ISSUES AND CHALLENGES OF ICT INTEGRATED TEACHING AND LEARNING AT PRIMARY LEVEL – AN INVESTIGATIVE STUDY

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ABSTRACT

The purpose of this research study was to explore the challenges that private schools' primary teachers and coordinators faced while integrating technology into their institutions and the solutions they came up with. The administrators and teachers of schools were provided training on technology integration to promote high-quality education at the elementary level and to ensure the effective application of integrating technology in education and information. This research explored the issues and challenges experienced by teachers and administrators of schools in ICT integrated teaching and learning and to find out strategies they used to overcome the issues. The research study used a phenomenological method and was qualitative in character. Semi-structured interviews and an online questionnaire were used as the data collection tools. Purposive sampling was used to get the data for this research article. Ten teachers and school administrators from Karachi's private schools made up the sample. Interviews and online surveys served as the data gathering tools. The Pedagogical and Content Knowledge (TPACK) paradigm was used for the research article. The findings suggested that difficulties integrating technology into education stem from instructors' subject-matter expertise, didactic abilities, and technological comprehension at the same time as technology acceptance. In certain instances, it was difficult to get teachers' comprehension and conduct about the implementation of technology. The findings indicated that the problems may be solved by ongoing professional development, which will prepare instructors for dealing with technological problems by leading and teaching them.

KEYWORDS
ICT Integration, Challenges of ICT Integration, TPACK, Primary Schools

INTRODUCTION

Technology is a fundamental component of educational systems all over the world since it has a significant influence on children's development. This digital world of information, communication, and technology are currently in effect, and curricular integration of technology will help students become more globally minded learners. This article aims to evaluate how information & communication technologies (ICT) are being adopted and integrated into private elementary schools, as well as teachers' and advisors' perspectives on how teaching and learning strategies might be improved with the aid of technology integration. The model of information, communication, and technology (ICT) can improve the teaching-learning process and raise the standard of education and information in schools because technology integration requires schools to not only modernize their technological equipment but also to change their teaching methods from conventional to international education and information, as well as the roles of their teachers. They ought to be forced to think about how they fit into the organizational and interactional structures of the classroom. Technology can be examined as a "significant tool for constructing knowledge societies" (UNESCO, 2003) and particularly, as a primary-level tool that could determine how to revise and modernize instructional practices and techniques to improve the quality of education for elementary-level students. This article outlines specific areas that need to be investigated as well as advanced, such as comprehensive ICT approaches, professional growth as well as training for teachers, additional research on how teachers incorporate technical and technological aspects in teacher preparation programs and help all students become universal learners, creation of contemporary online content, and modification of current practices to make the integration of technology at schools easier. The first goal of this article was to explore the problems with ICT-integrated teaching and learning. The second was to investigate the issues and difficulties in using ICT for teaching and learning, and the third was to learn how to deal with problems and obstacles while integrating ICT in teaching and learning. There have been a few research done in Pakistan on integrating technology into secondary education and higher education, but there have been relatively few studies done on integrating technology into the classroom at the basic level. The goal of this article was to examine the issues and challenges that affect how technology is integrated into education and to develop strategies that are appropriate for this new educational style, the role of educators, as well as the role of students when technology is integrated into teaching and learning and schooling methods. Children between the ages of 4 and 12 may be harmed by the lack of technology integration in the classroom because, without access to it, they are unable to develop contemporary capabilities and even become global learners. However, it must be understood that incorporating technology into the basic

curriculum but also classrooms do not just enhance learning; it may also result in slightly more than a novel approach to instructing and learning, which may not be adequate or up to date. (Adams, 2011). Furthermore, "technology in education has to be supported by suitable policies" (Tondeur, van Keer, van Braak & Valcke, 2008) at all levels as well as the professional development necessary for instructors (Lim, 2007). The article's findings will aid researchers in determining the issues surrounding technology integration in elementary school. The results also showed that, even though some schools are well-equipped with technical resources, there are still challenges, such as teachers' reluctance to integrate technology, and how these issues were overcome to allow teachers to do so. The findings of this study may help teachers plan their instruction using technology and participants participate actively so that all technological means are available for the instructional methods. It also examined whether teachers at the elementary level could benefit from technology and looked into potential difficulties and disadvantages of technology-integrated education for teachers, schools, and policymakers.

