



# TECHNOLOGY INTEGRATION IN ELT: SWOC ANALYSIS

An Analysis of Strengths, Weaknesses, Opportunities and Challenges of Technology  
Integration in ELT

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**Abstract:** The objective of this paper is to perform a systematic review of selective literature. For the systematic review, the articles which were published since 2018 were selected exclusively from Google Scholar using the keywords “Technology Integration” that appears in the titles only. For the selection of articles, inclusion-exclusion criteria were set and 16 specific articles out of 199,000 general articles were selected for meta-analysis. For the analysis of the available data, thematic content analysis was used for SWOC analysis to analyse the data. The available data were scanned for emergent thematic contents and each of the emergent content was further analysed. The paper is hopeful that challenges can always be transformed into opportunities. The paper concludes that technology integration has a better prospect for the future in the field of teaching-learning activities, and then sets some recommendations for the stakeholders of technology integration.

**Index Terms** - empirical review; ICT; PRISMA; systematic review; technology integration; thematic content analysis.

## 1. INTRODUCTION

Technology makes a language classroom more effective and motivating for the students, making the teacher comfortable with devising and using teaching-learning activities. When integrating technology in an English language classroom, a language teacher uses the technology to enhance the student’s learning experience. A language teacher utilizes several types of technology in the classroom, including a virtual classroom, that motivates and engages learners actively with their learning objectives. The use of Information Communication Technology (ICT) like interactive boards, tablet PCs, smartphones and the Internet and computers in a classroom makes the classroom more interactive, thought-provoking, and effective. The integration of technology also makes a classroom more inclusive with the help of assistive technology for physically challenged learners. The integration of technology in an English language classroom turns the language classroom into a language lab in which the learners gradually develop their expertise in the language to enable themselves to compete in the era of global competition. The use of ICT tools and integration of technology makes an English classroom as it has never been before.

### 1.1 Statement of the Problem

Technology integration makes a language classroom effective shifting the emphasis from the teacher-centred methodology to the student-centred methodology. Integration of technology in teaching-learning activity always positively affects the teaching-learning environment. However, technology integration always does not get the privilege of selection from the instructors and learners because of its weaknesses and challenges. A system does not operate smoothly and systematically until and unless all its parts function properly. Technology integration also has some loopholes that are worth researching. This paper sheds light on technology integration’s strengths, weaknesses, challenges, and opportunities. The paper hopes to pave the way for the successful integration of technology and set some course for action for future research in its conclusion.

### 1.2 Purpose of the Study

This article aims to explore the strengths, weaknesses, opportunities, and challenges in technology integration in education, especially in English language teaching and learning. The article reviews available literature for exploring the strengths, weaknesses, challenges, and opportunities and sets the path for thematic analysis of the content based on the pertinent theme by clustering and re-clustering it based on emerging themes.

### 1.3 Research Questions

This review article will focus on the strengths, weaknesses, challenges, and opportunities in technology integration in education, especially in English language teaching and learning. The paper will try to find answers to the research questions below –

RQ 1. What are the strengths, weaknesses, challenges, and opportunities in integrating technology into education, especially in English language education?

RQ 2. What pertinent and emerging themes can be ascertained while exploring the themes of strengths, weaknesses, challenges, and opportunities in integrating technology into education?

### 1.4 The Rationale of the Study

The integration of technology in language teaching has invited several researchers to investigate the area as a potential for their research for a long time. Vikash Kumar Jhurree concludes in his research that the developed countries also have similar concerns in technology integration like teacher apprehension and motivation, and lack of appropriate educational software and technical support. They also face similar challenges of adequate teacher training, inadequate infrastructure, learner-centred instruction, and proper assessment procedures in schools (2005). This shows that the issues and challenges in technology integration are similar in developed and developing countries. Agyei and Voogt conclude that the prospective teachers in Ghana showed more anxiety and were less technology competent than the practising teachers (2010). When you look for the articles under the keywords “technology integration” you will get over a million hits. Adding an article over a million other articles is not a clever idea. In such circumstances, a review article about the area of your interest will do justice in the field of research.

## 2. LITERATURE REVIEW

Many scholars use the ‘use’ of technology and the ‘integration’ of technology interchangeably although there is an apparent distinction between these two terms. By ‘use’ we understand the occasional application of ICT tools without any significant contribution to the teaching-learning process, in which technological usage is random and the focus is simply on the application of the ICT tools rather than the improvement of the learning process. When using technology in the classroom, only the instructor uses technology to instruct the learner on the content limiting the learners’ access to the tools. In such a case technology is peripheral to the learning activity, and more instructional time is spent on learning how to use the technology. On the other hand, the ‘integration’ of technology ensures the maximum application of ICT tools. The integration of technology gives a significant contribution to the teaching-learning process. The use of technology is systematic, planned, and purposeful, and the focus is on using technology to create and develop new thinking processes. Both the instructor and the learners make efficient use of technology to engage the learners with the content rather than giving information about the content. In such a case, technology is essential to the learning activity, and more instructional time is spent on teaching-learning activity rather than learning how to use technology.

