



## Teachers' Perception and Challenges for Integration of Digital Technology in Teaching English: A Case Study of Community Colleges of Sindh, Pakistan\*

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### ABSTRACT

Channa, Imdad Hussain, Muhammad Mujtaba Asad, Zulfiqar Ali Chachar, and Sarala Thulasi Palpanadan. 2025. Teachers' perception and challenges for integration of digital technology in teaching English: A case study of community colleges of Sindh, Pakistan. *Korean Journal of English Language and Linguistics* 25, 151-169.

Information and communication technology has become an integral part of teaching and learning in this modern era. The use of new technologies in an educational context is strongly influenced by teachers' perceptions. The emergence of COVID-19 in 2019 required a herculean response on the part of English teachers by switching from physical (face-to-face) teaching to online teaching; They were encouraged by their respective management to use ICT tools and techniques. However, observations and circumstantial evidence suggest that most teachers, particularly English teachers, experience difficulties in using ICT. This study examined English teachers' perceptions of ICT integration in teaching English. In addition, the study also examined the challenges faced by English teachers in integrating ICT. This case study was conducted in 5 community colleges in Sindh. The participants in this qualitative case study were senior English teachers at community colleges. Detailed semi-structured interviews were analyzed through thematic analysis. To validate the interviews, the classrooms were also observed using an observation checklist. An interpretive approach was used to obtain the results. The results of the study showed that English teachers at community colleges have a positive attitude towards ICT integration. Their willingness, motivation and attitude towards ICT integration were also rated positively. Additionally, the community colleges have better infrastructure in terms of ICT tools and techniques but still need further development, e.g. Such as the availability of language labs, availability of backup power adapters to avoid power outages, and a strong internet connection to help teachers complete their assignments within time. The study suggests that English teachers could be provided with needs-based training related to ICT integration for English teaching using the TPACK and TAM model to achieve better results.

### KEYWORDS

digital technology, teaching English, technological, pedagogical and content knowledge, technology acceptance, community colleges

## 1. Introduction

Through school and university closures, the worldwide pandemic COVID-19 affected about 1.54 billion children and young people across 185 nations on all continents by the end of March 2020 (Schleicher 2020). Almost all colleges and universities transformed their mode of teaching from physical (face-to-face) to virtual classes. It has been observed that English language teachers faced a lot of challenges to adapt to this change. English language teachers come from a social science background and barely have technological knowledge. On other hand, integrating information communication technology for teaching has become an essential part of language teaching due to global change in education.

The utilization of technology has shown a very positive effect on teaching the English language. ICT attracts and encourages language learners (Altun 2015). The adaptability of technology in classroom teaching is considered great assistance in teaching and learning however without a motivated teacher it is not possible (Ramanair et al. 2017). The idea was taken from the literature associated with teachers' knowledge regarding the use of technology, pedagogy, and outcome. Of students' learning. In this regard, many studies have accredited the necessity to design a more consistent and effective tool to quantify TPACK. Several types of research have been conducted to authenticate the TPACK tool in various study contexts (Ersanli 2016a). Hence, very little work has been done on English language teachers, especially for those who have been using outdated methods and now are being forced to transform their thinking and abilities to modern modes of 21st-century teaching and learning. Jayanthi and Kumar (2016) also clarify the positive effect of ICT in teaching ESL in various domains for example accessibility of resources, students' perspectives, etc. The combination of different ICT tools develops interpersonal skills and helps both the students and teachers to support language learning (Salehi and Salehi 2012) ICT has a vital role to help ESL teachers (Toumi 2015) Current innovations like mobile-assisted learning (MAL), computer-assisted learning (CAL), different learning management systems, online assessment are used to empower language learning (Ananga 2020). Within the context associated with advanced countries, the impact of ICT is very positive. It provides a variety of interesting resources to the learners for the improvement of the English language. This includes vocabulary building, grammar practice, reading comprehension, listening practices, and writing techniques (Duff 2015).

The adaptability of ICT in improving the effectiveness of the English language is one of the most discussed issues in academia (Yunus et al. 2012). Several kinds of research support the idea that the use of ICT improves the learning and teaching process (Salehi and Salehi 2011). For Second language learning, grasping the second language is a substantial learning challenge (Schmitt 2014). Therefore, it is important to integrate information communication technology to enhance learning language. ICT has been proved to be able to provide a good environment for general language programs (Mullamaa 2010). Information and communication technology (ICT) and web-affiliated learning tools offer learners to produce better learning outcomes (Yunus et al. 2013). ICT adaptability in ESL teaching is used to create, share, manage information (Ersanli 2016a). Furthermore, many studies support that the use of e-learning and media resources support different learners in different ways. There are different types of learners in the classrooms and ICT provides motivation and encouragement to them (Lightbown and Spada 2013). Queirós et al. (2017), has pointed out that teaching with the help of ICT needs more planning to provide authentic and reliable support as per the curriculum.

There are several models and theories adapted by the teachers as per their subject needs and organizational demand. One of the most prominent models adapted by English teachers is TPACK. The technical, pedagogical, and content knowledge (TPACK) framework developed by Mishra and Koehler (2006), is an updated version of Shulman's (1986) classification of teacher competence about technology to assess attitude, behavior, and integrity.

