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Exploring the Impact of Information and Communication Technology (ICT) on English Language Instruction at Secondary Schools in Faisalabad: A Survey Study

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ABSTRACT

In the modern world of innovativeness, ICT has a keen importance in the educational field. The study dealt with the perception of teachers about ICT for teaching the English language at the secondary school level in Faisalabad. The rationale of the study was based on the objectives of understanding the perceptions of teachers about the usage of ICT and how learners perceive the incorporation of ICT in education. ICT is not confined to a set of new technologies used in EFL classrooms; rather, it has innovated new pedagogical approaches to both teaching and learning in EFL settings. The research was conducted to assess the impact of ICT technology in EFL classrooms, how it was helpful for the learning and teaching process and the way it innovated pedagogical approaches. The study dealt with perceptions about the incorporation of ICT due to the current progressive era. This study examined the aspects of the incorporation of ICT and the attitudes of learners and teachers toward ICT. Twenty-five English teachers participated in the research, and a survey questionnaire was completed by using Google Forms. SPSS along with Microsoft Excel was used to analyse the data. The outcomes of the study revealed positive attitudes of teachers towards the usage of ICT.

KEYWORDS

Information and communication technology (ICT), English language teaching (ELT), perceptions, challenges, survey study.

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INTRODUCTION

In this age of globalisation, English is widely used as a global language of research, science, technology, medical sciences and many other areas. Globalisation is also strengthening the role of English as an international language. These and many other factors have won English the status of the language of globalisation and have increased the importance of English. To meet the rapid development around the world, the use of technology is very important in every field of life. Students and teachers must use technology to obtain better results in the study. Educationists all around the world are emphasising the usage of technology in the field of education not only for normal students but also for students with hearing problems, vision problems, etc. The usage of technology for teaching at the secondary school level will be very beneficial not only for students but also for teachers, as this will enhance the instruction and learning process and enhance its effectiveness. The use of technology can be proven to be a game changer in the classroom, as it altered the attitude of the pupils by just altering the way they do it from physical to digital (Flórez-Aristizábal et al., 2019). In the current state of society, ICT has a great role in education for the improved teaching-learning process (TLP) and its evaluation. Google Sites, Moodle, Zoom, YouTube, Google Forms and survey-monkey are some distinct digital tools that have evolved education and research during the past few years. These tools aid teachers in making education simple and lively for students and have also made education beyond classes, which means that physical classes are now not an essential part of education due to the availability of modern digital technological tools. EBooks and interactive whiteboards are very prominent examples of the incorporation of ICT in education as the world is shifting towards a paper-free environment, and the usage of eBooks is a very important step in this regard. IWBs are also very helpful, as teachers can display and copy the projected computer image to interactive boards and make students see it so that the engagement and commitment of students can be ensured.

By enabling flexible curriculum development and enabling students with disabilities to participate equally in the learning process, technology in education plays a particularly significant role in preparing them for jobs and lifelong learning outside of the classroom. There is also no hesitation that the reimbursements that ICTs offer to pupils with incapacities are many and very diverse; hence, it is necessary to contemplate them globally in the subject, always from the versatility and possibilities they offer in attention to diversity. ICT consists of the use of computers, the internet, radios, televisions and projectors, which are widely used in today's educational field. ICT tends to expand students' access to education, as ICT can promote learning anytime and anywhere because of the availability of education through online systems. There is no doubt that

the integration of ICT is improving the standard of learning and teaching, and it has become essential to integrate ICT into education in this modern era. There is a need for the integration of ICT into the education system of Pakistan to compete with the fast-developing world. The integration of ICT in education can improve the ability of students so that they can compete at the international level and cope with the fast-developing world.

Research Problem

ICT is not confined to a set of new technologies used in EFL classrooms; rather, it has innovated new pedagogical approaches to both teaching and learning in EFL settings. Much research has been carried out to assess the impact of the ICT of technology in EFL classrooms, how it is helpful for the learning and teaching process and how it has innovated pedagogical approaches. Technology has a huge impact on education in every aspect. This research will investigate the effect of the fast rate of innovation and its integration into EFT education from both teachers' and learners' perspectives. Secondary schools of Faisalabad were made part of the research to gather data related to the research. The researcher focused on the impact of fast-paced innovation on English language teaching and how technology could be used further in the future for better English language teaching and learning. The researcher observed the use of software and applications to see how these changed and modified English language teaching.

Research Objectives

The objectives of this research are as follows:

1. To investigate the role of technology in learning the English language at the secondary school level in Faisalabad.
2. To understand the perception of English language instruction regarding technology at the secondary school level in Faisalabad.
3. To determine the challenges and barriers faced by teachers while teaching the English language by using technology at the secondary school level in Faisalabad.

Research Questions

1. How do English language learners accept the role of technology in education at the secondary school level in Faisalabad?
2. How do English language instructors conceive of the role of technology in education at the secondary school level in Faisalabad?
3. What are the potential challenges and barriers faced by English language teachers in teaching English by using technology in the classroom at the secondary school level in Faisalabad?

Significance of Study

The significance of this research lies in its practicality, as this research will elevate the standard of learning through the integration of ICT at the secondary school level in Faisalabad. In the modern era, especially during and after COVID-19, the world has dramatically shifted from the traditional educational system to a computerised educational system or, in other words, an educational system that involves the integration of ICT. The research will focus on the integration of ICT and the barriers faced by teachers in the integration of ICT. The research will also discuss the need for training for students and teachers so that they can implement the educational use of modern technologies more properly. The research will also analyse the deficiency due to which the implementation of ICT in education has not yet been done. The research will help to analyse and revise certain elements that can bring miraculous improvement in the integration of ICT at the secondary school level. The research will also highlight important issues and will provide information to educational practitioners for better educational planning at the secondary school level. Keeping in view all the points, the researcher aims to find the results that would explain the use of ICT at the secondary school level in Faisalabad and its effectiveness for both teachers and students.