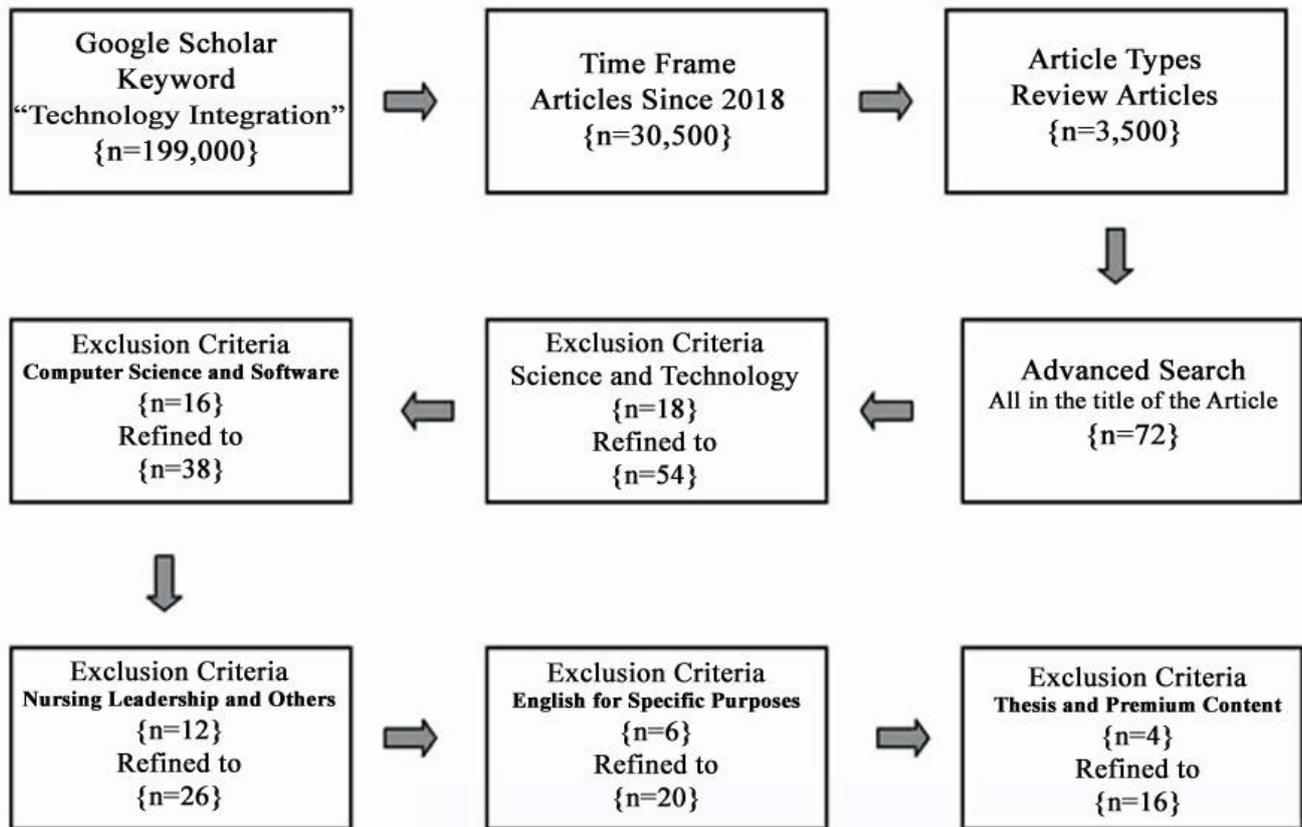
Educational technology is not a new phenomenon in education. These tools have been used since as early as the time of the cave paintings. The historical record of educational technology starts with an educational film (the 1900s) or Sidney Pressey’s intellectual teaching machines in the 1920s. The first historical record of large-scale use of technologies can be traced back to the time of the second world war in which the soldiers were trained through “training films and other mediated materials” (Gupta, 2013, p. 5). These days teachers and learners are working with various technological and ICT tools which were once unimaginable, and still they are in the process of being developed. The teachers and the learners have a wide range of technological and ICT tools, from a simple voice recorder to presentation-based technologies, Computer-based tools (CBT), and Internet-based tools (IBT), to choose from.

