

A Study to Explore the Effectiveness of Information Communication and Technology (ICT) Integration in English Language Classroom at Secondary Schools of Quetta City

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Abstract

The 21st century is the century of Information and communication technology (ICT), which has become part of our lives. The expanding influence of ICT on education is causing a revolutionary change in classrooms. This study investigates the effectiveness of ICT integration in English language classrooms at secondary schools in Quetta City, Balochistan. This study uses *Diffusion of Innovation* (DOI) by Rogers as a conceptual framework. The study adopts a quantitative research design. Using a random sampling technique, the sample size was 300 English language teachers, both male and female. A developed questionnaire, which consisted of 20 questions using a 5-point Likert scale, was used to collect the responses from the participants. The SPSS software was used to statistically analyze data (frequency, means, and standard deviation). The findings indicate a significant confidence, awareness, and perceived usefulness of ICT. The study identifies several significant barriers to implementing ICT in English language classrooms. The most prominent obstacles include inadequate training, insufficient technical support, limited access to software and reliable internet resources, and inadequate administrative support. The study concludes that the overall perceptions of English language teachers towards ICT integration are predominantly positive. The findings align with existing literature, highlighting the need for a supportive environment that includes training, resource allocation, and administrative backing to overcome these barriers. Educational institutions can help teachers move from initial resistance to active adoption and effective use of ICT in their classrooms by addressing these challenges.

Keywords: ICT, DOI, TAM, Integration, Language Teachers

Introduction

ICT use in English language learning classes has been proven effective by numerous studies. Many researchers state that the use of ICT helps to increase student motivation and engagement in the class. Students can communicate in real time with peers or native speakers around the globe using tools like video conferencing, which fosters cross-cultural interaction and enhances language proficiency. Additionally, teachers can more effectively monitor students' progress and give them tailored feedback on their performance.

ICT has been recognized as a fundamental component of the teaching and learning process by numerous educational institutions globally (Juang et al., 2008). The advent of new technologies and challenges in education has led to rapid development and transformation in student and teacher education (Moon, 2004), necessitating the reorganization and restructuring of teaching methodologies by educational institutions to equip students for future challenges (Auerswald & Magambo, 2006). ICT plays a pivotal role in driving development in the present century. The government of Pakistan has acknowledged this fact and emphasized the integration of ICTs into the higher education sector. The Medium-Term Development Framework 2005–2010 and the Vision 2030 Approach Paper demonstrate policymakers' commitment to transforming Pakistan into a knowledge-based economy (Shaikh & Khoja, 2011). In recent times, teaching-learning activities have frequently been linked with the useful utilization of ICT (Amrullah, 2023). Apart from supporting other subjects in general, its efficacy is undeniable in teaching-learning activities of the English language. In this regard, numerous studies find ICT helpful and vital in English language classroom activities (Yusra, 2019). With ICT-based learning, face-to-face English language instruction should be replaced by online instruction in the English language learning class. Thus, it becomes vital to monitor the development of ICT-based learning to determine if English language instruction helps students meet their learning objectives (Ramdhani, 2018). Further, using technology is very beneficial from the students' point of view as it maximizes the learning outcomes and learning environment. Therefore, technological tools may be an integral part of learning (Hidayat, 2022). Another important ICT tool is mobile digital learning. Recent studies have shown that mobile digital learning has become very common nowadays due to its vast number of users. It is a very convenient form of learning. A study led by Zakian (2022) says mobile technology is significant in learning English vocabulary (Zakian, 2022). Moreover, many useful ICT tools are operated using mobile phones, which can be easily operated by all educated people. The use of ICT in education in Pakistan is restricted to a few elite educational institutions (which is why only they have impressive English language proficiency). In contrast, its use in public educational institutions is insignificant. Secondly, almost all the competitive exams, interviews, and admission/ entry tests to join professional careers are taken in English. Therefore, it becomes very significant for school-level students to have improved English language skills, but in Balochistan, the picture is even worse for primary-level teachers; the secondary-level English (as a compulsory subject) language teachers are unable to use ICT in their respective classrooms. Considering the influence of ICT on modern education teaching-

learning practices, particularly in the English (as a compulsory subject) classroom, this study explores the effectiveness of ICT in the secondary schools of Quetta City, Balochistan.

Purpose of the Study

This study examines the effectiveness of ICT integration in English language classrooms at secondary schools in Quetta City, Balochistan. Further, the study was conducted to examine English language teachers' perceptions towards the ICT integration in their English language classrooms. Moreover, it also investigated the barriers to successful ICT implementation in English language classrooms.

Review of Literature

Haerazi (2024) focused on a miscellaneous land of ICT combination between English literary works in private institutions of higher Education in West Nusa Tenggara, Indonesia. Although few teachers have proven a tendency to combine inventive and multilayered tools, some teachers show further conservative and instrumentation-driven methods. It can be determined that English literary works have opinions about the equipment used that must be optimized in ICT, in combination with English linguistic study programs. Nawaz and Nasreen (2024) established that tutors usually professed ICT combination as informal and helpful, noticing enhanced education efficiency and learner involvement. Tutors with progressive ICT expertise were more efficacious in integrating skills into their coaching rehearsals.