LITERATURE REVIEW

Technology Not Limited to Anyone

The introduction of ICT at all levels of education and rehabilitation is a dire need for the instruction of deaf and hard-of-hearing students (Debevc & Peljhan, 2004) by using the SUMI questionnaire, and digital transformation to sustain literacy teaching to deaf children by using digital interactive storytelling has also proven beneficial (Flórez-Aristizábal et al., 2019). A prominent association was observed between computer self-efficacy, subjective standards and professed pleasure, which indicates students' attitude towards computer usage and their satisfaction with using computers (Al-Rahmi et al., 2020). Quantitative methods were used to analyse students' intentions to use ICT, which proved that the influence of communication and information technology on education has proven beneficial for students. New technologies, according to (Etta & Elder, 2005), provide a learning environment for EFL students. Students received feedback quickly and improved their understanding and knowledge. Therefore, it was evident that ICT provides a teaching and learning environment by shaping education according to new trends. ICT improved students' skills in critical thinking, knowledge management and teamwork. The integrated ICT teaching and learning system encourages students' autonomy by directing their minds towards metacognitive approaches such as planning, directional attention, self-monitoring and learning (Barnett, 1993).

Teachers frequently create films and use websites, tutorials, and new technologies to improve students' capacity to solve problems, engage in conversation, and communicate with one another. Students watch the video before the class, use the category time to resolve advanced concepts, and answer questions, and students are inspired to be told actively (Hwang et al., 2015). Students felt ready and knowledgeable, which improved their concept because visually, they learned more before the class they watched videos that enhanced their knowledge, and then they participated actively in the class. Mathematical games have shown great development in the learning of mathematics concepts by learners (Wu et al., 2017). The impact of technology has greatly improved education, and through the use of technology, the concepts of mathematics have become fun for students. Students show very positive responses in learning them and learned them very easily.

Role of ICT in Education

Professionals became aware of the usage of technology in the education field and have admired the significant impact of technology on the education of children and adults. Early childhood education counting the use of ICT in it has not been largely explored, and it was expected that teachers and researchers would find the incorporation of theories and practices in online education for early childhood very beneficial (Milkova et al., 2016). Educational institutes had to motivate their faculty to enhance the usage of ICT for educational purposes so that it can be proven significant (Gasaymeh et al., 2017). The study was a quantitative study that was based on a cross-sectional survey design, and a questionnaire was completed by 35 faculty members of the university so that their views could be gained by the researcher. Participants' gender. age. Their major, rank and use of ICT had been made part of the research. Cost and capital, educational, technical and structural access to ICT and skills in using ICT in instruction are some of the most important factors that influence the usage of ICT in education.

Participants rank salary, responsibility, achievement, advancement, policy administration and recognition in chronological order when the technology acceptance model was administered to inspect the features that influence faculty members' usage of the learning management system (Gautreau, 2011). System eminence, apparent self-efficacy, apparent usefulness, perceived comfort of use and attitude towards technology straight or circuitously prejudiced faculty members' usage of learning management systems (Fathema et al., 2015). Acquiring these skills in ICT can ensure our great competitiveness among young people in the practical market (Shopova, 2014). A greater part of the young generation who received admission to the university does not have the abilities required to use the internet and information technology to resolve problems for separate tasks independently and in crews. To improve policies for future acceptability and knowledge of ICT-related tools for studying and teaching Islamic education in remote locations where such tools were not accessible, policymakers might analyse public opinion (Qazi et al., 2021). The focus of the study was on policymakers so that they can design policies according to modern standards and incorporate technology into their policies to improve learning and teaching.

Professional Development Using ICT

The professional development of teachers is a very important phenomenon in the context of educational change, such as the induction of ICT in education (Li et al., 2019). The researcher discussed the situation. With the help of international communities, many professional development projects were implemented in Mongolia, where the professional development of primary school teachers is considered to be a very important aspect of achieving quality education. For this reason, teacher training programmes have also been focused on ICT usage. It was important to note the need to adopt measures in the initial training of teachers, giving them the possibility of acquiring skills, abilities and competencies that allowed them to incorporate the use of ICT in people with any type of disability (Cabero-Almenara et al., 2019). All teachers should be aware of how any student, whatever disability he or she has, can access ICT, what hardware devices and existing software help educational accessibility and accessibility guidelines in the design of web pages.

High-quality professional development is crucial for the safe quality of online instruction and learning to ensure high-quality education for all students (Schildkamp et al., 2020). There was significant evidence that teachers could and simultaneously hold pedagogical beliefs seemingly contradictory, alternating, for example, teaching practices focused on both the student and the content (Arancibia et al., 2020). Therefore, the teacher's beliefs about learning and teaching were critical factors when integrating ICTs in the classroom, showing that the use of technology does not ensure the transformation of pedagogical practices since that practice was a reflection of the teacher's beliefs.

Research Gap

Despite the increasing use of technology in education, there has been limited research examining the role of technology in the learning of the English language at the secondary school level in Faisalabad. Moreover, there was a lack of understanding about the perception of English language instruction regarding technology among secondary school teachers and students in Faisalabad. Furthermore, the challenges and barriers faced by teachers while integrating technology in the teaching of the English language at the secondary school level in Faisalabad have yet to be fully explored. These research gaps highlight the need for further investigation into the effective use of technology in the teaching and learning of the English language at the secondary school level in Faisalabad. The researcher tried to address these gaps by researching so that the role of technology, perceptions of teachers and challenges faced by them could be understood.