### 3. DATA COLLECTION

This paper attempts to perform a systematic review of the available literature from 2018 till the present under the topic “technology integration” after going through a systematic article refinement process. For the selection of literature, the researcher used Google Scholar for the repository of research articles. The search keyword “technology integration” was used, and that called up 199,000 hits on Google Scholar. The timeframe was changed to “since 2018” which refined the number to 30,500 hits. The article type was changed to “Review Articles” which refined the number to 3,500. The advanced search option on Google Scholar was used and the keywords were looked only in the titles of the research articles. Advanced Search under the topic refined the number to 72 hits. After finding 72 available articles, exclusion criteria were set. Since the focused interest of the research was on ELT and Education, articles from other areas and subjects were excluded. 18 Articles from Science and technology were excluded that refined the number to 54. Similarly, 16 articles from the area of Computer Science and Computer Software were excluded refining the result to 38 articles. 12 articles were excluded from the area of Nursing, Healthcare and other areas like Industry, and environmental science which refined the number to 20. Finally, 4 articles were Theses and premium content which were excluded as well refining the number to 16 articles which were selected for the review. A detailed process of article refinement is illustrated in Figure 1 below.

Figure 1:

Article Refinement Process



The resultant articles vary in methodology, research design, data collection and analysis. After determining the articles for review, they were arranged and tabulated for analysis and discussion. The arrangement of the research articles was done in chronological order from the year 2018 to 2022. The tabulation details with the author's name, year of publication, methodology, research design, data collection, and data analysis are listed in Table 1 below.

Table 1  
Literature Selected for review

SN	Author	Methodology	Design	Data Collection	Data Analysis
1	(Ali & Azhar, 2018)	Qualitative	Exploratory Case Design	Semi-Structured Interview	Cross-Thematic Analysis
2	(Al-Kadi, 2018)	Qualitative	Literature Review	Random Literature Selection on Integration of Technology and ICT in education	Content Analysis
3	(Bakar et al., 2018)	Quantitative	Literature Review	Articles accessed from October 2017 until January 2018 from Google Scholar and ERIC	Thematic Content Analysis
4	(Burch & Mohammed, 2019)	Qualitative	Literature Review	Literature regarding classroom technology integration and acceptance published during 2012 - 2018	Content Analysis
5	(Singh, 2019)	Qualitative	FGD	6 groups of students in Kathmandu valley	Thematic Content Analysis
6	(Alkhezzi & Ahmed, 2020)	Qualitative	Review	Available Literature that discussed technology	Thematic Content Analysis
7	(Joshua et al., 2020)	Qualitative	Review	Purposive selection of 15 instructional models	Comparative Content Analysis
8	(Abbasi et al., 2021)	Mixed Method	Survey	39 Tertiary Level Pakistani ESL educators Questionnaire and Interview Protocols.	Descriptive Analysis; SPSS 22
9	(Akcil et al., 2021)	Qualitative	Literature Review	Purposive selection of available literature	Descriptive Compilation pattern
10	(Iqbal et Al., 2021)	Qualitative	Literature Review	Advanced Search in Web of Science -with main citation index SCI-Expanded, SSCI, A & HCI and ESCI	Content Analysis
11	(Pagunsan-Sumbise & Montecalvo, 2021)	Mixed Method	Descriptive Survey	Questionnaire	Descriptive Statistical Analysis
12	(Sarip@Khalid & Aziz, 2021)	Qualitative	Literature Review	Purposive selection of available literature	Content Analysis
13	(Syathroh et al., 2021)	Qualitative	Literature Review	Purposive selection of available literature	Content Analysis (Creswell & Clark, 2010)
14	(Akram et al., 2022)	Qualitative	Systematic Review	Available literature in the past 5 years in Pakistan	Content Analysis (Onwuegbuzie et al., 2012)
15	(Kandel, 2022)	Qualitative	Literature Review	Purposive sampling of literature	Thematic Content Analysis
16	(Pelila et al, 2022)	Qualitative	Literature Review	Inclusion - Exclusion Criteria 46 articles (19 qualitative, 27 quantitative)	PRISMA Analysis

## 4. DATA ANALYSIS

For analysing the data, the selected articles were scanned for their contents and the contents were arranged from the perspectives of strengths, weaknesses, opportunities, and challenges. The categorization of SWOC resulted in some emerging themes under each of the themes from strengths, weaknesses, opportunities, and challenges. The findings and the discussion of the content thus emerged are discussed here.

### 4.1 Findings

Data identification and tabulation are important in a research paper as the research finding and conclusions are based on them. Hence, a research paper is never complete without data analysis and interpretation. Available data from the conclusion section of the research articles selected for analysis were first organized for SWOC analysis under four broad categories of themes – strengths, weaknesses, opportunities, and challenges. The thematically compiled data were further investigated for finding persistent and emerging themes. The emerging themes for strength were identified as globalisation and policy support, motivation for learners and instructors, and supportive role in positive transformation; the themes that emerged under weaknesses were identified as lack of technical and financial support, clarity in policy and guidance, and inadequate competence and anxiety of the instructors in using technology. Similarly, the emergent themes of opportunities were opportunities for teachers and learners, opportunities for institutions and policymakers, and opportunities for novelty and innovation, and finally, the emergent themes of challenges were deficiency and the digital divide, the complexity of technology, and the attitude of administrators and policymakers.