This approach has highlighted the importance of formulating and comprehending technological, pedagogical, and subject knowledge to more effectively incorporate technology into education. To enhance technology tools in English Language Teaching, the TPACK paradigm stressed three domains. Technological knowledge, Pedagogical knowledge, and content knowledge are the three domains very imperative domains in teaching. The TPACK model, which combines attitude, behavior, and usability, assists instructors in presenting successful topic matters to students by combining the most effective and integrated technology with need-based pedagogy (Koehler et al. 2014).

### **1.1 Problem Statement**

During the spread of Covid-19, the world has changed the way it lives. Teaching and learning paradigms were changed 180 degrees (Akseer et al. 2020). Covid-19 has changed the traditional teaching method in schools and colleges, transforming it into technology-based teaching across the world. Although it was initially challenging, students and teachers gradually adapted to this change (Shah et al. 2020). Most teachers were not fully trained in a new method of blended learning and teaching integrating various ICT tools. (Schleicher 2020). The spread of COVID-19 posed enormous challenges for the global education community. An abrupt shift from face-to-face teaching to online teaching was observed worldwide (MacIntyre and Gregersen 2020). This challenge brought both challenges and opportunities for the teaching and learning community (Araya-Guzmán et al. 2018). The emergence of COVID-19 earlier this year required a herculean response from teachers, shifting from physical, face-to-face teaching to online teaching; They were requested by their respective management to use Learning Management System (LMS) and conduct online courses using available tools like Edmodo, Zoom, MS and Google courses.

However, observations and circumstantial evidence suggest that most teachers, particularly English teachers, experience difficulties in using ICT. As an English teacher, I struggled to navigate ICT tools and techniques to make my students' online learning and my own teaching experiences effective. English teachers have a social science background and hardly have sufficient knowledge of the use of ICT for educational purposes in schools and universities. This resulted in students not understanding the concepts well. Most students complained that teachers do not have good ICT skills. One of the study projects conducted in Pakistan suggests that teachers use computers three times less than students (Khokhar and Javaid 2016). Therefore, the students are familiar with the technology and are very familiar with using these tools. English teachers at IBA Community Colleges also faced the same challenges. Although they have started teaching online based on trial and error. However, digital literacy is crucial for teaching and learning to integrate technology into the teaching and learning process. There is a general perception that teachers with technological skills achieve better learning outcomes for their students. Jayanthi and Kumar (2016), also highlight the positive impact of ICT in teaching ESL in various areas such as accessibility of resources, students' perspectives, etc. This study will explore the problems faced by English language teachers and highlight the challenges and strengths of integrating technology with pedagogy.

This research study is important for several reasons. First, it would help to know how ICT helped English language teachers to achieve better learning outcomes. Second, it will highlight the perceptions of English language teachers about ICT. Third, it would help future English teachers, policymakers, and curriculum developers that how ICT develops digital competency among English language teachers for developing macro and micro-skills of students.

## 1.2 Research Questions

The following research questions have been developed to achieve the targeted objective of this study:

1. How do the English teachers perceive the ICT adaptation in teaching English as a second language at Community Colleges?
2. What challenges do the English teachers face while adapting ICT in their ESL classroom at Community Colleges?
3. How does ICT integration influence teaching English in Community Colleges?

## 2. Literature Review

The term "Information Communication Technology" covers the range of physical equipment i.e., personal computers and minicomputers, projection technology, mobiles, and software applications including system software and application software available in schools for teaching, learning, and research purpose (Hennessy et al. 2005). Information and communication technologies (ICT) created a lot of room for today's students for transformation. Besides that, ICT tools produced new actions and behaviors. This technological setting is now common, a routine reality that has rooted in lives with extraordinary speed. The proven adaptability and re-programming shape our brain by coping with new challenging and unexpected circumstances with flexibility, this adaptability of new technologies and interests are demonstrated by an incursion into academia (Lorenzo and Trujillo 2018). ICT is creating a dynamic change in the world. It has an impact on every element of life. School is where the inspirations are felt the most. ICT gives students and teachers greater options for tailoring learning and teaching to their specific requirements. As a result, schools are compelled to include this technological innovation in their curricula (Mikre 2011).

Information and communication technologies (ICT) have created a lot of space for transformation for today's students. Furthermore, ICT tools led to new actions and behaviors (Lorenzo and Trujillo 2018). The technological application included not only hardware and equipment but also coordinated connections with other people, machines, and the environment. This systematic process emphasizes achieving better learning outcomes and maximizing learning (Qaddumi et al. 2020).

### 2.1 Teachers' Perception about ICT

The utilization of technology has shown a very positive impact on teaching the English language. ICT encourages language teachers (Altun 2015). The adaptability of technology in classroom teaching is considered great assistance in teaching and learning however without a motivated teacher it is not possible (Ramanair et al. 2017). Therefore, it is significant to integrate information communication technology to enhance learning language. ICT has been proved to be able to provide a good environment for general language programs (Mullamaa 2010). Information and communication technology (ICT) and web-affiliated learning tools offer learners to produce better learning outcomes (Yunus et al. 2010). Teachers found technology as one of the effective tools in learning. This is a significant reason to adapt technology to develop skills. Teachers stressed the importance of using technology to assist the curriculum so that students can get the most out of it when it comes to acquiring their language skills (Costley 2014).