RESEARCH METHODOLOGY

The study was quantitative and was designed to measure the effect of ICT on English language teaching at the secondary school level in Faisalabad at a single point in time. A cross-sectional survey questionnaire was designed to collect data from the teachers of secondary schools. The objectives of the research were to explore the role of technology in English language learning and to explore the perception of English language teachers regarding the use of this technology. Furthermore, the research also aimed to determine the challenges and barriers faced by teachers and to see the integration of ICT regarding different subjects along with the access of students to the internet at the secondary school level in Faisalabad. The research was quantitative because only quantitative methods were used to collect the data from teachers for this research. The population of the research was defined as the people among which participants for research would be selected (Mills & Gay, 2019). The researcher employed a convenience sampling technique to gather participants for the research (Battaglia, 2018), and a total of 25 English teachers were selected based on convenience random sampling from secondary schools in Faisalabad. Moreover, the education of English teachers was a minimum Master's degree but could be higher because it was not an extraneous variable and could not affect the dependent variable. An online questionnaire analysis was the main data-gathering instrument for this cross-sectional survey research. The questionnaire was validated for content, face and construct validity by experts and tested for reliability by applying Cronbach's alpha on the questionnaire so that concise results could be obtained and effective conclusions could be drawn (Petrunoff et al., 2013; Zhang & Aryadoust, 2022). The questionnaire was administered by using Google Forms online from the participants of the research and was analysed using SPSS and Microsoft Excel.

RESULTS AND DISCUSSION

The sample's frequencies, ranges, means, and standard deviations were calculated using SPSS, which was also utilised for the data analysis. Analysis of the data collected from 25 participants by using online Google Forms was performed by using the SPSS tool. Demographic information was also collected by the researcher based on the gender, qualification, age and teaching experience of the participants. The results are shown in tabular form below.

Table 1. Demographic information of participants

Demographic Variable	Type	Frequency	Valid Percent
Gender	**Male**	10	40
	Female	15	60
	Total	25	100
Qualification	**MA**	10	40
	BS	8	32
	MPhil	7	28
	Total	25	100
Age	**20-24**	17	68
	25-29	8	32
	Total	25	100
Experience	**1-5**	25	100

Table 1 depicts the information about the participants as a total of 25 participants were part of the research, among which 10 were males and 15 were females, representing 40% and 60% of the sample, respectively. The table also shows that there were 10 Master's students, which was 40% of the sample, and 8 BS students, which comprised 8% of the sample size. 7 participants were belonging to MPhil, comprising 28% of the population. The age group of participants was 20-29 years, among which 17 (68%) belonged to the age group of 20-24 and 8 (32%) belonged to the age group of 25-29 years. Finally, all participants had teaching experience of 1-5 years, which showed that all had significant experience.

Cronbach's alpha based on standardised items had a value of 0.935 (see table 2), which was preferable and suggested that the internal consistency reliability was very good. Values > 0.7 were considered acceptable, and values > 0.8 were preferred in the research. The value showed a very high value, which depicted that the items of the questionnaire had high reliability.

Table 2. Reliability statistics of the items

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardised Items**	**N of Items**
0.933	0.935	97

Table 3 presents the summary of mean, maximum, minimum and range values along with the variance of the items. The table shows that the mean of the items was 3.554, whereas the minimum value was 1.143 and the maximum value was 4.571. The range of value was 3.429, and the variance among the items was 0.903, which was preferred and was considered a very high value for the relationship among the items (Kao & Green, 2008). The total number of items used for covering the research questions was 97, which entails the purpose of the research and provided insight into the views of the participants.

Table 3. Summary of items in the questionnaire

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum/Minimum	Variance	N of Items
Item Means	3.554	1.143	4.571	3.429	4	0.903	97
Item Variances	0.841	0.132	2.731	2.599	20.708	0.443	97

Table 4 presents all the items used to obtain information from the participants. The items seek information about the perception of ICT by learners and teachers. The mean of items was 4.195, the item with the lowest mean value was 3.71, and the highest value mean for the items was 4.43, which depicts the range of 0.72. The total items in this table were 34, which were based on the Likert scale from strongly agree to strongly disagree. The standard deviation of items was also calculated by using SPSS analysis software. The table presents the itemwise mean and standard deviation of all the items of the questionnaire used by the researcher for gathering information from the participants who were selected as samples for the research. The information depicts that 25 participants strongly agreed were selected 32.235%, which means a total of 274 times out of 850 times it was selected and agreed was selected 492 times (57.88%), neither agree nor disagree 64 times (7.529%) and disagreed was selected 19 times (2.235%) and strongly disagree was selected only once. The information shows that teachers show high interest in teaching by using ICT, as they feel they can teach different activities by integrating ICT, as the combination of strongly agreed and agreed participants is 90%, which shows that participants have a keen interest and can teach by using ICT and by implementing different digital tools for teaching and learning.

Table 4. Data mean and standard deviation of items related to teachers' perceptions

Items	Mean	Std. Deviation	Strongly agree	Agreed	Neither agree nor disagree	Disagree Participants	Strongly disagree
I feel I can use support software in the classroom to carry out teaching activities.	4.14	0.535	8	16	1		
I feel I can do activities with the students that include determining problems collaboratively by means of digital technology resources.	4.21	0.579	9	15	1		
I feel I can propose activities with the students that include analysing a problem in a collection, suggesting substitute explanations, exchanging the outcomes and publishing them using digital technology capitals.	4.29	0.611	10	12	3		
I feel I can stimulate autonomous learning and using resources from digital technology, collaborative work by converting and developing knowledge depending on issues that need to be resolved.	4.29	0.726	10	11	4		
I feel I can design teaching activities that use digital technologies.	4.21	0.802	12	12		1	
I believe I can incorporate digital information seeking, handling, saving,	4.21	0.579	7	13	4	1	