### 4.2 Discussion

When analysing the available data for further discussion it was found that most of the researchers focused on the challenges of technology integration. The order of focus on the broader thematic categories was found to be starting from challenges, and then subsequently going down to strengths, weaknesses and opportunities as the discussion below displays.

#### 4.2.1 Strengths of Technology Integration

Technology integration in a language classroom has been a matter of discussion in the modern globalised world because of its strength in supporting teaching-learning activities in the classroom. Ali and Azhar (2018) commend the clear instructions in the policy documents regarding technology integration. Al-Kadi (2018) mentions the positive impact of globalisation in bringing motivation and a supporting position for the benefit of instructors and learners with the help of technology integration. Bakar et al. (2018) investigate teachers' self-efficacy and self-confidence brought about by technology integration. The diversity of theories supported by technology integration in language classrooms set a path in predicting and explaining various human behaviours in different contexts that help the teachers and learners gain from their classroom practices (Alkhezzi & Ahmed, 2020). Classroom teachers are motivated as they experience high regard for technology translated into higher purposes aligning them towards technology integration. It offers a lot of possibilities for both teaching and learning languages (Pelila et al., 2022; Akcil et al., 2021). Integration of technology is beneficial both for the teachers and students as they will be motivated in using technology for improving their skills, expertise and fulfilment of their classroom objectives. Some emerging themes appeared from the overview of the overall strengths of technology integration in classrooms. The themes like globalisation, policy support, motivation for learners and instructors, and the supportive role of technology integration emerged from the analysis. These themes are covered here in detail.

#### *Globalisation and Policy Support*

The world is getting narrower due to globalisation. The physical distance between people does not matter much today, thanks to globalisation. People are pacing up with the technologies that are coming up in any part of the world without any concern whether they are from their domestic area, neighbouring area or any part of the world. The horizon is continually expanding due to globalisation. This expanding horizon is bringing positive changes in the ELT environment by bringing in new technologies to be integrated into the classroom (Al-Kadi, 2018). Since technology integration is a modern and global phenomenon, educationists and policymakers provide complete support by making policies for integrating technology into their school curriculum and policy making (Ali & Azhar, 2018). Schools and educational institutions should pace up with the emerging trends in ICT education. For this school administrators and teachers should foster partnerships with GOs, NGOs, and other private organizations in the acquisition, upgrade and maintenance of ICT infrastructures in schools. Teachers and students must be given equal opportunities to use ICT infrastructure without limiting the use of ICT laboratory rooms solely for ICT classes and ICT coordinators' use. This will bring up some positive changes in educational institutions and adds up to their strength (Pagunsan-Sumbise & Montecalvo, 2021). The policies made for integrating technology, motivating instructors, and enthused learners will transform the teaching-learning atmosphere into a productive environment.

### *Motivation for Learners and Instructors*

The integration of technology makes a classroom into a learning centre by transforming the teacher-centred classroom into a learner-centred workplace. The changed focus will be beneficial not only to the learners but also to the instructors. In a technology-integrated classroom, the teacher's role will be just like that of a facilitator. It eases the instructors' herculean task by converting it into simple instruction. The teachers don't have to struggle with the materials as they will be able to use readymade materials ready to be implemented in the classroom.

Researchers have identified the role of motivation in the technology-integrated classroom. Al-kadi (2018) and Iqbal et al. (2021) observe that technological tools maximize genuine opportunities and lots of possibilities for teachers and learners in conducting ESL or EFL activities. The students can benefit from technology-based activities if those activities are connected with their interests. It helps them to learn even better than what their instructors expect them by using their creativity, and communicative ability in a student-centred environment, and it allows the teachers to be more creative, effective and motivating. In a similar vein, Syathroh et al. (2021) hold that technology enables teachers and learners to interact communicatively, provides understandable input and output, aids learners in developing thinking skills, makes learning and teaching more student-centred, promotes learners' autonomy and makes them feel more comfortable, and increases learners' willingness to learn a foreign language.

Bakar et al. (2018) assert that self-efficacy and self-confidence in the use of technology motivate, facilitate and provide an impact when teachers integrate technology into their classroom activities. Joshua et al. (2020) note that ICT integration models have peculiar similarities and differences, providing a helpful understanding of the instructional system design. The instructional models rooted in ICT integration can be used in both designing unit plans and single lesson plans, so the teachers should be encouraged to adopt them. Pagunsan-Sumbise and Montecalvo (2021) hold that schools and educational institutions must be equipped with internet connectivity to bring the world into their classrooms. Schools with no internet may have to seek assistance from government agencies like the Department of ICT. Teachers should be trained and followed up, especially on ICT integration, its content, pedagogies, and strategies that are aligned with the curricular goals. Akram et al. (2022) hold that the inclination of teachers in integrating technologies assists learners in acquiring learning objectives in several ways. Pelila et al. (2022) believe that the use, attitude and facilitating conditions of classroom teachers regarding technology translate into higher purposes in the classroom. The professional factor of the instructors conveys a more authentic relationship with technology integration. Competence among teachers in using technology also plays a significant role in successful technology integration.