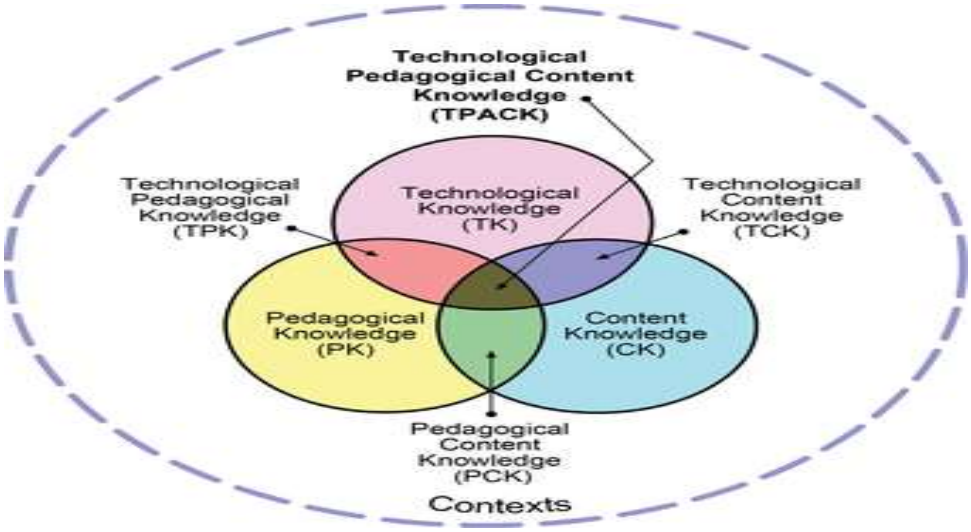
LITERATURE REVIEW

Information and communication technologies have merged with education in the twenty-first century. This is so that we may readily transfer knowledge since technology is a route or pathway. This requires educational institutions like schools to think about integrating technology into their curriculum to help students become universal learners and build 21st-century abilities (Ghavifekr, Afshari & Amla Salleh, 2012). The use of computer-based communication in the everyday educational process in the classroom is commended by an overall system of information, communication, & technology in the pedagogic process. Technology integration into regular lessons aids educators in preparing pupils for the present digital environment. Technology can create a teaching-learning environment that is effective and convincing (Arnseth & Hatlevik, 2012). While the goal of integrating technology is to improve and expand the quality, convenience, and cost-efficiency of how teaching is delivered to students, it also incorporates the advantages of learning communities to address the problems of current globalization (Albirini, 2006, p.6). Technology integration is a continual process that completely supports teaching, learning, and information resources rather than a single act (Young, 2003). In education, Information, Communication, and Technology (ICT) integration often refer to computerized teaching and learning techniques, which roughly relate to the way of teaching with technology in school. The issues with student learning, particularly in the classroom, are crucial since pupils are accustomed to it and learn better in a technological environment. Because of this, using technology in education offers a variety of pedagogic aspects, where the use of computers will outperform learning via the use of ICTs' domains and elements (Jamieson-Procter et al., 2013). It is accurate to suggest that practically all subject areas, including mathematics, physics, languages, the arts, humanities, and other