and sharing in a variety of formats into lesson design.							
I believe I can instruct and gather data regarding the effective application of digital technology to publishing information and teamwork.	4.21	0.426	5	19	1		
I believe I can create activities that are rich in competence (functional, transversal, and autonomy-focused), require the application of complicated abilities (solving actual problems and situations, interpreting, communicating, etc.), and make "excellent use" of digital technology.	3.86	0.864	5	14	4	2	
I believe I can instruct others on how to access various sources of information to conduct research.	4.43	0.514	13	12			
I believe I can instruct others on how to use various information sources in accordance with standards of excellence, veracity, and applicability.	4.21	0.579	9	14	2		
I believe I can instruct others on how to categorise, sort, and choose information from many sources using standards of excellence, veracity, and relevance.	4.29	0.469	9	15	1		
I believe I can use digital tools to boost students' motivation and facilitate their study even if they require specialised educational support (SESN).	4.21	0.579	9	14	1	1	
I believe that, while taking into account the inclusion of students, I can use digital technology to respond to SESN as a component of accessing the curriculum.	4.21	0.426	5	18	2		
To address the SESN of the children and make up for disparities in access to technology, I believe I can provide materials and individualised resources.	3.71	0.994	4	16	3	1	1
I believe I can provide other professionals with the digital didactic tools they need to satisfy SESN while also taking the idea of "design for everyone" and accessibility requirements into consideration.	4.14	0.663	6	15	2	2	
I feel I can know the centre's guidelines for including digital technologies in the classroom and take them into account in the teaching plans.	4.14	0.77	7	17		1	
I am confident that I can plan and execute digital competence-building activities in accordance with the available resources and methodological requirements.	4.14	0.663	7	14	4		
I feel I can propose new innovative methodological strategies and be a teaching model for Digital Competence work.	4.29	0.611	13	8	2	2	

I believe I can offer fresh, cutting-edge methodological approaches and serve as an example for students studying Digital Competence. I believe I can tutor pupils and monitor their progress using digital tools (meetings, attendance, assessment, reports, etc.).	4.29	0.611	11	12	2		
Together with the other centre experts, I believe I can analyse and track kids using shared digital resources.	4.07	0.616	7	14	4		
I believe I can utilise a digital tool to inform families about the evaluation and supervision of their children.	4.29	0.469	9	15	1		
At the centre and educational administration levels, I believe I can manage and use digital resources (environments, digital portfolios, etc.) to track academic progress and evaluate students.	4.21	0.579	8	14	3		
I believe I am qualified to assess and choose from among the available tools and resources for use in the classroom.	4.07	0.475	6	16	3		
For various educational scenarios, I believe I can choose and employ the best resources and tools.	4.29	0.469	8	14	3		
I believe I can integrate the usage of various digital tools according to their potential while critically evaluating how well pupils do using these tools.	4.14	0.363	6	17	2		
I believe I can do study on teaching scenarios including digital technologies and innovate in response to the findings.	4.21	0.579	9	14	1	1	
Depending on the circumstances, I believe I can utilise the digital tools available in the classroom (fixed and mobile devices, etc.).	4	0.679	7	16		2	
I believe I can modify the educational programmes to fit the center's physical areas and technological resources.	4.21	0.579	7	17	1		
I believe I can use digital technologies to improve instructional environments and utilise the available infrastructure in a way that meets consensus standards.	4.21	0.579	8	15	1	1	
I believe I can set up and run the center's facilities in a way that maximises and provides digital technologies in accordance with a prior study of demands.	3.86	0.663	3	19	1	2	
I believe I can recognise the areas within the centre that use digital technologies and am familiar with how they operate.	4.43	0.514	9	13	2	1	
I believe I can appropriately use the center's many venues and digital tools with the children.	4.36	0.497	8	15	2		

I believe I can interact with other teachers using digital tools to communicate and impart my own knowledge.	4.36	0.633	11	12	2		
I think I can teach instructors how to exchange and develop knowledge using digital technology through tasks accepted by the educational administration.	4.43	0.514	9	14	1	1	
Total			**274**	**492**	**64**	**19**	**1**

Table 5 discusses the challenges and barriers faced by teachers using ICT for learning and teaching purposes. The mean of the items is 4.269, the item with the lowest mean value is 3.93, and the item with the highest mean value is 4.57, which depicts a range of 0.64. The total items in this table were 25, which were based on a Likert scale from strongly agree to strongly disagree. The standard deviation of items was also calculated by using SPSS analysis software. The table presents the itemwise mean and standard deviation of all the items of the questionnaire used by the researcher for gathering information from the participants who were selected as samples for the research. The information depicted that the 25 participants strongly agreed was selected 36.8% which 230 times out of 625 times selected and agreed was selected 311 times (49.76%), neither agree nor disagree 63 times (10.08%) and disagreed was selected 15 times (2.4%) and strongly disagree was selected only 6 times. The information showed that the barriers described by the researcher in the questionnaire were very much relevant and were being faced by the participants while integrating ICT for the learning and teaching process, as it was seen that the combination of strongly agree and agree combined up to 86.56%, which shows that the majority of the participants faced the barriers described in the questionnaire, which included lack of confidence, lack of support by the management and other teachers for implementing ICT in education.

Table 5. Data mean and standard deviation of items related to barriers perceived

Items	Mean	Std. Deviation	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Barriers perceived by the teachers in using ICT in the classroom Insufficient internet bandwidth or speed	4.21	0.802	9	13	3		
Barriers perceived by the teachers in using ICT in the classroom Insufficient number of internet-connected computers	4.36	0.633	13	10	1	1	
Barriers perceived by the teachers in using ICT in the classroom Lack of flexibility due to time constraint and overload of work	4.43	0.514	11	13	1		
Barriers perceived by the teachers in using ICT in the classroom Insufficient number of the interactive whiteboard or any other educational software	3.93	0.917	8	11	3	1	2
Barriers perceived by the teachers in using ICT in the classroom Absence of pedagogical models on how to practise ICT for learning	4.29	0.611	8	14	2	1	
Barriers perceived by the teachers in using ICT in the classroom Inadequate space and infrastructural facilities	4.29	0.611	9	13	2	1	
Barriers perceived by the teachers in using ICT in the classroom Lack of contents in regional languages	4.07	0.73	6	15	3	1	