The adaptability of technology makes a significant contribution to teachers achieving better learning outcomes in English classes (Gunuç and Babacan 2018). Language is considered one of the most important features influencing global interaction and communication. Students apply a variety of skills to improve their listening, speaking, reading, and writing abilities (Grabe and Stoller 2019). ICT encourages English teachers to adapt different types of classroom activities to improve the language learning process. The scope of technology use is growing as an essential tool to support language teachers in their teaching (Ahmadi 2018). Gilakjani (2017), reinforced the idea that technology has changed the way languages are taught. The versatility of the technology, experts say, motivates learners to learn according to their interests and needs. Teaching and learning have always been heavily dependent on technology.

## **2.2 Benefits of Integration of ICT**

Almost every teacher is concerned about incorporating ICT into their teaching because they are anticipated to be bright to leverage the many dimensions of ICT to produce more effective teaching and learning activities. ICT professional development must be provided by determining the needs of remote learners and retooling with curricular integration. Encouraging future language teachers to integrate ICT tools is one of the most demanding ways to seek out new types of learners and develop new pathways for students currently residing in a digital era. Teachers in conventional classrooms stand in front of pupils and use a board or chalkboard to deliver lectures, explanations, and instructions. With the advent of technology, this process may be modified. Multimedia uses print texts, movies, and the internet to help students improve their language skills. The usage of this ICT tool allows students to receive knowledge and access to intriguing resources for language interpretation and analysis, as well as situations (Arifah 2014). As a result, the technology acceptance model (TAM), which was developed by Davis in 1986, is one of the most demanding ways to seek out new learning styles and create new paths for learners living in a digital era (Davis 1989). Perceived utility and perceived ease of use are two key aspects in a user's adoption of technology, according to this concept. The user's assessment of the extent to which the technology would affect his performance is referred to as perceived usefulness (Supported 2015).

## **2.3 ICT and National Policies of Pakistan**

The National Accreditation Council for Teachers Education ("NACTE" 2009) focused on the professional development of teachers through the use of ICT. In its National Professional Standards for Teachers in Pakistan ("Ministry of Education" 2009), the seventh of ten key standards "Effective communication and competent use of information and communication technologies" ensured that teachers must have the skills to help them do this, to deal with basic functions of computers to design teaching strategies by adapting the appropriate use of ICT. Furthermore, the National Education Policy of Pakistan (Government of Pakistan 2017) emphasizes the adaptation of ICT applications to improve framework teaching strategies. In addition, excellent digital skills, and ICT integration as well as cybersecurity awareness were ensured to promote research and innovation. NEP (Government of Pakistan 2017) specifically focused on integrating ICT at all levels of education to promote, improve and strengthen IT skills. In this document, policymakers place great emphasis on expanding the scope of ICT through the design of educational resources for all schools. NEP 2017 proposed taking a big step towards digitalization of schools with innovative pedagogical approaches.

### 3. Methodology

The study design is the framework for the methods and research procedures chosen by a researcher. This specific design allows researchers to improve investigative techniques appropriate to the topic and develop successful studies. The research design explains what the nature of the research is, e.g., B. experimental research, semi-experimental research and correlational research (Bhat 2019). In addition, research design includes the processes and techniques used in data collection, data type, sample, study setting, and sampling methods, as well as data analysis procedures and interpretation of the results of a study (Creswell and Creswell 2017). Structured interviews, semi-structured interviews, focus groups, and field observation are the most common qualitative research methods. Qualitative research focuses on assessing and quantifying the behavior of individuals. The data collection process is largely carried out through interviews or observation of practices (Queirós et al. 2017).

This study uses an exploratory analysis. The exploratory study, based primarily on interviews, is a non-formal, proactive technique that aims to extract a personalized, complete account of the direct experience of a phenomenon from a small group of people who have observed it (Patton 2015). Qualitative researchers observe participants because it helps them gain experience in a kind of subjective sense (Van Manen 2016). The instruments used for this study are semi-structured interviews and classroom observations of the interviewed participants to know the actual experiences and validate the data conducted through interviews with English teachers in community colleges of Sindh.



Figure 1. Exploratory Research Method

The qualitative researcher often presents readers with a genuine, contextual picture of a particular area of life, which may be more meaningful than quantitative techniques (Dodgson 2017). Qualitative research approaches are adaptable, and they're usually done in realistic settings with semi-structured data collecting methods to allow for departure to get a more in-depth response (Cypress 2018). At the start of a research project, qualitative researchers

establish distinct goals and objectives. A thorough grasp of the motivations driving one's job can aid in avoiding getting distracted or losing time and effort on activities that do not further these objectives (Maxwell 2005).

In this study, exploratory analysis is employed. The exploratory study mostly via interviewing is a non-formal, proactive technique that seeks to extract a personalized, complete account of a phenomenon's direct experience from a small group of people who have observed it (Patton 2015). Qualitative researchers observe the participants because it helps them to get experience in a type of subjective sense (Van Manen 2016). The tool used for this study is semi-structured interviews and classroom observation of the interviewee participants to know the real experience and validate the data conducted through interviews with English teachers of IBA Community Colleges Sindh.

This research is based on interpretivism. Interpretivism considers factors such as cultures, circumstances, and epochs that influence the emergence of distinct social experiences. Interpretivism, as a paradigm, contends that reality is subjective and may differ depending on the individual (Scotland 2012).