Fatima et al. (2024) observed the role of ICT in the Education of English as a second language. It consists of deliberations on many strategies. These approaches include English linguistic learning sites, computer-assisted linguistic learning applications, email communications and conversation, software for exhibitions, digital glossaries, CD players for attending, and precise video clips. The results show that certain insinuations that the usage of ICT cannot be disconnected in any manner from our lives, as it works as an easing in our lives.

Al-khresheh (2024) exposed that tutors identify ChatGPT's perspective to simplify personal and energetic education relations, as well as express visible anxieties about language reliability, possible over-reliance on technology, and the chances of creativity clampdown. The study contributes to the increasing discourse on AI collaboration with ELT by integrating a worldwide viewpoint, making it valuable for teachers, program of study designers, and tech modernizers. Boundaries, commendations, and insinuations were provided.

Rusmiyanto et al. (2023) highlighted the reframing role of AI in English linguistic education and the perspective on discourse on the various requirements of linguistic students. By accepting the present state of study and discovering the chances and problems existing with AI in linguistic learning, instructors and representatives can make knowledgeable resolutions to connect the benefits of AI tools and capitalize on its effect on raising effective communiqué abilities amongst English linguistic learners.

Rintaningrum (2023) showed that certain advantages of assimilating tools in English linguistic education were students can prepare some coding, rehearsal online tests, increase speed of replying queries, increase marks in English exams, study a new overseas linguistic, organize some cooperative education, boost self-governing education, have chances to inscribe, express, read, and attend in English, do online education, come to be online situations, use of numerous computer apps, get the modern info, decode, have chances to use multi-media exhibition other than establish new technique of coaching. Some problems in tools assimilation are the type of machinery used, the quick modifications of equipment growth, the number of classes qualified, class dimensions, fee, period, age, professors' amount of work, capability to use tools, and accessibility of the tools to use.

Batool et al. (2024) stated that Learners' inspiration increased with the usage of the internet. The results show that girls have better knowledge of English linguistic learning and tools assimilation in ELT due to differences in these standards, and girls have a larger propensity to favor the use of tools in ELT classes than boys. The findings elucidated that technology has profoundly shaped our societal fabric, exerting distinctiveness.

The existing literature on the integration of ICT in ELT offers a comprehensive understanding of the benefits, challenges, and perceptions of teachers in Pakistan and other regions. Researchers have concentrated on primary schools, secondary schools, and higher education, and many emphasize the advantages and obstacles of ICT. There is insufficient emphasis on its specific impact on ELT results in secondary schools, especially in less developed areas. Additionally, teacher training and ICT facility improvements are frequently mentioned, but there is a gap in understanding the specific pedagogical practices and student engagement strategies in secondary classrooms. Therefore, this study aims to explore how ICT integration in ELT affects both teachers and students in secondary schools in Quetta City, a context that has not been thoroughly examined in previous research.

Methodology

The study utilized a descriptive quantitative approach. Considering limited time and resources, this study was delimited to secondary schools in Quetta. The population of this study consists of all English language teachers working in public secondary schools in Quetta city. The total population of English teachers in public and private secondary schools is 537 (283 female and 254 male). A random sampling technique was utilized to select 300 participants. The sample included both male and female teachers, ensuring diversity and helping to eliminate any potential gender bias in the study. A developed questionnaire was used to collect information from the participants (Ghavifekr & Rosdy, 2015).

This questionnaire consisted of 35 closed-ended questions. A point Likert scale was used to record the responses of the participants. The response scale was varying from 1 (strongly disagree), 2 (disagree), 3 (Neutral), 4 (agree), and 5 (strongly agree).

Results and Discussion

Table 1: Descriptive Analysis (N=300)

Q. No.	Statement	SD f	D f	N f	A f	SA f	Mean	St Dev
Perception of ICT Use								
1	I feel confident learning new computer skills	24	6	15	96	159	4.2	1.16
2	I find it easier to teach English by using ICT	6	15	15	159	105	4.14	0.873
3	I am aware of the great opportunities that ICT offers for effective teaching of English	6	21	15	171	87	4.04	0.895
4	I have limited time to integrate ICT into my teaching.	3	75	39	138	45	3.49	1.055
5	My knowledge with ICT and its uses in teaching English language is limited	9	87	33	141	30	3.32	1.087
Effectiveness of ICT in Teaching and Learning								
6	I think that ICT-supported teaching makes learning more effective	3	3	3	171	120	4.34	0.653
7	I think the use of ICT helps to prepare teaching resources and materials.	9	9	9	156	117	4.21	0.877
8	The use of ICT enables the students to be more active and engaged in the lesson.	9	21	18	129	123	4.12	1.004
9	The use of ICT helps teachers to improve teaching with more updated materials.	6	9	0	141	144	4.36	0.808
10	I think the use of ICT improves the quality of teaching.	9	6	6	153	126	4.27	0.848
11	I think the use of ICT helps to prepare teaching resources and materials.	9	9	9	156	117	4.21	0.877
12	I have more time to cater to students' needs if ICT is used in teaching.	9	33	12	177	69	3.88	0.984
13	The use of ICT helps students to find related knowledge and information for learning.	6	12	3	183	96	4.17	0.802
14	The use of ICT increases students' confidence to participate actively in the class.	9	21	12	171	87	4.02	0.939
15	I think the use of ICT helps to improve students' ability, specifically in reading and writing.	3	27	45	162	63	3.85	0.889
Barriers to ICT Integration								
16	Lack of training on ICT tools affects my ability to use them effectively in English Classroom	6	30	15	180	69	3.92	0.925
17	Lack of appropriate software restricts my ability to utilize ICT effectively in my English language class.	12	21	39	174	54	3.79	0.953
18	ICT tools and equipment are expensive, which makes it difficult to use them in an English language class	9	45	18	156	72	3.79	1.063
19	Lack of administrative support hinders my ability to utilize ICT in my English language class	18	18	42	150	72	3.8	1.06
20	Lack of technical support affects my ability to utilize ICT effectively in my English language class	9	18	12	186	75	4	0.896