important subjects, may be learned more efficiently with computerized tools and technology. Additionally, technology supports scholars' and students' aid and assistance in a way that links the use of computers to give learning aids to productive learning (Jorge et al., 2003). It is necessary to provide the technical infrastructure and resources to all of the nation's schools. Subject matter experts must have access to technology anytime they are required (Hennessy, Ruthven, & Brindley, 2005). One of the biggest issues that schools, particularly those in rural locations, are experiencing is the lack of proper technical equipment and a poor or nonexistent network. Technical issues are a significant barrier, a source of frustration for teachers and administrators, and a source of interference with teaching and learning techniques in the majority of schools. Teachers are unable to utilize the equipment indefinitely due to a lack of technical support and maintenance (Jamieson-Proctor et al., 2013). It has an impact on students and will deter them from utilizing technology tools because they are not provided with any technical assistance on the subject. The research by Türel and Johnson (2012) noted that technological difficulties provide a significant problem for administrators. These issues include poor connection, malware attacks, and malfunctioning printers. However, there are certain exceptions. Technology-related practices, a strong structure, qualified teachers, and connections to the environment are all considered external factors. The conventional teaching techniques used in schools are one of the major obstacles to the incorporation of technology. Wilson, Notar, and Yunker (2003); Williams (2005); Pelgrum (2001). Teachers' successful adoption of technology in the classroom is influenced by their computer-use habits and technological perspectives (Drent and Meelissen 2008; Mueller et al. 2008). More research indicates that computers do not develop significant modifications. (Cuban, Kirkpatrick, and Peck in 2001; Robertson in 2003; Cuban 2001). It is clear, nevertheless, that academic achievement driven by technology may significantly improve student learning (Wong and Li, 2008). The use of didactic techniques, instructors' and students' prior knowledge and conduct, and their shared practices are only a few of the numerous aspects that might contribute to the successful integration of technology into instructional approaches (Law & Chow, 2010). Additionally, to achieve technology education goals, administrators must modify their methods and even their ways of thinking, which is the same as resisting change (Guskey, 2002). Based on these elements, information, communication, and technology can play a variety of roles in the pedagogic process, influencing learning techniques and intended learning results. This article looked into how chances for learning and teaching at the elementary level are provided by technological education to develop students' and teachers' 21st-century skills. Depends on how automated learning and teaching tools are used. They may be categorized as "information tools". According to Lim and Tay's (2003) advice, these are programs that deliver information in different configurations (for example, text, sound, graphics, and video). Interactive media reference books and resources on the World Wide Web (WWW) are sources of informative tools. Tools for

setting up environments for students to apply situations and experiences are known as situating tools. Systems like this include virtual reality, gaming, and simulation. Students benefit from forming tools, which are often employed for maneuver knowledge since they help them organize their thoughts or interpretations. Applications like a mental map or social networking sites, for instance, can help students organize their ideas and communicate with others. Tools for communication include e-mail, blogs, e-conferencing, and e-discussion boards. These enable educators and students to engage. Internet may also be used as a diagnostic instrument and to carry out the role of education in addition to these other four categories. Technology is frequently used in conventional classroom settings, possibly notably in elementary school classes when a simple technology-integrated curriculum is used. Additionally, when communication and information technology evolve, so do the didactic techniques that are now unproven and untested. This might change and extend the use of future technology. The elementary classroom program that incorporates technology without a comprehensive strategy does not produce the desired outcomes and that computerized process needs to be related to the lesson's purpose and the teacher's learning objectives (Kervin et al., 2019; Genlott & Grönlund, 2013). These studies have highlighted the importance of future research into how technology might be integrated into classroom instruction at the elementary level. These studies reach the conclusion that instructors planning to use technology in the classroom would benefit from thinking about how the 'what, why, and how' of a topic and technology might be connected explicitly (e.g., Hudson, 2007; Loveless, 2007, 2011). Digitalization is under pressure both as a direct subject area and as a tool to assist curricular learning, according to findings (Loveless, 2003, 2007). According to Loveless (2007, 2011), teaching using information and technology may be aided by a structure of academics' professional expertise that focuses on the relationship between subject matter knowledge, computerized technologies, and many teaching experiences. This research article aimed to improve technology integration and improve the quality of teaching and learning experiences in schools. The Technological, Pedagogical, and Content Knowledge (TPACK) proposed framework by Punya Mishra and Mathew J. Koehler of Michigan State University in 2006 has been acknowledged and found to be appropriate for the article as the conceptual framework. The TPACK framework (Technological, Pedagogical, and Content Knowledge) represents the types of competence required by instructors for effective information and communications technologies integration in teaching and learning activities. The TPACK model has the potential to affect studies and methods in teacher preparation and professional development, and it has promoted much study and scholarship. Since 2009, TPACK has been the primary construct in more than 1200 journal papers, chapters, over 315 dissertations, and 28 books (Harris & Wildman, 2019). Three interlocking circle diagrams are the most well-known form of the TPACK model. The Content Knowledge, Pedagogical Knowledge, and Technological knowledge are represented

by the circles in the TPACK diagram. Knowledge of different types combines in the locations where the circles intersect. In TPACK, there are three main types of knowledge: Content Knowledge (CK), Technology Knowledge (TK), and Pedagogical Knowledge (PK).