### 3.1 Conceptual Framework

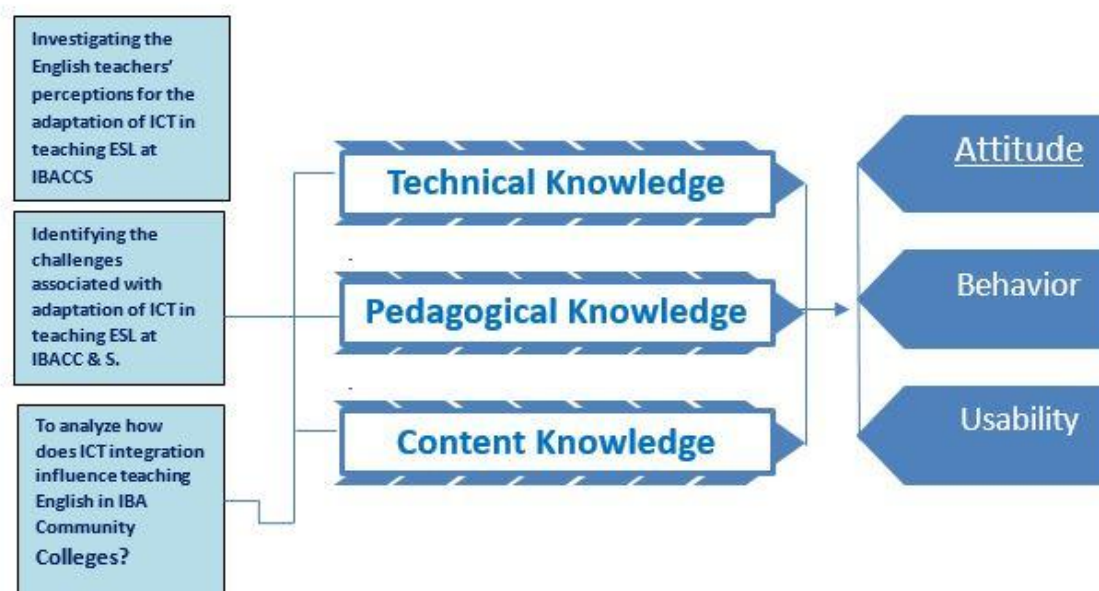


Figure 2. TAM (Davis 1989) and TPACK (Mishra, P. and M. J. Koehler 2006)

### 3.2 Population of Research Study

According to Mohamed Adam (2017), a research population is a group of individuals or objects studied by researchers. This study uses the purposive sampling technique based on this exploratory case study. The population of this study consisted of 12 English teachers who were purposively selected based on their teaching experience in community colleges in Sindh (Ubauro, Khairpur, Sukkur, Naushero Feroze, and Hyderabad).

## 4. Data Analysis

The data analysis process is divided into three phases. After conducting the interviews, the first process consists of transcription, coding, generalization, and creation of themes/subthemes. The second step involved developing an observation tool based on the themes generated through direct experiences, as well as comparing and validating data already collected through interviews. Identifying, interpreting, and extracting data is called thematic analysis (Staller 2015). In the third phase, both the results of the observation and the interviews are analyzed. To obtain English teachers' perceptions of the impact and challenges of adapting information and communication technology for English teaching, a semi-structured interview protocol was created. This interview protocol has been reviewed and validated by the expert from the Education Department of Sukkur IBA University. After reviewing the interview protocol by a panel of experts, the remaining dimensions were English teachers' willingness to use ICT in English teaching, determining teachers' attitudes towards English teaching, and finally the usability of ICT. Subthemes from the interviews were summarized into broader themes to give them an appropriate structure based on the professional experiences of the lecturers. Due to the current lockdown in the country, zoom interviews were only conducted online. These interviews are conducted to analyze the primary data of the study and summarize it in the form of main themes. Thematic analysis is used to identify patterns or themes in qualitative research. Thematic analysis is the most effective method for evaluating qualitative data. The six phases of analysis proposed by Braun and Clarke are suitable for examining qualitative data.

### 4.1 Results and Findings

This case study was conducted in five IBA Community Colleges namely Hyderabad, Naushero Feroze, Khairpur, Sukkur, and Ubauro. These colleges were selected due to their better infrastructure in terms of ICT resources. Twelve English teachers from IBA Community Colleges were specifically selected to teach English at higher grades/levels. In the first phase, due to the prevailing situation of COVID-19, semi-structured interviews with English teachers were conducted online via the Zoom app. The second phase was to analyze the transcript through thematic analysis. The third phase is to develop an observation tool based on the themes generated from interviews to observe participants' classrooms and gain direct experience. After the lesson observations, the results of the interviews and lesson observations were analyzed and compared, and the final report was prepared.

### 4.2 Perceptions of English Teachers About the Adaptation of ICT

**RQ1:** How do the English teachers perceive the ICT adaptation in teaching English as a second language at Community Colleges?

Teachers' attitudes, opinions, and perspectives on the use of ICT in the English language teaching and learning process are referred to as perceptions. ICT integration is critical for motivating students and updating their knowledge and abilities to teach 21st-century pupils.

In terms of positive perceptions, teachers who believe that ICT training is useful are more likely to use technology in their classrooms. Teachers' views on technology include the "how" and "what" impact it can have on students, such as whether students can change language and communicate directly with computers using special tools and techniques. Teachers have clearly stated that all computer and mobile-related tools, techniques, applications, and platforms suitable for improving teaching are referred to as Information and Communication Technology (ICT).



Classroom observation confirmed that most English teachers in community colleges were motivated to integrate ICT into their teaching to achieve better learning outcomes. The teachers were confident enough to use various forms of interactive pedagogical and technical skills.