### *Supportive Role in Positive Transformation*

Integrating technology in a classroom environment brings some positive transformation and makes the classroom a learning centre for both the teachers and the learners. Teachers can learn and update their knowledge with new technologies that are developing at the pace of time and modernization. The learners can enable themselves to seek and gather knowledge in a learner-centred environment. Al-Kadi (2018) remarks that there has been a considerable change in technology. Earlier, technology was employed to convey and store data, but modern ICTs have widened the spectrum of innovation by including email, synchronous chat, asynchronous discussion groups, and many types of web-based tools. Alkhezzi and Ahmed (2020) observe that the diversity of theories, on which technology adoption and integration models are rooted, sets a path in predicting and explaining various human behaviours in different contexts. Joshua et al. (2020) believe that the instructional models in technology play a supportive role for the teachers in developing and designing unit plans and single lesson plans for use in their classrooms. Akcil et al. (2021) conclude that in-service and prospective teachers must be equipped with simple, simple-to-use, free and accessible tools that can be integrated instead of independent web tools to motivate them to integrate technology into their lessons. Sarip@Khalid and Aziz (2021) observe that technology integration has brought some positive changes in teaching learning activities as it was found that the explicit method is the most influential instruction strategy in vocabulary teaching. Kandel (2022) is hopeful that by mitigating challenges with a proper system, all the challenges can be transformed into opportunities. Thus, we can observe that the integration of technology plays a supportive role in teaching-learning activities.

#### *4.2.2 Weaknesses of Technology Integration*

With the rise of the sun, the darkness shifts away. The world is lit by the splendid brightness of the sunlight, but there might be some hidden corner where the light of the sun may not reach. Darkness can still be seen lurking around such dark nooks and corners. Integration of technology has some serious corners that can be studied under weaknesses of technology integration. The researchers have identified weaknesses, especially in the lack of supporting resources, training and workshops, financial and technical support, clarity in policy and

guidance, inadequate competence, and hesitation of the teachers in using the available resources. These findings are further clustered into thematic divisions below.

#### *Lack of Technical and Financial Support*

Educational institutions mostly suffer from a lack of technical and financial support. Few state-controlled institutions are struggling with the lack of trained manpower. Donor-driven training and training equipment are sometimes made available for such institutions but the trained instructors are reluctant to use the skills in the absence of proper follow-up after the training, and the equipment keeps on rusting in the absence of a competent operator. Ali and Azhar (2018) have identified the lack of technical and financial support for integrating technology in the classrooms. Sing (2019) finds that teachers need professional training to be updated for technology-integrated instruction. Pelila et al. (2022) observe that schools are facing barriers that range from the availability of support in facilities, time, and even experts to troubleshoot fundamental technological problems during classes despite the efforts to effectively integrate technology in the classrooms. Pagunsan-Sumbise and Montecalvo (2021) observe that ICT facilities and equipment are inadequate. Akram et al. (2022) find that lack of resources, leadership support, accessibility of ICT infrastructure, inadequate time, unclear policies, professional development, technical support and lack of appropriate pedagogical models are hindering a successful technological integration in ELT classrooms.

#### *The clarity in Policy and Guidance*

Teachers and instructors in the modern globalised world suffer from technological anxiety because of the explosion of technological inventions. The teachers are trained to use technology after a much-sought training, but after the training transfers to their actual classrooms, they find out that the training they have taken is outdated, and the equipment that is available for them is more advanced than the ones they took training from. In the absence of clear policy instructions and guidance, technology integration cannot reach its far-fetched results. Al-Kadi (2018) warns that ICT does not automatically lead a learner to better language learning, it must be wisely applied and utilized to gain from it. Alkhezzi and Ahmed (2020) have observed that technology adoption and integration models are rooted in a diversity of theories, which sometimes might confuse the instructors while making a choice. Iqbal et al. (2021) warn instructors that they must remember technology is simply a tool and that students' learning growth depends on the proper and creative use of the technological tools. Hence, it is observable that in the absence of clear instructions on how to use the technological tools and the policy instructions of policymakers regarding technology integration the task becomes challenging.

#### *Inadequate competence and Anxiety*

Modern and advanced tools used in technology integration require specific training to operate the tools and implement the technology in the classroom. The anxiety of the teachers due to their lack of competence in using technological tools adversely affects technology integration in the classroom. Singh (2019) concludes that teachers need professional training to be updated for technology-integrated instruction. Akcil (2021) observes that the in-service training programmes did not reach their exact goals as the trainers were inadequate in integrating technology into their courses and lacked technology knowledge. Pagunsan-Sumbise and Montecalvo (2021) observe that the teachers are weak despite being practised to a moderate extent. The teachers rarely use the emerging trends in ICT integration in education.