The idea of Pedagogical Content Knowledge (PCK), as described by Shulman (1986, 1987), is consistent with and similar to PCK. PCK includes the knowledge of methodology that is appropriate for teaching a particular topic. The notion of a subject matter revolution in education is Shulman's central idea for PCK. This revolution, as per Shulman (1986), takes place, particularly as the instructor chooses the subject matter, chooses different ways to present it, and integrates and adapts the educational expertise to diverse ideas and the student's existing knowledge. The fundamentals of instruction, acquiring knowledge, curriculum, assessment, and situations that improve teaching and learning as well as their relationships to these elements are contained in (PCK). The primary criteria for classroom instruction include knowledge of common misconceptions and techniques for addressing children, the implication of formed affiliation with various knowledge themes, students' prior knowledge, the choice of instructional strategies, and the adaptability that results from exploring alternative theories for arriving at the same solution. Compared to categories in the (TPACK) framework, Technology Knowledge (TK) is constantly changing. It is therefore more challenging to define it specifically. By the time this text is released, any explanation of technical expertise runs the danger of becoming outdated. This is true for all technology resources and tools since the digital world is always evolving. The definition of (TK) employed in the (TPACK) framework is close to that of (FITness), which was proposed by the National Research Council's Committee on Information

Technology Literacy (NRC, 1999). They recommended that (FITness) expands on the notions of universal computer literacy by requiring individuals to have a thorough understanding of information technology to use it effectively in the workplace and in their daily lives, to recognize when communication technology can help or pose obstacles to achieving a goal, and to continuously adapt to changes in information technology. By obtaining (TK) in this manner, a person can use digital technologies to carry out a variety of tasks and develop new methods of carrying them out. Instead of assuming an "end state," this method of teaching (TK) acknowledges that mental growth happens across a lifetime of fruitful, free connections with technology. Technology and subject-matter experts have a long history of interaction. Advancements in a variety of disciplines, including physics, history, archaeology, and medicine, have acceded to the contemporary automation that provides the portrayal and effective application of information. The development of technology has also given rise to new metaphors for understanding the world. Consider the intellect as an information-processing instrument or the heart as a pump, for example, as new technical perspectives that might help us comprehend events better. These symbolic and original relationships are not merely incidental. They typically result in significant modifications to the way the subject matter is organized. It is difficult to design pertinent technology devices for didactic aspirations without a deeper grasp of the technology's relevance in learning and teaching and subject matter expertise of a particular field. To make more practical technological instruments for teaching purposes, it is essential to comprehend the relevance of technology integration to the practices and philosophy of a certain field of study. The availability of technology tools is essential for delivering the subject. The development of new, more diversified representations is also made possible by technology, which might be necessary for some sorts of desired representations. Therefore, Technological Content Knowledge (TCK) is the understanding of the ways that subject matter and technology influence and require one another. Teachers must not only be knowledgeable in the subject area they teach but also have a thorough understanding of how to incorporate the right technology. The Technological Pedagogical Content Knowledge (TPACK) framework is a symbolic step in the right direction, indicating the importance of the domain of knowledge and the interaction between those domains as well. However, it is not a comprehensive approach that helps us solve all the strategic issues that influence the success of teacher development projects. However, the (TPACK) model's significant and essential contribution does not diminish its significance in terms of education. Although (TPACK) is still useful, it may have a propensity to ignore the fundamentals of the model. This study contends that different sorts of accuracy presentations are not the hallmarks of current (TPACK) measurement operations and identifies the elements that could work as a catalyst for the growth of TPACK measurement (Cavanagh, R.F., 2013). Particularly difficult are the fundamental components and content of validity proof. Both the theory and the measurement of the (TPACK) model are still in their