Barriers perceived by the teachers in using ICT in the classroom Insufficient training is given to the tutors for using ICT in the classroom	4.57	0.514	14	11			
Barriers perceived by the teachers in using ICT in the classroom Restrictive timetable	4.21	0.579	9	12	3	1	
Barriers perceived by the teachers in using ICT in the classroom The pressure to prepare students for exams and tests	4.29	0.825	11	12	1	1	
Barriers perceived by the teachers in using ICT in the classroom Lack of contents in national language	4.21	0.699	6	15	3		1
Barriers perceived by the teachers in using ICT in the classroom Insufficient number of computers	4.57	0.514	14	10		1	
Barriers perceived by the teachers in using ICT in the classroom School computers out of date or need repair	4.29	0.611	9	14	2		
Barriers perceived by the teachers in using ICT in the classroom Insufficient pedagogical support for teachers	4.29	0.825	10	13	1	1	
Barriers perceived by the teachers in using ICT in the classroom Lack of adequate contents or material for teaching	4.36	0.745	10	13	2		
Barriers perceived by the teachers in using ICT in the classroom Absence of knowledge of ways to use ICT in teaching and learning successfully	4.5	0.65	12	10	3		
Teachers' perceptions on obstacles to ICT use in the classroom insecurity in reference to the usage of ICT	4.43	0.646	10	11	4		
Teachers' perceptions on obstacles to ICT use in the classroom ICT use in instruction and learning is not a school's primary objective.	4.14	0.864	10	11	3	1	
Teachers' perceptions on obstacles to ICT use in the classroom ICT integration into the curriculum is too challenging	4.36	0.633	9	12	4		
Teachers' perceptions on obstacles to ICT use in the classroom Teachers receive insufficient technical support	4.5	0.65	11	12	2		
Teachers' perceptions on obstacles to ICT use in the classroom Tutors' lack of interest	4.07	0.73	5	15	5		
Teachers' perceptions on obstacles to ICT use in the classroom The majority of instructors are opposed to using ICT in the classroom	4	0.877	7	9	7	1	1
Teachers' perceptions on obstacles to ICT use in the classroom The majority	4.14	0.77	6	11	5	2	1

of parents are against using ICT in schools							
Teachers' perceptions on obstacles to ICT use in the classroom inadequate teacher preparation	4.29	0.611	10	13	1	1	
Teachers' perceptions on obstacles to ICT use in the classroom No or hazy advantages of ICT in education	3.93	0.997	3	18	2	1	1
Total			**230**	**311**	**63**	**15**	**6**

Table 6 discusses the resources available for using ICT for learning and teaching purposes. The mean of items was 1.798, the item with the lowest mean value was 1.14, and the highest value mean for the items was 2.71, which depicts the range of 1.57. The total items in this table were 11, which were based on yes/no questions. The standard deviation of items was also calculated by using SPSS analysis software. The table presents the itemwise mean and standard deviation of all the items of the questionnaire used by the researcher for gathering information from the participants who were selected as the sample for the research. The information depicted that out of 25 participants, "yes" was selected 37.455%, which means a total of 103 times out of 275 times it was selected, and "no" was selected 133 times (48.364%); 14.182% of participants did not give a reply. It was deduced from the information that there was a lack of availability of resources, as approximately 48% of the participants highlighted that they had no access to the resources described in the questionnaire, and 37.45% of the participants had access to such resources, which indicates that due to the lack of availability of resources, there was difficulty in integration of ICT for learning and teaching of the students.

Table 6. Data mean and standard deviation of items related to resources available and usage

Items	Mean	Std. Deviation	Yes	No
Indicate what resources are available for the students at your place of teaching. Desktop computer	2.71	0.726	22	3
Indicate what resources are available for the students at your place of teaching. Laptop computer	1.43	0.852	6	19
Indicate what resources are available for the students at your place of teaching. Tablet	1.29	0.726	2	23
Indicate what resources are available for the students at your place of teaching. Mobile Phone	1.86	1.027	10	15
Indicate what resources are available for the students at your place of teaching. Television	1.57	0.938	8	17
Indicate what resources are available for the students at your place of teaching. Camera	1.43	0.852	7	18
Do your students have access to the internet at their residence?	2.36	0.745	13	4
What resources do students usually use at the school? Desktop computer	2.71	0.726	20	2
What resources do students usually use at the school? Laptop computer	1.57	0.938	5	10
What resources do students usually use at the school? Tablet	1.14	0.535	1	13
What resources do students usually use at the school? Mobile Phone	1.71	0.994	9	9
Total			**103**	**133**

Table 7 discusses the usage of resources by the students. The mean of items was 2.752, the item with the lowest mean value was 2.07, and the highest value of the mean for the items was 3.79, which depicts the range of 1.72. The total items in this table were 17, which were based on > 3 hours, 2-3 hours, 1-2 hours, < 1 hour, and never. The standard deviation of items was also calculated by using SPSS analysis software. The table presents the itemwise mean and standard deviation of all the items of the questionnaire used by the researcher for gathering information from the participants who were selected as the sample for the research. The information depicts that the participants used technological resources 21.176% for more than 3 hours and 12.24% for 2-3 hours, whereas 21.65% used 1-2 hours, 20.47% used less than 1 hour daily, and 24.47% never used

technological resources. The information showed that the usage of technology by the participants was very high, and most of the usage was about surfing the internet and social media networks.