The darkness is not always dismal. It is said that the shadow is the greatest teacher of how to come to the light. The darkest night makes it possible to see the stars brighter. Integration of technology does have some serious concerns and by identifying the darker corners, we can illuminate with the lights and see what we have been missing in the darkness. The teachers, learners, educationists, and policymakers should look into the darkness to find a new way out for brighter and more successful technology integration in the future to come.

#### *4.2.3 Opportunities from Technology Integration*

Technology integration in education has brought many opportunities for teachers, learners, policymakers and educationists. The integration of technology makes the classroom practice motivating engaging and problem-oriented. The learners can initiate learning by involving in the process as the classroom gets more and more learner-centred because of the integration of technology. The opportunities that the stakeholders in education can be seen from the point of view of those who are directly or indirectly involved in the field of education. When sifting through the articles it is to conclude that these opportunities should be identified from the perspectives of teachers and learners who are directly involved in the teaching-learning process, the institutions and the policymakers who play an influential role in the process, and the teaching-learning pedagogy that always keeps upgrading and updating.

### *Opportunities for Teachers and Learners*

As observed earlier, teachers and learners are directly involved in the teaching-learning process. Integration of technology brings a multitude of opportunities for both the teachers and learners to get updated with the knowledge and the skills of delivering the knowledge. Al-Kadi (2018) observes that mobility of the modern life is driving language learning into a boundless arena of classrooms and textbooks bringing a horde of opportunities for the learners to pace up with the updated and advanced learning environment. Similarly, it also updates teachers' skills and makes them updated with newer areas of knowledge to apply in their classrooms. Iqbal et al. (2021) observe that appropriate teacher training will enable teachers to conduct teaching-learning activities effectively so that their students may benefit from technology. Kandel (2022) holds that the access and availability of information and communication technologies and tools have connected the school with the outside world and the teaching-learning process has even gone beyond the classroom setting.

### *Opportunities for Institutions and Policymakers*

Educational institutions, educationists and policymakers are supportive factors in the field of education. School administrations are attracted towards newer technologies with the hope that the technology will enable their classrooms to be able to compete with institutions all over the world in this global arena. They are always enthusiastic towards integrating technology into their institutions. They spend a large sum of money on technology, teacher training, and technological support. Ali and Azhar (2018) hold that the institutes that adopt technology integration have the opportunity to be proactive and align the in-service training with the guidelines of policy objectives to improve the scenario of technology integration in the institutions. The policymakers can also adapt the policies to cope with the modern trend of development and use every possible element to enhance technology integration in educational settings in the modern global world. Kandel (2022) observes that full cooperation and support from the school administration, positive attitude of teachers, continuous training to update teachers' ICT skills, training on when, when not and how to use ICT tools appropriately, the appropriate use of interactive websites, email, discussion boards and redesign of educational infrastructure, teacher training, curriculum structures and materials, classroom practices and modes of assessment at all levels are required to mitigate the challenge of providing access to ICT to all and implementing them in teaching learning effectively. Policymakers and institutions should look into this regard.

### *Opportunities for Novelty and Innovation*

Globalization is bringing in innovation now and then. The technology that we are using today was unthinkable in the past and it will be obsolete in no time when new advanced and updated technology arrives. Once pagers were effective means of wireless communication, but now nobody uses a pager unless it is for some specific purpose. Technology integration makes use of technology and it is the technology that is gradually developing and becoming advanced. Technology integration in the classroom provides an opportunity for the teachers, students and stakeholders to get acquainted with innovations and technologies. Al-Kadi (2018) observes that technology integration is a work in progress that facilitates no conclusions, and it does not recommend a watertight theoretical framework. This gives room for integrating new and advanced technology demanded by the situational environment. Akram et al. (2022) notice that the changes brought by the COVID-19 pandemic brought an opportunity to enhance the effectiveness of teaching-learning practices through ICT integration at all levels. Of course, the pandemic was a black spot for educational opportunities, but thanks to technology, teaching-learning activities never stopped even during the pandemic-induced lockdowns. The technology kept on developing and the virtual environment became more and more student-friendly, and easier for teachers and instructors to adopt and adapt technology to meet their objectives.

#### *4.2.4 Challenges of Technology Integration*

A famous African proverb goes "Smooth seas do not make skilful sailors". This is true that challenges define our success. The more we struggle with the challenges, the more we find the way out of them. Technology integration in the language classroom is of course challenging. When looking at these challenges from different angles, three thematic categories emerge. They are deficiencies and the digital divide, the complexity of technology, and the attitude of educationists and policymakers. They are discussed hereafter.

#### *Deficiency and Digital Divide*

No one is indeed perfect in the world, and nothing ever can be perfect. Perfection is subjective to observers as it depends on how much they regard as perfect from their point of view. Technology integration also does have a deficiency. The instructors' knowledge of technology also plays a vital role in the effective integration of technology in the classroom, and so does the students' anxiety about using it in the classroom. The digital divide between the people with knowledge of technology integration and those who possess little or limited knowledge of technology affects technology integration in the classrooms.

