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Teachers' Experiences and Challenges of Integrating ICTs in English Language Classrooms in Rural Schools of Nepal

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Abstract

This study explored the English language teachers' experiences of using Information Communication Tools (ICTs) in the rural schools' classrooms of Ramechhap district, Nepal. It mainly focused on three aspects: the exploration of the tools used by the teachers; the challenges in implementing ICTs; and the possible solutions to cope with the situations from the perspectives based on the teachers' experiences. Using a qualitative approach, through narrative inquiry, the research involved a series of unstructured interviews with five purposively selected participants. We have analysed the information descriptively and thematically. The findings indicate that the teachers utilised various ICTs including laptops, mobiles, multimedia projectors, websites, Facebook groups, PowerPoints, and printers to enhance the teaching/learning. However, several challenges were identified, such as heavy workloads, time constraints, maintenance issues, erratic electricity supply, inadequate ICT resources and financial limitations. To handle the situations, the teachers employed various strategies like selective ICT use, use of personal computers, advocacy with higher authorities, workshop organisation, and ensuring reliable electricity and internet connectivity. To integrate ICTs in teaching and mitigate those barriers, the study recommends focusing on teacher training programs, ensuring consistent and reliable internet access, maintaining an uninterrupted power supply, providing adequate financial support, and implementing systematic monitoring and evaluation mechanisms. By addressing these recommendations, educators in rural Nepal can potentially enhance their teaching effectiveness through improved ICT integration, thereby, facilitating better learning experiences for the students in English Language Teaching (ELT) classrooms.

Keywords: Digital, ELT, ICT, ICT policies, inquiry, narrative

Introduction

The 21st century is dominated by science and technology, widely utilised across various sectors such as business, health, trade and education. Both developed and developing countries are trying to make maximum use of ICT to enhance teaching and learning for both students and teachers. Unwin (2009) suggests that "ICT can be a catalyst by providing tools that teachers use to improve

teaching and by giving learners access to electronic media that make concepts clearer and more accessible."

The term ICT broadly encompasses all forms of technology used to create, store, process, and use information in various forms (data, voice, image, multimedia presentations, and any other forms), enabling and supporting communication. ICT is employed for capacity development and citizen empowerment, ultimately enhancing educational opportunities and outcomes for students, including those with intellectual disabilities (Anderson, 2009). Specifically, ICT refers to the convergence of micro-electronics, computers, and telecommunications, enabling the transmission of data, including text and video signals, anywhere in the world where digital signals can be received. This includes networks such as fixed, wireless, and satellite telecommunications, broadcasting networks, and applications like the Internet, database management systems, and multimedia tools (Lundall & Howell, 2000).

The use of ICT has significantly increased and become an inseparable part of today's teaching and learning activities. Every country is focused on developing global human resources based on e-learning. Governments, researchers, school leaders, teachers, parents, and learners all consider technology to be a crucial part of education. In Nepal, it is recognised that technological advancement influences how people create, share, use, and develop information in society, provided that young people need to be highly skilled in ICT use. English teachers exhibit great interest and motivation in using ICT in their classrooms and professional development.

The ICT Policy of Nepal (2015) aims to enhance educational quality and institutional capacity regarding infrastructure and human resources in public and private educational institutions, including schools and universities that offer ICT courses and use it for pedagogical purposes. According to this policy, appropriate measures will be taken to facilitate and promote ICT integration across the entire Nepali educational system to support administration, pedagogy, learning, and research, to improve education quality and training at all levels and to enhance access to education. The policy also aims to launch nationwide e-schools and related initiatives to promote e-learning, e-education, and lifelong learning.

Various initiatives have been undertaken as a part of the information and communication policy, giving ICT a significant role in classrooms. This has led to a paradigm shift in education, introducing a new wave of learning and teaching, revisiting the educational landscape, and fostering digital literacy. Teachers and students are increasingly using ICT as both a tool and a medium, facilitating personal growth and teaching-learning activities. However, the reality is that rural schools in Nepal still lag in digital integration. Numerous challenges prevent teachers from using ICT, and the tools are often limited to a narrow range of applications, mainly for personal use. Many schools have lower than the necessary facilities for ICT use, and even when available, most teachers use computers for basic tasks like word processing, lesson planning, creating worksheets, assessment tests, grade registration, or retrieving information from the internet (Jimoyiannis & Komis, 2007, p. 149-173). As ICT becomes an increasingly powerful tool for education and economic development; it was crucial to investigate whether teachers used ICT in their classrooms and identify the challenges of integrating ICT in language teaching in rural areas. Therefore, this study recognised the need to conduct a comprehensive investigation into the challenges of integrating ICT in ELT classrooms in rural Nepal. Specifically, the study chose this issue to examine the core barriers preventing teachers from using ICT in their classrooms.

Motivation for the Study

National Educational and ICT policies, such as the School Sector Reform Plan (SSRP, 2009), ICT Masterplan (2013), ICT Policy of Nepal (2015), School Sector Development Plan (SSDP, 2016), National Curriculum Framework (NCF, 2076), and Digital Nepal Framework (2076), as well as several studies, advocate for the use of ICT in language teaching to achieve better outcomes. However, numerous ICT-related issues continue to hinder teachers from incorporating ICT into their teaching. Most schools and colleges either lack internet access or have very limited access.

