educational public and private sectors (National Education Policy, 1992) is clearly stated: all educational institutions and training programs should consist of computer literacy as a compulsory component to reinforce the teaching-learning process. National Education Policy (1998-2010) has also proposed valuable initiatives for the induction of the use of CALI at all levels in educational and religious institutions at an intermediate level. This situation has clearly indicated the bright future for using CALI in religious as well as in formal education system in Pakistan. Hence, in keeping with previously conducted studies, the current study invites the attention of policy makers and stakeholders to come forward and facilitate English language teachers with computer and other educational technologies (as students are provided with laptops by the federal and provincial government of Pakistan) along with pre-induction training at

a Higher Secondary level without any discrimination in Pakistan (formal and religious Schools). However, the success of using CALI is subject to the treatment for reducing issues and challenges faced by English language teachers in Pakistan.

7. Recommendations

This study has some recommendations for administrators and policy makers in Pakistan. The teachers at the higher secondary school level should be provided proper training to use CALI as a teaching technique so that they may get the advantage of using latest technology use by making English as a foreign language easier and attractive for EFL learners in Pakistan.

The current research also recommends that English language teaching staff should be provided opportunities to attend international conferences and workshops. This may become a great source in enhancing their knowledge by using latest techniques and methodologies to create interest among students towards English language learning. Ultimately, the teachers will be able to get innovative ideas by experiencing international standards of imparting language education.

REFERENCES

- Abdollahpour, Z., & Maleki, N. (2012). Second language Vocabulary Acquisition in use of Computer-Assisted Language Instruction technique and MALL Environments and their Effect on L2 Vocabulary Retention: A comparative study. *Australian Journal of Basic & Applied Sciences*, 6(9), 109-118.
- Ahmad A.A. (2010). Selection of Prophetic hadiths and Muhammad Wisdoms English Arabic in Salma A (trans), DarAl-Kotob Al-Ilmiyyah, Beirut Lebanon.
- Alderson (2009). Towards a Theory of Diagnosis in Second and Foreign Language Assessment: Insights from Professional Practice Across Diverse Fields. *Applied Linguistics*, 36(2), 236–260.
- Aziz, A.A., Hassan, M.U., and Dzakiria, H. (2018). Growing Trends of Using Mobile in English Language Learning. *Mediterranean Journal of Social Sciences*, 9(4), 235-239.
- Bhatti, R., Ahmad, M. N., & Khan, S. A. (2014). Trends Towards Computer-Assisted Language Instruction Usage Among Dini Higher Secondary Schools in Pakistan (Religious Schools) Teachers of Lodhran District, south Punjab, Pakistan. *Library Philosophy and Practice (e-journal)*, 1090, 1-15.
- Carless, D. (2011). *From testing to productive student learning: Implementing formative assessment in Confucian-heritage settings*. New York, NY: Routledge.
- Charmonman, S. (2014). Message from the chairman of the organizing committee. *Proceedings of the International Conference on eLearning for Knowledge-Based Society*, Bangkok, August 4-5, 2004.
- Choi, Y. H. & Lee, H. W. (2008). Current Trends and Issues in English language Education in Asia. *The Journal of Asia TEFL*. 5(2), 1-34.
- Chow, P., & Ge, V. (2011). *Multimedia English classroom*. Puli, Taiwan: National Chi Nan University Publications, 1-10.
- Edwards-Groves, C. (2012). Interactive creative technologies: Changing learning practices and pedagogies in the writing classroom. *Australian Journal of Language and Literacy*, Vol. 35(1), 99-113. Retrieved from: <http://www.alea.edu.au>.
- Farooq, M.U. & Soomro, A.F. (2018). Teachers and Computer technology: Trends in English Language Teaching in Saudi Arabia. *International Journal of English Linguistics*, Vol. 8(5), 10-19.