Table 7. Data mean and standard deviation of items related to the usage of resources

Items	Mean	Std. Deviation	> 3 hour	2-3 hours	1-2 hours	< 1 hour	Never
How often do students use the following applications or programs each day? Word processors	2.29	1.49	3	1	6	7	8
How often do students use the following applications or programs each day? Databases	2.07	1.207		3	7	5	10
How often do students use the following applications or programs each day? Spreadsheets	2.07	1.072	1	1	8	4	11
How often do students use the following applications or programs each day? Presentations	2.57	1.399	3	3	6	8	5
How often do students use the following applications or programs each day? Audio editing softwares	2.07	1.269		6	4	2	13
How often do students use the following applications or programs each day? Video editing softwares	2.21	1.424	2	3	7	2	11
How often do students use the following applications or programs each day? Image editing softwares	2.5	1.225	1	4	7	7	6
How often do students use the following applications or programs each day? Web-based email service	2.36	1.598	5	2	4	6	8
How often do students use the following applications or programs each day? Web browsers	3.07	1.385	8	2	6	6	3
How often do students use the following applications or programs each day? Internet search engines	3.5	1.401	11	4	4	4	2
How often do students use the following applications or programs each day? Blog/web editors	2.5	1.653	5	4	4	3	9
How often do students use the following applications or programs each day? Collaborative work tools	2.86	1.46	5	2	7	4	7
How often do students use the following applications or programs each day? Instant messaging	3	1.301	7	5	3	8	2
How often do students use the following applications or programs each day? Video conferencing systems (Zoom, Teams etc.)	2.86	1.61	5	3	4	8	5
How often do students use the following applications or programs each day? Social networks	3.43	1.284	11	2	6	5	1
How often do students use the following applications or programs each day? Games	3.64	1.277	11	2	6	4	2
How often do students use the following applications or programs each day? Mobiles	3.79	1.251	12	5	3	4	1

Total			**90**	**52**	**92**	**87**	**104**

Table 8 discusses the purpose of the usage of ICT by students. The mean of items was 2.885, the item with the lowest mean value was 2.57, and the highest value mean for the items was 3.36, which depicts the range of 0.79. The total items in this table were 10, which were based on a Likert scale from not at all to a lot. The standard deviation of items was also calculated by using SPSS analysis software. The table presents the itemwise mean and standard deviation of all the items of the questionnaire used by the researcher for gathering information from the participants who were selected as the sample for the research. The information depicted that 16.8% never used digital technology tools for any of the purposes mentioned in the questionnaire by the researcher and 21.2% used technological tools but not very much for the purposes being asked in the questionnaire. A total of 26.8% used digital tools but in very little quantity, whereas 17.6% used these tools quite a lot, and 17.6% people used these tools a lot for the purposes mentioned in the questionnaire. The information showed that people used technological tools in a very limited way for purposes such as keeping themselves informed, communicating in real time, sharing files and connecting to social networks. The information depicted that the participants are very less aware of the usage of ICT tools due to which they use these tools in a very limited way. They need proper understanding and information so that they can use these tools for productive purposes.

Table 8. Data mean and standard deviation of items related to the purpose of usage

Items	Mean	Std. Deviation	Not at all	Not very much	A little	Quite a lot	A lot
Why do students use ICT each day? To have fun	2.64	1.151	6	7	8	2	2
Why do students use ICT each day? To learn	2.86	1.027	2	6	9	4	4
Why do students use ICT each day? To work	2.71	1.139	5	7	7	3	3
Why do students use ICT each day? To keep myself informed (press, documentaries, radio, etc.)	2.79	1.251	4	6	7	3	5
Why do students use ICT each day? To communicate in real time (chat, voicemail, videoconferencing)	2.64	1.393	5	4	6	4	6
Why do students use ICT each day? To communicate not in real time (email, forums, etc.)	2.57	1.342	6	5	7	5	2
Why do students use ICT each day? To share files (documents, images, music)	3.14	1.231	5	2	8	5	5
Why do students use ICT each day? To connect to social networks	3.21	1.528	3	4	5	6	7
Why do students use ICT each day? To manage my activities (agenda)	2.93	1.269	3	7	6	4	5
Why do students use ICT each day? To do other activities	3.36	1.336	3	5	4	8	5
Total			**42**	**53**	**67**	**44**	**44**

DISCUSSION

Based on the responses from the participants, the following findings were revealed during the data analysis. The questionnaire revealed that the majority of the participants agreed that they could use technology for the benefit of students and could integrate technology in learning and teaching so that they could cope with this modern era (Shopova, 2014). Responses showed that participants agreed that they could use software to support learning in the classroom along with the perspective that they could also involve students in problem resolving collaboratively by using digital technologies (Gasaymeh et al., 2017). The findings of this research also revealed that major participants agreed that they could propose activities for students that involve analysing a problem in groups and proposing alternative solutions by using ICT and could also stimulate autonomous learning and collaborative work but transforming and creating knowledge based on problems that must be solved by using digital technology resources (Al-Rahmi et al., 2020). Moreover, the findings of the research also revealed that teachers had a

positive attitude toward designing activities, sharing information in different formats in didactic planning and designing complete and rich activities that involve using complex skills in which there was a good use of digital technologies.

The findings of the research also showed that teachers have a good knowledge of ICT, and they could teach students how to search for information by accessing different sources and how to use information sources of different types according to criteria of quality truthfulness and patience. They could also teach students to classify sources of information and sort and select information from these sources according to their requirements (Gautreau, 2011). Furthermore, it was observed that the participants also agreed that they could increase motivation and facilitate the learning of students with specific educational support needs by using ICT tools, and they also revealed that they could elaborate materials and personalised resources for the student and could compensate for inequalities in access to technology. Distance also revealed that they could organise and manage spaces according to the criteria of optimising and providing digital technologies and could adapt the teaching activities to the available spaces. They also agreed that they could use digital tools to communicate and share personal knowledge with other teachers and could benefit students by using these tools and benefit other teachers from these tools. The second part of the questionnaire dealt with the barriers to using ICT. The findings showed that the main barrier regarding this was that participants were unclear about the benefits of using ICT for teaching purposes; 18 participants agreed and 3 strongly agreed with this out of 25 participants. Participants also agreed that the other barrier to using ICT in the classroom was the lack of interest of teachers and the lack of content in regional languages, which limited their use of ICT (Ekberg & Gao, 2018). The responses also revealed that participants faced problems because of insufficient internet bandwidth, an insufficient number of internet-connected computers, a lack of pedagogical models on how to use ICT for learning, and inadequate space and infrastructural facilities.