The results reveal that teachers generally hold a positive perception toward the use of ICT in teaching English. Most respondents expressed confidence in learning new computer skills, with a mean score of 4.2, indicating strong agreement. This aligns with Nawaz and Nasreen (2024), who found that teachers with progressive ICT expertise are more effective in integrating technology into their teaching practices. Teachers in this study also agreed that ICT makes teaching English easier (mean = 4.14) and are aware of the great opportunities' ICT offers for effective teaching

(mean = 4.04). These positive attitudes mirror Fatima et al. (2024)'s findings that ICT is an inseparable and facilitative component in modern language education. Despite the optimistic perception, some challenges remain. Teachers reported limited time to integrate ICT into their teaching (mean = 3.49) and acknowledged that their knowledge of ICT applications in teaching English is somewhat limited (mean = 3.32). These practical constraints echo Haerazi's (2024) observation of conservative and instrumentation-driven methods due to a lack of optimal equipment use, as well as Rintaningrum's (2023) identification of factors such as class size, teacher workload, and accessibility that hinder ICT assimilation.

Regarding the effectiveness of ICT in teaching and learning, teachers overwhelmingly agreed that ICT-supported teaching enhances learning effectiveness (mean = 4.34) and aids in preparing teaching resources and materials (mean = 4.21). They believed that ICT encourages students to be more active and engaged during lessons (mean = 4.12) and helps teachers improve instruction by providing access to updated materials (mean = 4.36). This broad recognition of ICT's impact supports Nawaz and Nasreen's (2024) findings on increased learner involvement and Fatima et al. (2024)'s emphasis on diverse ICT tools facilitating language learning. Teachers also perceived an improvement in the overall quality of teaching with ICT use (mean = 4.27) and felt that ICT allows more time to address students' individual needs (mean = 3.88). Additionally, ICT was seen as helping students find relevant knowledge and information (mean = 4.17), boosting their confidence and abilities in reading and writing. These outcomes resonate with Rintaningrum's (2023) description of ICT benefits, including fostering self-directed learning, multimedia use, and cooperative education opportunities.

However, several barriers to ICT integration were reported. A significant number of teachers identified a lack of training on ICT tools as a major obstacle (mean = 3.92), alongside the unavailability of appropriate software (mean = 3.79) and the expense of ICT equipment (mean = 3.79). These barriers are also reflected in Nawaz and Nasreen's (2024) study, where educators in secondary schools across Lahore and Gujranwala reported that limited access to ICT resources significantly hindered their ability to integrate technology into their teaching. Insufficient administrative (mean = 3.8) and technical support (mean = 4.0) further hinder effective ICT use. These barriers reflect the concerns raised by Al-khreshah (2024) about the lack of training and support, as well as Rusmiyanto et al. (2023)'s discussion on obstacles limiting full utilization of AI and ICT tools in ELT.

Conclusion

This study aimed to examine English language teachers' perceptions toward ICT integration in their classrooms and to investigate the barriers to successful ICT implementation. The findings indicate that teachers generally hold a positive attitude toward the use of ICT in English language teaching, recognizing its potential to enhance teaching effectiveness, improve student engagement, and provide access to up-to-date instructional materials. Teachers also expressed confidence in acquiring new ICT skills, which is encouraging for future integration efforts. However, the study also identified significant challenges that impede the full adoption of ICT, including limited time for ICT integration, insufficient training, and lack of appropriate software, financial constraints, and inadequate administrative and technical support.

These barriers highlight the need for targeted interventions to support teachers, including comprehensive professional development programs, improved access to resources, and stronger institutional backing. Educational stakeholders can foster a more conducive environment for ICT integration, ultimately improving the quality of English language teaching and learning in secondary schools by addressing these challenges. This study contributes valuable insights into the specific context of Quetta City, emphasizing the importance of localized strategies that consider both teacher perceptions and the practical constraints they face.

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