infancy (TPACK). The creation and maintenance of (TPACK) study and measurement require support from acknowledged disciplines of study and methodologies. The TPACK (Technological Pedagogical and Content Knowledge) model is distinct from other technology models even if it does not seek to be fully packed including all elements of technology integration in teaching and learning. Until and until the instructor has paid appropriate attention to their lesson preparation or testing of the technology, incorporation of any technology model cannot enrich the program or instruction and make it effectively technologically incorporated teaching and learning model. The idea known as Technological Pedagogical and Content Knowledge (TPACK) has been used as a conceptual framework to examine the problems and difficulties associated with integrating information and communication technologies into teaching and learning. The (TPACK) model was created to describe that Pedagogical and Content Knowledge and instructors' perceptions of didactic technologies combine to achieve compelling technology integration. It was based on Shulman's (1987, 1986) explanations of PCK. The concept of (TPACK) discussed here was developed over time and through several publications. Mishra and Koehler (2006) and Koehler and Mishra (2010) provide comprehensive explanations of the framework. The foundation of teaching with technology is called Technological Pedagogical and Content Knowledge (TPACK), which calls for knowledge of didactic approaches that effectively use technologies to teach subject matter, demonstration of ideas through technologies, and understanding of what makes topics difficult or simple to understand, and how technology can help students solve problems. It also calls for knowledge of students' fundamental knowledge. Knowledge of facts, procedures, and methods relevant to a field; a comprehension of explanatory frameworks connecting and coordinating topics; and an understanding of evidence are all examples of subject matter knowledge (Shulman, 1986). Teachers need to be aware of the many types of information and analyses in various domains, such as how mathematical data differs from classical or historical definitions. Lack of understanding of the topic may cause teachers to misunderstand the material for the students (Ball & MacDiarmid, 1990). Didactic knowledge is a thorough awareness of the developments and methods of teaching and learning, as well as how they include all educational goals, standards, and objectives (Mishra & Koehler, 2003). This sort of in-depth information is misapplied in every aspect of students' education, including lesson design, classroom management, and application. Additionally, it includes ways for assessing students' knowledge as well as knowledge about methodologies to be used in the classroom, the variety of the students, and other factors. An educator with extensive didactic knowledge is better able to comprehend how students construct information, develop skills, and extend habits and successful dispositions toward learning. According to Mishra and Koehler (2003), didactic knowledge necessitates comprehension of cognitive, social, and the creation of theories of knowledge, as well as how they are applied to students in the classroom. Knowledge of common technologies, such as the

internet, computers, smartphones, DVD players, and other audiovisual equipment, is referred to as Technological Knowledge (TK). This calls for the capacity to work with certain technology (Mishra & Koehler, 2003). When it comes to computerized technologies, this includes understanding how to manage systems and computer hardware as well as the ability to work with common programming tools like word processors, spreadsheets, browsers, and e-mail. Awareness of how to fix and remove portable drives, fix and remove computer programs, and generate and record documents all fall under the category of Technological Knowledge (TK). Numerous monthly technological seminars and coaching sessions continue to concentrate on developing specialized skills. Teachers need to know their subjects, but they also need to know how to apply the subjects using technologies (Mishra & Koehler, 2003). The term "Technological Pedagogical Knowledge" (TPK) refers to the awareness of the presence, characteristics, and potential effects of various technologies as they are incorporated into the teaching and learning process through information and communication technologies (Mishra & Koehler, 2003). This might include knowledge of the many technical tools available for a given work, the capacity to select the best tool for the job at hand, tactics for utilizing the tool's features, and comprehension of instructional methods and technology implementations. According to Gorder (2008), successfully integrating technology into teaching and education can result in differences in how classrooms are changed. Integration of ICT is a challenging task that involves three steps: instructor comprehension, use in education, and information dissemination to improve students' knowledge. Hew, (2007) identifies six factors that have an impact on the effective integration of technology. The factors include a lack of funding, a shortage of specialized knowledge and abilities, infrastructure issues at educational institutions, attitudes, and behaviors related to technology, as well as different topic evaluation methods. In the last 10 years, computer-based technologies have encouraged rapid development, making it difficult for educational institutions to stay current. A further factor is a lack of time. Due to their extensive workloads, teachers are not given enough time to prepare for technological integration. Cybernetic material and knowledge of computerized technologies require time. Hew (2007) said that to respond quickly and effectively when a computer malfunctions, teachers require extra time for preparation and must be available on-site and provide technical assistance. To employ digital technology in teaching and learning, teachers need specialized computerized learning and awareness. they require instruction to implement the process for boosting students' knowledge (Hew, 2007). The integration of digital technologies placed a focus on instructors' effective classroom management abilities. Once classrooms are outfitted with technology tools, methods and concepts should be integrated. Regarding the individual aspect of the teacher, it is asserted that the use of ICT in schools is influenced by the instructors' methods and understanding of technology adoption. For example, a teacher who believes that technology compromises their traditional teaching methods, such as