Other barriers that were appointed by the participants were the lack of adequate training given to the teachers for using ICT in the classroom, and the timetable by the management was also very restrictive. Students were under continuous pressure for exams and tests, and teachers also bear this pressure to prepare students for exams and tests, which causes teachers to not use ICT in the classroom. There was a lack of adequate content for material for teaching and a lack of confidence among participants regarding the use of ICT. Parents of children were also not in favour of using ICT along with teachers who were more likely to not use ICT at school. The findings also revealed that using ICT in teaching and learning was not considered a goal of the school because the goal was to prepare students for exams, which was a barrier for teachers to use ICT in education. It was also found that the majority of the schools possess desktop computers rather than laptops, tablets and mobile phones because students possess more knowledge about using desktop computers rather than any other digital resource. It was also revealed that most of the time students use mobile phones and spend more time on games and social networks, they possess very little knowledge about using word processors, databases and spreadsheets because they spend very less time on these softwares. Participants also revealed that most of the time students use ICT for the transfer of data that involves sharing files such as documents, images and music.

Teachers showed a very positive attitude towards the integration of digital technologies so that they could innovate according to society. They presented the views that they could do research into teaching situations based on using digital technologies and could adapt teaching activities to the available resources, which showed their positive attitude towards the integration of digital technologies in education so that the education could be up-to-date according to the standards of modern society (Barnett, 1993). Teachers were very enthusiastic about teaching by using digital technologies, but on the other hand, they were facing map barriers to using modern technology in education, and these barriers were causing hindrances for them to integrate ICT into education. It could be concluded that the major barrier to not using ICT in education was the lack of information about its benefits and usage for the education process. It has been concluded that there was pressure from management to prepare students for exams and tests, and parents also demand this, so in such an environment, the use of ICT in the classrooms was not preferred by the teachers. Furthermore, insufficient technical support for teachers and improper training were also prominent barriers to using ICT, which resulted in a lack of confidence in teachers in using ICT in the classroom. The other reason that comes across during the research was that the lack of proper instructional materials and educational content for teaching and learning was also a prominent barrier to the implementation of ICT in education.

Students used desktop computers in school rather than using laptops, tablets and mobile phones due to which limitations arose regarding the implementation of ICT for learning and teaching. It has also been concluded that students use modern digital technologies to have fun and to share information in the form of documents and pictures. Along with this, it has also been seen that students use modern technologies to learn and keep themselves informed. On the other hand, it has been concluded that most of the students were unable to use word processors, databases, spreadsheets, audio and video editing software and collaborative work tools, but on the other hand, they were capable of using these modern technologies for instant messaging and video conferencing. They also spent more time on social networks and playing games by using modern technologies. The finding helped the researcher to conclude that teachers have a positive attitude towards using ICT for educational purposes and students also have knowledge about using these ICT tools, but the focus of educational policies was not on using these tools because no proper activities have been designed for using these tools by integrating them in the curriculum so that it running and teaching could be done by using ICT tools according to the standards of modern society.

Findings of the Study

Based on the responses from the participants following findings were revealed during the analysis of the data.

- The majority of the participants agreed that they can use technology for the benefit of students and can integrate technology into learning and teaching.
- The participants agreed that they can use software to support learning in the classroom.
- The participants agreed that they can propose activities for students that involve analysing a problem in a group and proposing alternative solutions by using ICT.
- ICT can stimulate autonomous learning and collaborative work.
- Teachers have a positive attitude toward designing activities and sharing information in different formats.
- Young teachers have a good knowledge of ICT and can teach students by using these resources.
- The participants also agreed that they can increase motivation and facilitate the learning of students using ICT tools.
- The main barrier regarding this was that participants are unclear about the benefits of using ICT for teaching purposes.
- The other barrier to using ICT in the classroom is the lack of interest of teachers and the lack of content in regional languages.
- There is a lack of adequate content for material for teaching and a lack of confidence among participants regarding the use of ICT.

CONCLUSION

The study measured the attitudes of teachers towards using information communication technology in teaching and learning and discussed the barriers faced by teachers regarding the implementation of these modern technologies in education. The study further elaborated that the students knew about the use of these technologies, but because of the lack of educational policies, they were unable to use these technologies in learning to enjoy playing games and surfing social media networks. The point of view of teachers was taken regarding the implementation of ICT and how they perceived the role of ICT in this modern era. Lack of instructional material, technical support and confidence were among the most prominent barriers preventing teachers from integrating ICT in education that involves learning and teaching. This could be overcome by providing proper training to the teachers, as the participants focused on this point that they lack proper training due to which they were unable to integrate ICT into education. The researcher smoothly and conveniently completed all the stages of research, and the results of this research had sufficient grounds to generate new knowledge in this philosophical and ideological enterprise that could be very helpful for designing new policies and making decisions for the future.

The results of the research revealed that teachers had a positive attitude towards the integration of ICT for teaching and learning, as this could be very helpful for both teachers and students. The results also revealed the problems faced by teachers with the implementation of ICT in education. The results of the study indicated that teachers lack confidence in implementing ICT, as they have no proper training for doing so and lack adequate resources and materials for the implementation of ICT. The study further elaborated that the students possess little knowledge about using ICT for educational purposes, but they used ICT more for entertainment purposes, which involved playing games and surfing social networks. It was also discussed by the researcher that educational institutes lack adequate resources and do not provide proper support to teachers for using ICT. Furthermore, the study would be helpful for language practitioners to implement ICT in English language learning as the research was helpful to identify the attitudes and perceptions of teachers and challenges being faced by them while using ICT in language learning classrooms.

CREDIT AUTHOR STATEMENT

Muhammad Shaharyar Sabiri: Conceptualization, Methodology, Writing- Original draft preparation, questionnaire preparation, Data Analysis. **Umm-e-Rubab:** Reviewing, Data Analysis, questionnaire preparation. **Rahat Batool:** Data Analysis, Validation, Reporting, questionnaire preparation. **Rai Hassan Iqbal:** Validation, revision, investigation. **Ahmad Farid**: Interpretation, reviewing, data curation.