Many scholars have discovered deficiencies in technology integration. Deficiencies in technical expertise, financial and technical support, training and resources hinder successful technology integration in language classrooms. Ali and Azhar (2018) observe the lack of competence in technological, technopedagogical and content knowledge of the instructors. The teacher's desire alone to use the technology does not help in the successful integration. Teachers' knowledge of technology, and pedagogy connected with technology play equally important roles in technology integration. Al-Kadi (2018) notices that many ESL and EFL contexts are not ripe for ICT integration. The pedagogies and technologies that are developed for the specific area may not be able to suit for all the contexts of ESL and EFL. The research also points out that extolling technology without addressing its challenges is a cautionary note. Though the technological tools maximize genuine opportunities to learn and teach L2, ICT does not automatically lead to better language learning, it has to be adopted and then adapted to suit the need of the teachers and learners. Alkhezzi and Ahmed (2020) have observed that successfully facilitating technology adoption must address a comprehensive, cognitive, theoretical, and technological understanding. In the absence of these qualities, technology integration may not be able to meet its objectives. Singh (2019) observes that EFL teachers' limited skills and knowledge of ICT integration could not utilize well the educative potentials of ICT tools.

In a similar vein, Pelila et al. (2022) note that the barriers to technology integration range from the availability of support in facilities, time, and even experts to troubleshoot fundamental technological problems during classes. When those barriers are dealt with, the teachers are further burdened when the resolutions are dealt with independently. The teachers will not be able to sort out and solve the problem if the same problems occur again. They will have to depend on technically expert resources to solve the same problem again, and this will subsequently be worsened by a lack of access to sufficient resources. Abbasi et al. (2021) note that educators face difficulties integrating technology because of external and internal hurdles like lack of technological resources, unavailability of different modes of technology, limited competency, and lack of training facilities. Similarly, Iqbal et al. (2021) and Akram et al. (2022) notice that several barriers hinder effective technology integration in teaching-learning practices, including lack of resources, accessibility of ICT infrastructure, inadequate time, professional development, technical support, and lack of appropriate pedagogical models. They also note that teachers must be well-informed and have professional qualities including technological competence. Kandel (2022) holds that low levels of digital literacy, insufficient access to ICT facilities, lack of technical support, unfavourable appraisal systems related to ICT use, difficulty in changing deep-rooted roles of teachers, schools and students and inappropriate beliefs and attitudes are posing challenges in the integration and implementation of ICT in the educational sector.

The knowledge of technology plays a significant role in the integration of technology. The anxiety of the teachers and learners in the use of technology results in inefficient integration of technology in teaching-learning activities. Burch and Mohammed (2019) claim that a gap exists between higher education administrators who see instructional technology as a key element of 21st-century learning, but the faculty have been slow to adopt and continuously use classroom technologies. As newer technology develops, there will always be a new and modified way of teaching-learning continuously that brings a digital divide among the instructors. Similarly, Singh (2019) has observed that insufficient ICT infrastructure at school, limited frequency of technology-integrated EFL classrooms and the digital divide were found to hinder the effective integration of technology tools in teaching-learning EFL. Pagunsan-Sumbise and Montecalvo (2021) have found that there is a gap in the way technology is utilized in education and the way it is perceived by generations of school administrators, teachers, and students. This gap will adversely affect successful technology integration. Kandel (2022) holds that ICT tools are not at the access to many teachers, students and even to educational institutions in developing countries like Nepal. Varying skills in using ICT tools have brought a digital divide among teachers, students, and even educational institutions.

### *Complexity of Technology*

The application and integration of technology is not easy task. Teachers who have good competence in technology will be able to integrate technology in their classrooms but those with technical deficiencies will not be able to integrate technology in their classrooms. Hence, the complexity of technology is an issue we should see when investigating the challenges of integration of technology. Ali and Azhar (2018) claim that without proper training, ELT instructors are not able to integrate technology effectively and that the low competence of the instructors brings hindrances to learning the language through technology integration. The complexity of using the technology makes the teachers' tasks difficult in the classroom, and they will have to seek assistance from the technical support team. Al-Kadi (2018) observes that successful integration of technology requires a balance between pedagogy and technology. When this balance cannot be maintained, it might bring problems in integrating technology. Similarly, Alkhezzi and Ahmed (2020) note that technology

adoption is a complex and inherently social developmental process; individuals construct unique yet malleable perceptions of technology that influence their adoption decision, and Singh (2019) observe that EFL teachers' limited skills and knowledge of ICT integration could not utilize the educative potential of ICT tools well.