#### 4.3 English Teachers' Attitude to Use ICT

The interviews clearly showed that ICT has become an integral part of English teaching. Preparing for various teaching tasks, such as creating teaching materials, contacting or collaborating with colleagues, students and their parents, searching for digital resources, and developing lesson plans, is part of a teacher's professional use of technology. English teachers have either adopted this out of their own motivation or have been pressured by the university/school to address the global challenges to English teaching. Findings disclosed that English language teachers' attitude towards the integration of ICT in their teaching is positive. The majority of the teachers were engaged in classes by using different ICT tools as per their lesson needs.

#### 4.4 Online English Teaching Platform for the Usability of ICT

English teachers were of the view that they have been using various platforms, tools, websites, and blogs as per the need of the student learning outcome to develop their skills as per the situation and need. Some of these tools and apps are intended for language teaching only, while others are intended for different purposes. Further Teacher (T2) showed great concern that using ICT tools have made the teacher a facilitator rather than the sage on the stage to involve students more effectively to improve their language skills. Moreover, he expressed that: "I often use multi-media projector for delivering a presentation, recommend students the relevant audio and text e-books and sometimes Quizlet for vocabulary building."

It was witnessed through classroom observation that some of the most used platforms by English teachers are readtheory.org for reading comprehension, britishcouncil.org and American English for listening improvement, Paddle, and Quizlet for vocabulary building. Kahoot, Socrative, and Google Classroom were observed as assessment tools. Discovering more about particular English language platforms is still necessary.

#### 4.5 Available Resources for ICT Incorporation

Few interviews expressed that IBACCs has good infrastructure regarding computers, devices, and ICT tools and availability of high-speed internet. Teacher 1 expressed: "*We do have internet facility, computer labs, and language lab, multimedia, smart boards, and sound systems*". Another teacher (T4) shared: "*We have three computer labs available equipped with latest computers, devices and internet connection*". Teacher (T2) showed his concern regarding the availability of resources: "*We have internet available throughout the school, secondly, we have very updated and advanced computer labs where the latest Core i7 computers are installed. Multimedia projectors are placed in every class along with a white screen, speakers are available in case any English teacher wants to engage students in the listening activity. Printers are available to print any worksheet/handout*".

Data from interviews and observations show that IBACCs have better infrastructure in terms of ICT-based teaching. The table showed the direct experience gained through observation and validated through the checklist.

**Table 1. Availability of Resources**

Resource	Status	Availability %	Observatory note
Computers	Yes	95%	Most of the colleges have the latest computers.
Multi-media	Yes	90%	Almost in every college multi-media are found
Internet	Yes	90%	Most of the colleges have good internet connectivity.
WIFI routers	Yes	90%	Almost all colleges have WIFI connectivity.
Smartboards	Almost No	10%	Just a few colleges have smart boards.
Sound system	Yes	95%	All colleges have a good sound system
Mobile stands	Yes	50%	Several colleges have a mobile stand for conducting an online class
Language labs	Almost No	10%	Not all colleges have language labs.

#### 4.6 Challenges Faced by English Language Teachers While Adapting ICT

**RQ2:** What challenges do the English teachers face while adapting ICT in their ESL classroom at IBA Community Colleges?

Most English teachers are of the view that there are fewer challenges subject to the availability of resources and infrastructure because IBA Community Colleges are managed by Sukkur IBA University and the management already provided the related resources to almost all colleges in sufficient numbers along with high-speed internet connectivity. However, the adaptation of ICT for teaching English is not so simple. Interviews conducted with the English teachers of IBA Community Colleges revealed that there are still certain issues and challenges while integrating the ICT into their classroom practices. These challenges are categorized as follows as per the observation.

#### 4.7 Teachers' readiness to integrate ICT for teaching English

The willingness to use technology to achieve specific goals or tasks shows that teachers are technologically savvy human resources. Teachers who are willing to accept technology can use and adapt it in their classrooms because they believe that technology is a tool that can be used by both teachers and students to gain more information and convey meaning. The expression of willingness to introduce ICT (T 2) described that: *"This culture has recently been developed I believe especially in the COVID-19 period; it has taken a boom. So far skills of ICT are concerned. we have been provided multiple pieces of training on how to utilize ICT specifically, properly, and effectively for language teaching"*.

Interviews with English instructors at Community Colleges confirmed that using ICT in English language learning activities encourages students to study more actively and efficiently using their skills and natural abilities.

#### 4.8 Influence of ICT on English Teachers' Pedagogy

**RQ3:** How does ICT integration influence teaching English in Community Colleges Community Colleges?

The adaptation of ICT for English teaching is becoming increasingly popular to influence effective learning skills and their usability for the development of new skills that awaken social skills, problem-solving skills, self-confidence, responsibility, and the ability to take initiative. Teacher (T2) was of the view that *"I believe this pandemic is brought as much closer to the technology to the use of technology, even those teachers who are not willing to do the extra efforts they have initiated to learn the new methods to adapt ICT to teach English language"*. These are all crucial parameters that must be met in a dynamic teaching and learning environment. These

significant benefits are partly due to the opportunities offered by effective ICT integration in school and partly due to the impact. The need for appropriate usability for teachers when integrating ICT into language teaching is crucial.

#### **4.9 Challenges Faced by English Language Teachers While Adapting ICT**

**RQ2:** What challenges do English teachers face when adapting ICT in their community college ESL classroom? Most English teachers believe that resource and infrastructure availability challenges are less because community colleges and management already provide adequate resources and high-speed Internet connectivity to almost all colleges. However, adapting ICT to English teaching is not so easy. Interviews with English teachers at community colleges revealed that there are still certain problems and challenges in integrating ICT into their teaching practices. These challenges are categorized as follows according to the observation.