COMPLIANCE WITH ETHICAL STANDARDS:

It is declared that all authors don't have any conflict of interest. It is also declared that this article does not contain any studies with human participants or animals performed by any of the authors. Furthermore, informed consent was obtained from all individual participants included in the study.

REFERENCES

Al-Rahmi, W. M., Alzahrani, A. I., Yahaya, N., Alalwan, N., & Kamin, Y. bin. (2020). Digital communication: Information and communication technology (ICT) usage for education sustainability. *Sustainability (Switzerland)*, *12*(12). https://doi.org/10.3390/su12125052

Arancibia, M. L., Cabero, J., & Marín, V. (2020). Beliefs on teaching and the use of information and communication technologies (ICT) by higher education professors. *Formacion Universitaria*, *13*(3). https://doi.org/10.4067/S0718-50062020000300089

Barnett, L. (1993). Teacher off: Computer technology, guidance and self-access. *System*, *21*(3). https://doi.org/10.1016/0346-251X(93)90021-8

Battaglia, M. (2018). Nonprobability sampling. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods* (pp. 524–526). Sage Publications, Inc.

Cabero-Almenara, J., Barroso-Osuna, J., Llorente-Cejudo, C., & Martínez, M. del M. F. (2019). Educational uses of augmented reality (AR): Experiences in educational science. *Sustainability (Switzerland)*, *11*(18). https://doi.org/10.3390/su11184990

Debevc, M., & Peljhan, Ž. (2004). The role of video technology in on-line lectures for the deaf. *Disability and Rehabilitation*, *26*(17), 1048–1059. https://doi.org/10.1080/09638280410001702441

Ekberg, S., & Gao, S. (2018). Understanding challenges of using ICT in secondary schools in Sweden from teachers' perspective. *International Journal of Information and Learning Technology*, *35*(1). https://doi.org/10.1108/IJILT-01-2017-0007

Etta, F. E., & Elder, L. (2005). At the crossroads:, ICT policy making in east africa. In *Development*.

Fathema, N., Shannon, D., & Ross, M. (2015). Expanding The Technology Acceptance Model (TAM) to Examine Faculty Use of Learning Management Systems (LMSs) In Higher Education Institutions. *Journal of Online Learning and Teaching* , *11*(2).

Flórez-Aristizábal, L., Cano, S., Collazos, C. A., Benavides, F., Moreira, F., & Fardoun, H. M. (2019). Digital transformation to support literacy teaching to deaf Children: From storytelling to digital interactive storytelling. *Telematics and Informatics*. https://doi.org/10.1016/j.tele.2018.09.002

Gasaymeh, A.-M., Al-hasanat, H., Kraishan, O., & Abutayeh, K. (2017). Motivational Factors Affecting the Integration of Information and Communication Technology (ICT) in Education by Faculty Members: A Developing Country Perspective. *International Journal of Education*, *9*(3). https://doi.org/10.5296/ije.v9i3.11667

Gautreau, C. (2011). Motivational factors affecting the integration of a learning management system by faculty. *Journal of Educators Online*, *8*(1). https://doi.org/10.9743/JEO.2011.1.2

Hwang, G.-J., Lai, C.-L., & Wang, S.-Y. (2015). Seamless flipped learning: a mobile technology-enhanced flipped classroom with effective learning strategies. *Journal of Computers in Education*, *2*(4). https://doi.org/10.1007/s40692-015-0043-0

Kao, L. S., & Green, C. E. (2008). Analysis of Variance: Is There a Difference in Means and What Does It Mean? *Journal of Surgical Research*, *144*(1). https://doi.org/10.1016/j.jss.2007.02.053

Li, S., Yamaguchi, S., Sukhbaatar, J., & Takada, J. I. (2019). The influence of teachers' professional development activities on the factors promoting ICT integration in Primary Schools in Mongolia. *Education Sciences*, *9*(2). https://doi.org/10.3390/educsci9020078

Milkova, E., Pekarkova, S., & Salem, A. B. M. (2016). Information and Communication Technology in Education-Current Trends. *MATEC Web of Conferences*, *76*. https://doi.org/10.1051/matecconf/20167604022

Mills, G. E., & Gay, L. R. (2019). Educational Research: Competencies for Analysis and Applications Twelfth Edition. In *Pearson Education, Inc* (Vol. 6, Issue 2).

Petrunoff, N. A., Xu, H., Rissel, C., Wen, L. M., & Ploeg, H. P. Van Der. (2013). Measuring workplace travel behaviour: Validity and reliability of survey questions. *Journal of Environmental and Public Health*, *2013*. https://doi.org/10.1155/2013/423035

Qazi, A., Hardaker, G., Ahmad, I. S., Darwich, M., Maitama, J. Z., & Dayani, A. (2021). The Role of Information Communication Technology in Elearning Environments: A Systematic Review. In *IEEE Access* (Vol. 9). https://doi.org/10.1109/ACCESS.2021.3067042

Schildkamp, K., Wopereis, I., Kat-De Jong, M., Peet, A., & Hoetjes, Ij. (2020). Building blocks of instructor professional development for innovative ICT use during a pandemic. *Journal of Professional Capital and Community*, *5*(3–4). https://doi.org/10.1108/JPCC-06-2020-0034

Shopova, T. (2014). Digital literacy of students and its improvement at the university. *Journal on Efficiency and Responsibility in Education and Science*, *7*(2). https://doi.org/10.7160/eriesj.2014.070201

Wu, J., Liu, L., & Huang, L. (2017). Consumer acceptance of mobile payment across time Antecedents and moderating role of diffusion stages. *Industrial Management and Data Systems*, *117*(8). https://doi.org/10.1108/IMDS-08-2016-0312

Zhang, & Aryadoust, V. (2022). A systematic review of the validity of questionnaires in second language research. *Education Sciences*, *12*(10), 723. https://doi.org/10.3390/educsci12100723