the teacher-centered method they have embraced through time, may refuse to acknowledge technology practices (Liu & Huo, 2007). Additionally, educators that continually use technology in their lessons do so to advance knowledge and education (Cuban, Kirkpatrick & Peck, 2001).

RESEARCH OBJECTIVES

The main objectives of the research study were:

1. To investigate issues experienced by teachers and school administrators in ICT integration
2. To explore the challenges experienced by teachers and school administrators in ICT integration
3. To find-out the strategies to overcome the issues and challenges to ICT integration

RESEARCH QUESTIONS:

1. What are the issues in ICT integrated teaching and learning?
2. What are the challenges in ICT integrated teaching and learning?
3. How do overcome the issues and challenges of ICT integrated teaching and learning?

RESEARCH METHODOLOGY

The socio-anthropological research model, often known as the qualitative research design, was used for this research article. It is anthropological in character and explains things. The article's only focus was on private schools, and all of the coordinators and teachers were private school employees. The study addressed problems and difficulties experienced by private school instructors and coordinators. Schools were closed as a result of COVID-19, thus semi-structured interviews were conducted over the phone and an online survey was distributed over WhatsApp. To assure uniformity, the size of the sample was 10 online questionnaires and ten semi-structured interviews with the same teachers and coordinators. This article looked at the problems and difficulties of using technology to enhance the learning experience in Karachi's private elementary schools. The use of technology to promote a student-centered teaching-learning process, engage students, and take into account the diverse learners and students' preferences is known as technological integration. This article is based on a qualitative study approach. The qualitative technique is appropriate for this article since it was an exploratory examination of events and issues related to primary teachers' opinions of technology-integrated teaching and learning. According to Bryman and Bell (2007), data analysis is the method that emphasizes participants' verbal responses during the data collecting and breakdown process rather than quantification. To examine the concerns and challenges faced by instructors in technologically integrated teaching and learning, a phenomenological method was used in this article. According to Creswell (2014), research that relies on human perspectives or experiences that are often shared