Interviews with English teachers revealed that although community colleges are well equipped in terms of infrastructure and resources, there is still room for improvement of these institutions in terms of equipment, equipment, and tools. Few colleges have a smaller number of computers in the lab, which poses a challenge for the teacher to cater to all students. Most ELTs reported network connectivity and poor signals, and this challenge was also observed. If the internet hangs or signals drop out while conducting an online activity, students are at a loss. During a lesson, the teacher was observed taking a test on the Kahoot game. The students were very excited. Suddenly the power was interrupted, causing the computer to shut down and take several minutes to boot back up. The teacher started the quiz again and skipped the question he had already answered. This proved that challenges like these disrupt lessons.

Hence, English teachers are concerned with social sciences background and barely have scientific or technical knowledge so most novice teachers feel difficulty finding appropriate material for specific student learning outcomes. Findings revealed that there is dire need to improve the attitude and capacity to handle ICT in English language teaching. Interviews revealed that English teachers at community colleges have a good command of incorporating ICT tools and techniques. However, when it comes to troubleshooting, most teachers struggle to fix the problems encountered during class. The importance of grip troubleshooting cannot be denied. Teachers may have some basic skills to solve small technical problems. However, ICT assistants have also been deployed in most universities to solve such problems better and more efficiently, thus avoiding waste of time.

Some interviews showed great concern about the cultural and contextual differences in the resources and materials available on the Internet. Therefore, the teacher must be very careful when choosing resources to adapt to his English class. The teachers expressed that if we want to use a different platform for different activities, we need to be selective when conducting a listening skills course, so we need the corresponding website that has the right accent, speech intelligibility and clarity was following the requirements of the grade and was also consistent with the student's learning outcome.

##### **4.9.1 Importance of English Teachers' Training for the Integration of ICT**

Teacher professional development is described as a life-long learning process that includes both collaborative and independent learning. Teachers described that there are various means of professional development programs in these schools, for example, the Aga Khan board offers annual training and need-based training. Most of the time teachers go for annual training and Sukkur IBA University also manages or organizes annual training for professionals.

It was concluded from the interviews that community colleges prefer in-house, needs-based training. In addition, the Aga Khan Exam Board, which is affiliated with community colleges, also facilitates the provision of training. However, it was found that this training is either general for all teachers or subject specific. Specifically, ICT-based training in connection with English subjects is not confirmed by teachers. Some of the teachers reported that they enrolled in MOOCs (Massive Open Online Courses) and RELO (Regional English Language Organization) Pakistan to improve their ICT skills through these online courses.

## **5. Discussion on Findings**

The study found that English teachers at IBACCs were overwhelmingly positive about the integration of ICT into English teaching. Interviews with ESL teachers showed that teachers' acceptance and willingness met expectations. Observation of English teaching using the observation tool confirmed the results that the majority of English teachers used ICT for English teaching. It was also observed that the emergence of COVID-19 increased ICT usage, particularly in the English language. According to the results of the COVID-19 epidemic (Akram et al. 2021), teachers and educators were encouraged to explore teaching techniques to provide students with the best possible education and to propose changes to their teaching. According to Moorhouse and Kohnke (2021), ICT-based teaching is very popular. This period has undoubtedly presented significant problems for both teachers and students, but it has also provided a clear opportunity to improve and explore the potential benefits of ICT-based teaching in English language classrooms. Analysis of semi-structured interviews revealed that none of the participants showed a negative perception of integrating ICT into their English lessons.

Furthermore, based on the results of semi-structured interviews, it is concluded that most English teachers were motivated to use ICT tools and techniques for teaching English. Institutional support, demand for student learning outcomes, and conceptually based teaching were identified as reasons for this motivation. A study conducted in Saudi Arabia (Kaid Mohammed Ali and Rashad Ali Bin-Hady 2019) also confirmed that teachers' motivation and positive attitudes help English teachers achieve better learning outcomes. Another study conducted in Ankara (Semerci and Aydin 2018) also found that English teachers have a highly positive attitude towards ICT adaptability in teaching English in the classroom. During the interviews, it was observed that the management of IBACCs promotes ICT integration for English teaching, considering language as a skill. When language is viewed as a skill, it requires multiple teaching methods and, according to English teachers, the motivation behind this is its ease. These results correlated with a study conducted in the context of Pakistan (Khan et al. 2018), which found that Pakistani teachers and students had good attitudes towards the use of ICT in ESL courses. A study conducted in Malaysia (Rahman et al. 2019) correlates with the framework of the current study and shows that the Technology Acceptance Model (TAM) is a broad and complicated model that focuses on processes related to perceived usefulness and ease of use.

Similarly, the current study found that IBA community colleges have better infrastructure in terms of ICT tools and have almost all the basic resources for the adaptability of ICT to their English teaching. Respondents to the semi-structured interviews confirmed that they had access to internet connections, a computer room with the latest computers, multimedia projectors, and speakers. The availability of language laboratories and smartboards was also reported at some universities. Class observation confirmed the availability of resources. However, most universities did not have language laboratories or smart boards. The study correlates with (Brun and Hinostroza 2014) who stated that in terms of ICT resources, support, guidelines, and teachers' self-motivation about ICT-

related skills, we found an overall positive situation for the pedagogical use of ICT in such Institutions. Teachers reported using various ICT resources relatively frequently and attaching great importance to students' ICT learning.