Similarly, Joshua et al. (2020) claim that no single model is universally accepted as a perfect fit for facilitating classroom instruction. There are multiple models available for the teachers to choose from. With this availability of varying levels of quality of models, educators must be encouraged to be careful in their selection of a particular model to follow when designing instructions. Iqbal et al. (2021) observe that many teachers will need to be educated to effectively teach the four skills so that their students may benefit from technology. Similarly, Pagunsan-Sumbise and Montecalvo (2021) note that the teachers are weak despite being practised to a moderate extent. Teachers' transfer of knowledge from their practice can be instrumental only if they can apply the practice in their everyday classroom activities. Syathroh et al. (2021) believe that teachers and students should be qualified enough. They should be trained well. Lack of training may obstruct effective technology integration in their classrooms. The deficiency in expertise due to lack of training is another important factor that contributes to the failure of technology integration. The teachers, administrators, and policymakers should regard this in mind.

#### *The attitude of Administrators and Policymakers*

The success or failure of every programme is the combined and coordinated effort of every stakeholder. The teachers and the students are the direct subjects of technology integration in the classroom while the educationists and the policymakers play an equally important role in integrating technology into their educational programmes. Ali and Azhar (2018) warn that the institutes are dependent on donor-driven training for technology integration. They suggest that the institutes should not restrict themselves to such donor-driven training. They have also observed that the lack of funding has resulted in the inability to intervene to conduct action research and to design and implement in-service teacher training. Hence, the administrators and policymakers should see that the programmes do not lag due to the lack of funding. Akram et al. (2022) believe that one of the several barriers that hinder effective technology integration in teaching-learning practice is the lack of leadership support and unclear policies regarding technology integration. Leadership support, support from administrators and policymakers, plays an important role in technology integration. Kandel (2022) views that ICT tools are not much effective unless there is a clear and favourable ICT policy. Technology integration will be ineffective under unfavourable ICT policies in policy documents.

The challenges and weaknesses are apparent, but the need is to identify these challenges and find a way to come around them and set a new direction, a new path to reach the destination of technology integration and to meet the educational objectives set by curricular goals and policy intents.

## 5. CONCLUSION AND RECOMMENDATION

### *5.1 Conclusion*

Technology integration in a language classroom has been a matter of discussion in the modern globalised world. From the discussion above it can be concluded that countries have been supporting technology integration because of the influence of globalization. The learner learning in any nook and corner of a country has to compete with other students even in advanced countries. The technology that is integrated into the language classrooms has to be up to date and upgraded to meet the standard of globalization. The policies for education have to meet the global standard and the policymakers and administration should support technology integration in their programmes in educational practice. The school administration and the policymakers have to consider implementation, technical support and financial planning for the integration of technology seriously while making and implementing policies for educational practice. The integration of technology motivates the learners and the instructors in taking classroom activities to the height of success. Integration of technology turns a classroom into a learning centre, and that will be beneficial not only to the learners but also to the instructors. Integration of technology brings a positive and supportive role in a classroom environment helping the learners to sift through the ocean of information and get what they require to compete with the world outside. It helps the teachers to select an appropriate strategy from the myriad technological and methodological strategies to suit their environment and take a pride in the understanding of the world outside.

In the process of integrating technology, learners, instructors, and other stakeholders might come across obstacles and difficulties sometimes. The obstacles on the route make the travellers alert and that enables them to look for a way out of such obstacles. The problems the teachers and the policymakers face are the challenges that they have to overcome to get their objectives met. So, the teachers and the policymakers should turn the challenges into opportunities so that they pioneer the path for a better future of policymaking in the educational sector. This will of course help to create clear and transparent policies in technology integration in the education

of the country. Of course, we should keep in mind that the darkness is not always dismal. The darkest night makes it possible to see the stars even brighter. The teachers, learners, educationists, and policymakers should look into the darkness to find a new way out for brighter and more successful technology integration in the future to come.

It should be noted that globalization and the development of ICT and other technologies have brought a myriad of opportunities for learners, instructors, administrators, and policymakers in making their dreams realized. They can learn from the available resources and even research novelty and innovation with the help of technology integration. As we should know from the African proverb that the smooth seas do not make skilful sailors, the stakeholders of technology integration should always look behind what they have been doing, how far they have reached the objectives, and what obstacles are hindering them to meet their objectives so that they can come up with newer, fresher and better strategies to solve the problem and clear the obstacles that are preventing them from reaching to their destination. It is to observe that the challenges and weaknesses are apparent, but the need is to identify these challenges and find a way to come around them and set a new direction, a new path to reach the destination of technology integration and to meet the educational objectives set by curricular goals and policy intents.

### 5.2 Recommendation

After a careful examination of the articles listed in this research study, this systematic research concludes and sets up some of the guidelines for the stakeholders in technology integration. These recommendations are listed out below.

- Technology should be updated to meet the standard of globalization making a learner comparable to another learner anywhere in the world.
- The policies for education should meet the global standard and the policymakers and administration should support technology integration.
- The integration of technology turns a classroom into a learner-centred learning centre where the learners become the focus of the activities.
- Instructors, Administrators and policymakers should not dishearten themselves by obstacles; instead, they should turn the obstacles into opportunities.
- The stakeholders of the technology integration should always look behind the progress they have done, and the obstacles that are preventing them from reaching their goals.

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