by a group of individuals is the optimum context in which to employ a phenomenological technique. The current research article additionally gathered data from instructors and coordinators at private schools concerning the issues and difficulties associated with integrating information and communication technologies into the educational process. Data analysis, according to Bogdan and Biklen (2003), is the process of meticulously examining and organizing interview transcripts, field notes, and other material you obtain to enable you to conclude. According to the research, information inquiry involves working with both the data to combine them, organize them into manageable parts, code them, and synthesize them to create search patterns. According to Braun and Clarke (2006), theme analysis is a technique for identifying patterns or concepts in qualitative data. For the current research article, thematic analysis was selected as the method of information review. Semi-structured interviews and online questionnaires were used to get the information therefore it was necessary to code the information to extract the main ideas. The writing aided in summarizing the responses from participants on the problems and difficulties they encountered when integrating communication and information ICT into teaching and learning, as well as the methods private school instructors and coordinators employed to solve them. The best strategy for gathering data for a phenomenological study was semi-structured interviews with private school instructors. Consequently, information for the current article was gathered through semi-structured interviews. Semi-structured interviews, according to Bernard (1988), are particularly useful for gathering people's opinions and experiences. Participants were free to talk about their experiences as well as what and how they saw things throughout the semi-structured interviews. Surveys are so often employed in psychosocial studies since they are typically utilized to show and explore human behavior in qualitative research approaches like open-ended questionnaires (singleton & straits, 2009). Online surveys were thus conducted to determine the problems and difficulties associated with integrating technology into teaching and learning, as well as the strategies employed by administrators and instructors at private schools to resolve these concerns. Participants' responses to an online survey were used to validate and authenticate the data obtained through semi-structured interviews. After participants were reached by phone and WhatsApp and informed of the research article and its goals, the data collecting strategy was established. The participants' agreement was conveyed via WhatsApp, and before the interview was recorded, their approval for call recording was requested. Both researcher and participants also agreed on the timing of the interview since all schools were closed due to the COVID pandemic"19. Each participant's interview lasted twenty minutes. For the comfort of the participants, the online survey plus interview questions were delivered over WhatsApp before the interview. Every interview was captured on a phone recording and stored in Google Drive. The completed online questionnaires, interviews, and transcripts of the responses were shared among supervisors and peers to guarantee validity. To verify

the authenticity of the replies, the same instructors and coordinators participated in both the online survey and the interview. Validity and reliability are two essential components of every study. Researchers emphasize that the reliability and validity of the methodology—both essential components of quality—are linked to the accuracy of qualitative studies. The qualitative research method's precise qualities have also been subject to rigor (Cypress, 2017). Participants were instructors and coordinators from several private schools in Karachi so that the widest range of information could be gathered. Participants were informed of the article's description and the need for their agreement to collect their data to ensure the article's validity. Participants and interviewees agreed on the day and hour of the interview in turn. The interviews were taped and written down. Additionally, the researcher was able to confirm the interviewees' responses using the online questionnaires that were administered by the same teacher. According to Cohen et al. (2011), "ethical consideration includes participant anonymity and confidentiality, which are crucial for a research project". Before obtaining data, research participants were made aware of the subject and goals of the present investigation. Interview questions were presented to participants before obtaining their consent to conduct interviews. The participants were informed that their responses will only be used for this proposed research and that they would be handled with strict confidentiality.

FINDINGS AND DISCUSSION

The research's findings led researchers to the conclusion that integrating technology into classrooms was difficult in private schools, where it was ineffective and had little bearing on students' learning. The professional development of teachers and their openness to using technology are key components of effective technology integration in education. The main difficulties that instructors encountered when integrating technologies in the classroom were a lack of resources, teacher competency issues, teachers' reluctance to use technology, and unplanned power outages. "The current usage of technology in Pakistani schools seems to be below the standard of its capability, as a result, a limited influence on students' learning" (Shah, S.W., 2011). The outcome showed that solutions were found quickly despite the obstacles that caused some degree of instructional delay. The main problems were teachers' poor pedagogical skills, lack of technical competence, and lack of topic understanding. It has long been recommended that teachers' aptitude and pedagogical topic understanding be demanding for convincing instruction. Pedagogical Knowledge (PK), as per Mishra and Koehler (2008), is the instructors' comprehension of the methods, strategies, and systems used in teaching and learning. The (TPACK) approach places additional focus on the value of trustworthy information and comprehension of technology, pedagogy, and content. It also promotes an awareness of interactive teaching methods that use practical theoretical representation to talk about students' difficulties and misunderstandings and progress acquisition of new