Likewise, the current study aimed to examine English teachers' perceptions and challenges in adapting information and communication technology. This section of the study explains some new findings that have not been reported in the context of Sindh/IBACCs. The qualitative semi-structured interviews with upper secondary and upper secondary English teachers have shown that, in addition to content and pedagogical knowledge, the English teachers' professional training also plays a major role. According to the findings, IBA Community Colleges in Sindh provide proper training to teachers i.e., H. internal training, annual professional development programs at Sukkur IBA University, training by the Aga Khan Examination Board and third-party training as required. However, it was confirmed that training specifically on ICT integration for English teachers did not continue to be a focus. English teachers are only offered content or pedagogy-based training. This was also confirmed during lesson observation that some teachers have problems using ICT tools during lessons. This finding correlates with studies conducted in Pakistan (A Mirani et al. 2021, Shabbir and Khan 2019).

According to these studies: *“specific technical training programs need to be established to increase the technical abilities of English instructors who come from a social science background and promote a better attitude toward ICT among ESL teachers”*.

The current study found that English teachers need specialized technical training as well as pedagogical skills to effectively integrate ICT tools and techniques to achieve better learning outcomes and reduce the challenges faced by ESL teachers in using ICT.

The study revealed that English teachers at community colleges were overwhelmingly positive about the integration of ICT into English teaching. According to Moorhouse & Kohnke (2021), ICT-based teaching is very popular. This period has undoubtedly presented significant problems for both teachers and students, but it has also provided a clear opportunity to improve and explore the potential benefits of ICT-based teaching in English language classrooms.

The current study also found that community colleges have better infrastructure in terms of ICT tools and have almost all the basic resources for the adaptability of ICT to their English teaching. Respondents to the semi-structured interviews confirmed that they had access to internet connections, a computer room with the latest computers, multimedia projectors, and speakers. The availability of language laboratories and smartboards was also reported at some universities. Class observation confirmed the availability of resources. According to these studies specific technical training programs need to be established to increase the technical abilities of English instructors who come from a social science background and promote a better attitude toward ICT among ESL teachers.

Through the thematic analysis of this qualitative exploratory case study, it was also found that community colleges have better infrastructure compared to public schools in Sindh. They have all the basic facilities including internet, computers, multimedia projectors, sound systems, etc. but despite all these facilities, there is still enough room for improvement. Power interruptions, low network speeds, and the reduced number of computers in some colleges also pose challenges for ESL teachers. One out of twelve universities has a smartboard and a separate language laboratory. However, at the remaining 11 colleges, ICT-based language teaching mostly took place in a computer lab or classroom using multimedia. The ESL teachers reported that the unavailability of a computer lab was due to the activities of other subjects, e.g., B. computers or science, is also a discouraging factor. Another challenge for ESL teachers was that curriculum completion and contextual differences between students were also reported as barriers to integrating ICT into ESL. This finding correlates with a study (Azmi 2017a) that confirmed

that the use of information technology in language teaching promotes autonomous learning, maximizes intended outcomes, encourages learners, and helps them improve their performance in ESL classes.

**Table 2. Findings at a Glance**

Categories/Themes	Findings through Interviews	Findings through classroom observation
<b>Perception of ELT for ICT integration</b>	The majority of ELT have a positive perception to integrate ICT in their ESL classes.	Teachers were found enthusiastic about the use of ICT.
<b>English Teachers' attitude, motivation, and acceptance to use ICT</b>	Most of the ELT embraced the ICT either by their willingness or college administration was compelled to adapt due to the need for time. Teachers expressed great motivation for ICT	ELT was found self-motivated as ICT helps them to engage learners in real-time which is the demand of the college.
<b>Teachers' readiness to integrate ICT for teaching English</b>	Due to the prevailing situation of COVID-19 almost all teachers took initiative to transform their traditional methods and move toward ICT-based teaching.	Although teachers have initiated to integrate of their lessons it seemed there is a need for time to fully embrace this new dimension.
<b>Available resources for ICT incorporation</b>	All the colleges have a good better environment in terms of ICT resources. Most colleges have computer lab(s), having a sufficient number of computers, multimedia, and other peripherals.	ELT might have an English language lab but most of them have one or several computers labs. These labs are generally the place where ICT-based lessons occur majorly.
<b>Challenges faced by English language Teachers while adapting to ICT</b>	Although, fewer challenges have been reported by ELT. The most common challenges are interrupted power supply, poor connectivity of the net, fewer numbers of computers, etc.	Contextual differences among students seemed a major concern. Managing time during class while integrating ICT is also questionable. Covering the syllabus and meeting criteria set by the college may also be found challenging.
<b>Lack of resources and infrastructure</b>	Although, good infrastructure but yet to be developed more.	Language labs and smart boards are not observed in most colleges.
<b>Lack of competence</b>	Teachers expressed that they have good ICT and pedagogical skills to integrate ICT in their ESL classes	Teachers are familiar with the basic skills of ICT and have diverse experiences but to be ICT experts they still have room.
<b>The ability of teachers for ICT related issues</b>	Teachers can handle minor issues that occur during classes and may handle multi-media, computer, and tools-related issues.	Teachers seemed not good at troubleshooting. However, ICT assistants are available to help them to figure out the major issues.
<b>English teachers training for the integration of ICT:</b>	Mostly in-house need-based training is conducted by the head of the college or field expert. IBA U also conducts annual ICT-based training.	The teacher's lesson delivery showed that they have a good grip on their subject due to good training. Experiences