- Fullan, M. (2011). *The new meaning of educational change*. New York, NY: Teachers College Press. *Futures*, 30(8), 843-851.
- Gill, D. (2011). Effects of technology on second language learning. *Journal of Dini Higher Secondary Schools in Pakistan (Religious Schools) Teaching & Learning(TLC)*,3(2),165-198.
- Grgurovic, M., Chapelle, C. A., & Shelley, M. C. (2013). A meta-analysis of effectiveness studies on computer technology-supported language learning. *ReCALL*, 25(2), 165-198.
- Haider, A.G. (2013). Perceptions of ESL Teachers towards Use of Computer-Assisted Language Instruction Technique Implications for ELT (English Language Teaching) at the Intermediate Level-A Case Study. *Researchgate.net Publication*,13(8), 204-237.
- Hani, N.B. (2014). Benefits and Barriers of computer assisted learning and teaching in the Arab World. *Theory and Practice in Language Studies*, 4(8) 1609-1615.
- Hargreaves, A. (2013). *Teaching in the knowledge society: Education in the age of insecurity*. Maidenhead, England: Open University Press.
- Hassan, T.U. & Sajid, A.R. (2013). Computer-Assisted Language Instructions in learning: problems faced by Pakistan. *Journal of Research and Reflections in Education*, 7 (1), 52-64.
- Hassan, M.U. and Dzakiria, H. (2019). The University Students' Beliefs towards Corrective Feedback in Learning English as Foreign Language in Pakistan. *International Journal of Recent Technology and Engineering*, 8 (3), 4094-4100.
- Hassan, M.U. and Dzakiria, H. (2020). Students' beliefs towards written CF and their impact on writing accuracy in EFL class: A Pakistani EFL context. *International Journal of Advanced Science and Technology*, 29 (6-S), 648-658.
- Hassan M.U and Aziz, A.A. (2019). Investigating the use of Computer Technology for E-learning in Pakistani Maddaris: Case of Religious Teachers. *International Journal of Distance Education and E- Learning*, 5 (1), 44-56.
- Hoopingarner, D. (2009). Best practices in technology and language teaching. *Language and Linguistics Compass*, Vol. 3(1), 222-235.
- Hussain, H. (2014), *Attitudes of English language learners towards computer assisted language learning in Karachi*, Munich, GRIN Verlag, <https://www.grin.com/document/351864>
- Khadria, B. (2002). Policy concerns in the globalization of education: Emerging trends of embodied and disembodied mobility of knowledge. *Tamkang International Conference on Globalization, Education and Language Proceedings*. Tapei, November 2002, 59-76.
- Levy, M. (2009). Technologies in use for second language learning. *The Modern Language Journal*, 3(1), 769-782.
- Lodhi, M.A, Fatima, A., Ismail, F., Amin, N., Khalid, F., & Siddiq, A (2019). Attitude of Male and Female Students Towards Computer Assisted Language Learning at Intermediate Level. *English Language Teaching*, 12 (3),108-118.
- Machnaik, J. (2012). *Investigating the effect(s) of computer technology integration on teaching practices that may lead to the development of a community of learners* [Electronic version]. Saskatoon, SK, Canada: University of Saskatchewan. Retrieved on October 28, 2018 from <http://www.usask.ca/education/coursework/802papers/machnaik>.
- Madsen, H. S. (1991). *Computer-adaptive testing of listening and reading comprehension*. In P. Dunkel (Ed.), *Computer-assisted language learning and*

- testing: Research issues and practice, 237-257. Cambridge university Press, New York: Newbury House
- Mahdi, H. S. (2013). Issues of computer assisted learning Normalization in EFL Contexts. *International Journal of Linguistics*, 5 (1), 191-203.
- Markee, N. (1997). *Managing curricular innovation*. Cambridge, England: Cambridge University Press.
- Ministry of Education. (1992). National education policy. Retrieved, November 23, 2019, from [http://thejournal.com/Articles/2016/11/23/ International Activities](http://thejournal.com/Articles/2016/11/23/International%20Activities).
- Ministry of Education. (1998-2010). National Education Policy. The government of Pakistan, Islamabad.
- Murray, D. E. (Ed.). (2018). *Planning change, changing plans: Innovations in second language teaching*. Ann Arbor: University of Michigan Press.
- Rogers, P. L. (2015). Traditions to transformations: The forced evolution of higher education. *Educational Computer Technology Review*, 9(1), 1-15.
- Tai, H. H. (2012). Globalization and its impact on Taiwan's higher education. *Tamkang International Conference on Globalization, Education and Language Proceedings*. Tapei, 169-180.
- Usman, A.Y. (2013). Using information and communication technology (Computer-Assisted Language Instruction) to enhance the teaching and learning of Arabic and Islamic studies in Nigeria. *Journal of Teaching and Education*, 2(3), 353–368.
- Waters, A. (2017). Managing innovation in English language education. *Language Teaching*, 42(4), 421–58.
- Wedell, M. (2009). *Planning for educational change: Putting people and their contexts first*. London, England: Continuum.