knowledge (Mishra and Koehler,2008). Teachers' opposition to the use of technology was also noted as a problem in the technology integration process. According to Johnson et al., (2016), instructors' beliefs and stances regarding instructional technology and pedagogy as a whole fundamentally influence how technology is used. Teachers' opposition to technology is resolved by their beliefs and stance. When educators behave negatively toward technology, they are less likely to adopt it themselves and are more likely to disregard its incorporation into teaching and learning. The results of the current article showed that coordinators and instructors frequently encountered educators who were afraid of integrating technology, were reluctant to do so, displayed erratic behavior, and believed that technology may take their position. While integrating technology into teaching and learning, this conduct was one of the main concerns for coordinators and teachers. Without educators' desire to employ technology, integration of technology in teaching and learning, according to Martin (2000), is almost impossible to advance. In his study of educators' attitudes toward technology, Ozbasi, (2008) found that factors such as motivation, statistics, instructional strategies, practice, and institutional factors had an impact on instructors' acceptance of technology. Technological Pedagogical Knowledge (TPK) necessitates more than just knowledge of technologies and effective instructional strategies; it also necessitates an understanding of how certain technologies might offer effective didactic strategies or methodologies. It is hard to incorporate technologies in the classroom when there is a lack of didactic understanding. The findings of the current article also support the assertion that instructors and coordinators used a variety of strategies to address issues through the use of technologies in teaching. It was reported that they placed backup generators in classrooms in case of unplanned load shedding and utilized mobile data when the internet wasn't functioning correctly. The coordinators' method for resolving problems and difficulties involved holding training sessions, engaging in practical exercises, and partnering senior instructors with new and young teachers who were tech-savvy. This was done both on-site and off-site to foster collaboration.

The main objective of the current proposed article was to examine the problems and difficulties that coordinators and instructors had while integrating ICT into their teaching and learning, as well as the methods that they used to do so. Less study has been done on this topic at the primary level. The research article was also constrained by academic requirements; however, a more extensive investigation may be conducted within the same framework. Additionally, while the current research article focuses on the problems and difficulties faced by teachers and coordinators, a future study might focus on the challenges encountered by the teachers and administrators in ICT-integrated teaching and learning under similar conditions with a focus on different subjects and classes. The suggested article can also be categorized under public schools in both urban and rural settings.

RECOMMENDATIONS

The research's findings indicated that teachers' comprehensive competency, such as a lack of subject matter expertise, knowledge of engaging teaching strategies, and technological skills, was the most important factor for coordinators and teachers to consider when training teachers for technology integration. There was no quick answer to these problems. These problems may be rectified as instructors advance their careers through mentorship and training. Teachers can increase their subject-matter expertise as well as their pedagogic understanding and technology knowledge with the support of training and mentoring. The knowledge of the subject area was not sufficient, according to the instructors and coordinators. Knowledge of computerized material and technologically linked teaching and learning necessitated the capacity for the subject matter and pedagogical comprehension. The most important action that can be made in the current situation to address problems and difficulties with technology integration in the classroom is to offer ongoing professional development for teachers. Private schools are known for hiring instructors with extremely low pay rates. Most instructors are still uninspired because of the poor pay scale. Additionally, low pay scales deter teachers from integrating communication and information technology into the classroom since it is highly challenging to persuade them to embrace change when their overall motivation is low due to low compensation. Teachers need to be encouraged to incorporate technology into their lessons and learning, which may be done by raising their pay scales. Offering outstanding pay can entice additional skilled and qualified people to apply for this position in addition to inspiring honest teachers. As a result, many skilled and talented teachers are available for hire. Motivation is necessary for beginning and continuing transformation. Offering incentives to teachers is another way to encourage them to embrace and integrate technology. Teachers that successfully integrate technology into their instruction and learning and improve overall teaching and learning procedures in the classroom should receive a specific incentive. For instructors to adopt this modern innovation, there needs to be a lot of encouragement. Giving incentives and awards to instructors who use exceptional teaching strategies can motivate teachers. Teachers who achieve at their highest levels should get rewards and incentives. The interviewees suggested that appropriately identifying the computerized subject was the main challenge in integrating technology in education. It was also discovered that the instructors were already overworked, having to teach more than three courses to different students, which put them in danger. They lacked the free time to thoroughly read and absorb the electronic information to instruct students more efficiently. Lessening the number of classes and subjects that instructors have to teach will give them more time to evaluate and investigate the new material. Therefore, it is vital to lessen the workload of teachers who teach more than two courses to different classes. Effective electronic text use requires time to research and thoroughly investigate it.

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