## 6. Conclusion

A thorough literature review revealed that English teachers' motivation, acceptance and attitude play a major role in integrating ICT into their English teaching. Furthermore, in-depth interviews with English teachers at community colleges revealed that they have integrated ICT into their English teaching using various tools and techniques. Regarding the challenges of integrating ICT for English language teaching in community colleges, it

was confirmed that these colleges have the basic infrastructure for ICT integration. Power outages, slow internet speeds, and the unavailability of language laboratories at universities are major challenges that hinder smooth integration and timely completion of the task. On the other hand, most English teachers are immigrants to technology, which has created a gap. Compared to students, teachers use less technology. Teaching English language considered a lingua franca, through the integration of ICT proved to be very beneficial, especially in community colleges as these colleges are affiliated to the Agha Khan University Exam, which also focuses on interactive and technology-based teaching. This is one of the reasons why the management of these colleges places great emphasis on integrating technology to teach English as a language skill and not just as a subject. It can also be concluded that adapting ICT at the national level will also lead to better results. Pakistan's national policy and national curriculum can be aligned considering the global need for integration of ICT, particularly for language teaching. To achieve the desired results, English teachers must receive professional training specifically considering the TPACK and TAM model. This study has implications for policy and practice. Therefore, implications for future research are provided below. Policymakers and curriculum developers can review ICT integration policies and procedures to treat the English language as a skill, provide a separate guide for English teachers, and mention appropriate platforms, programs, blogs, websites, etc. to achieve effective learning outcomes using ICT for students to achieve. Future research can be conducted to identify specific English proficiency, e.g., B. Reading comprehension, essay writing and listening comprehension through ICT integration. This will help provide detailed information on English language teaching and learning. In addition, some researchers also suggest conducting a mixed methods study to determine the perceptions of English teachers on a larger scale across the country and to identify the challenges and benefits of using ICT for English teaching. In addition, the experimental study can also be conducted using the experimental group and the control group to determine students' perception of learning outcome.

Thematic analysis findings and observation of the classroom suggest that this study has found positive perception, attitude, and readiness to use ICT tools and techniques to teach English language skills. Although, IBACCs have better resources in terms of ICT still some challenges of power interruption, poor internet connectivity, and unavailability of language labs are hindrance factors to integrating ICT into ESL teaching which leads to non-completion of syllabus provided by the management. However, ESL teachers confirmed that ICT usage attracts learners, provides better learning outcomes for English language skill development. Furthermore, it was also discovered through this case study that teachers' technical training played a great role to motivate teachers. English language teachers of IBACCs attended various training provided by the management. However, training specifically for ESL teachers regarding technical skills is needed to be focused more, according to the teachers. To conclude English teachers of IBACCs have a positive perception and attitude to motivate them to integrate ICT into their English language skills. Observation of classes also confirmed the same. Poor connectivity issues, power interruption, and unavailability of a language lab were reported as major challenges to complete the tasks timely. English teachers' specific ICT-based technical training related to SLOs has reported the need for ESL teachers.

## **7. Recommendations**

There are a few recommendations for the motivation of English teachers to integrate ICT in a better way.

**a.** Current study suggested that government should take strict measures to provide basic infrastructure of ICT tools and techniques to all public schools as English teachers may be able to integrate into all schools due to its positive outcomes.

b. This study suggested that English teachers' technical training is very important specifically focusing on Technical, Pedagogical, and Content Knowledge as they may be able to cope with the ever-changing teaching trends especially related to language teaching.

c. This study suggested the Directorate of IBA Community Colleges facilitate the colleges with separate English language labs as English teachers may have an appropriate place to execute the ICT-based language activities. Furthermore, it is also suggested that computers used for ICT integration may be supplied with backup power adapters to avoid power interruption which interrupts the work completion due to power tripping. Moreover, the Directorate of IBA CCs might look into the teachers' training programs. Training might be subject-specified. English teachers may be provided specific technical ICT-based training following TPACK and TAM model to ensure ICT-based teaching and learning.

d. Teachers' standards may be aligned more concerning technical knowledge as this is an emerging field, especially for English language teachers.

e. Furthermore, the current study suggests the government/institutions add some parameters of ICT/technical skill test while recruiting the English teachers to give priority to technically trained English teachers for better results.

f. In this era of information communication technology, where the students are native to technology English language teachers must plan ICT-based language teaching/learning to arouse the interest of students and use different platforms.

## 7.1 Implications of Study

This study has implications for policy and practice. Therefore, the implications are given below for future research. Policymakers and curriculum developers may review the ICT integration policies and procedures to treat the English language as a skill and provide a separate guideline for English teachers and mention appropriate platforms, programs, blogs, sites, etc. for achieving student effectively learning outcomes using the ICT.

Future research can be conducted to know specific English skills i.e., reading comprehension, essay writing, listening through ICT integration. This will help to know in-depth detail about the teaching-learning of the English language. Moreover, some scholar also suggests conducting a mix-method study to know the perception of English teachers on a larger scale throughout the country to know the challenges and advantages of using ICT for teaching the English language. Moreover, the experimental study may also be conducted by using the experimental group and control group to know the perception of students learning outcomes.

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Examples in: English

Applicable Languages: English

Applicable Level: Secondary and Higher Secondary