ICT in school education is considered a crucial tool for making education more learner-centred and for reducing the digital divide. The government of Nepal is implementing policies to encourage schools to adopt ICT and integrate it into the curriculum. However, rural schools still face significant challenges in using ICT. During the visits to multiple community schools in rural areas of Nepal, a lack of adequate infrastructure was observed. In some schools, ICTs are avail, but only in offices, not in classrooms.

There is a scarcity of research on ICT practices in the Nepalese context, and only a few studies have specifically focused on the challenges of integrating ICT in government schools in rural areas, particularly at the secondary school level. Given this gap, this study aimed to uncover the true state of ICT integration and the obstacles that rural schools and teachers currently face guided by the following research questions:

i. What ICT tools were used by the English language teachers while teaching English in their classrooms?
ii. What challenges were the teachers facing during the integration of ICTs in the English classes in the rural areas?
iii. What could be the possible solutions to cope with the problematic situations?

Literature Review

The theoretical review of literature here includes topics such as information and communication technology (ICT), the impact of ICT on English language teaching (ELT), the digital divide in the Nepalese ELT, policies related to ICT in education in Nepal, the Digital Nepal Framework (2076), ICT in the School Sector Development Plan (2016-2023), computer-assisted language learning, the need for ICT in ELT, and issues of integrating ICT in rural ELT contexts.

Information and Communication Technology (ICT)

ICT is a crucial tool for more effective teaching and learning practices in the modern era. Advancements in technology have revolutionised educational practices today. The scope of ICT in education is expanding, with ICT literacy becoming a key component of teachers' professionalism. In this post-modern era, ICT enables learners to access a wide range of information and perspectives, making technology a powerful educational tool. The United Nations Development Program (UNDP, 2003) defines ICTs as the tools used to produce, store, process, distribute, and exchange information. De Jong (2010) adds that ICTs encompass a range of hardware (computers, projectors, calculators, digital recording equipment), software applications (generic software, multimedia resources), and communication systems.

Impact of ICT in English Language Teaching

ICT has significantly impacted education by introducing new teaching strategies and re-conceptualizing globalisation. In Nepal, the use of various ICT tools (e.g. laptops, multimedia projectors, digital recording, mobile phones, and internet applications like; Facebook, Twitter and PowerPoint) has transformed teaching methods to meet learners' needs. ICT provides students with

opportunities to practice English both inside and outside the classroom, supporting significant changes in pedagogical approaches. According to Ibrahim (2010), modern technology is essential for effective English language teaching, fostering self-initiated learning and learner autonomy through diverse content in audio, video, and pictorial forms. Thus, ICT enhances concentration, understanding, and long-term learning, offering multiple benefits such as browsing materials, increasing student motivation, promoting learner autonomy, providing authentic learning environments, and aiding educators in preparing and retrieving teaching materials.

Digital Divide in Nepalese ELT

The digital divide refers to the gap between those with ready access to computers and the internet and those without. This divide is significant in Nepal, where rural community schools struggle to incorporate ICT. Harmer (2007) notes the disparity between well-equipped classrooms in urban areas and under-resourced rural schools. Despite government initiatives, such as the establishment of the Computer Association of Nepal (1992) and the Internet User Group (1997), and efforts to improve ICT infrastructure; rural schools still face significant challenges. To reduce the significant digital divide across the country, the government of Nepal has undertaken several initiatives. Although challenging, this obstacle can be overcome by breaking it down into specific tasks. There remains a substantial gap between rural and urban areas in Nepal, with rural community schools still striving to incorporate ICT. This is a mere example of a digital dive in the country.

Policies Related to the Use of ICT in Education in Nepal

Nepal's ICT policies aim to digitalise education and integrate ICT into the educational system. The ICT in Education Master Plan (2013-2017) identifies critical infrastructures like internet availability, skilled workforce, content development, and system enhancement as fundamental components. The ICT Policy (2015) emphasises public-private partnerships to provide ICT infrastructure in government schools. Key initiatives include promoting e-learning and e-education, enhancing ICT capacities in tertiary institutions, ensuring effective implementation of ICT plans, and establishing a national ICT research and development fund. The policy also ensured the establishment of an open university in the country which has now been established in 2016.

Digital Nepal Framework (2019)

The Digital Nepal Framework outlines how digital initiatives can contribute to economic growth and address societal challenges. In education, it targets a 20% annual investment, universal school enrollment within two years, nationwide literacy within five years, compulsory ICT usage in schools, and the establishment of e-libraries with modern educational materials (Ministry of Communication & Information Technology, 2019).

ICT in the School Sector Development Plan (SSDP 2016–2023)

The Government of Nepal has developed an education sector plan for 2016-2023, known as the School Sector Development Plan (SSDP). Concerning education and ICT, the SSDP has set the targets for providing ICT teaching-learning materials to enhance interactive teaching methods; establishing ICT learning centres at model schools; preparing ICT teaching and learning materials for Science, Maths, and English; providing ICT infrastructure and teaching-learning materials; implementing the unified computerised government accounting system (CGAS) within the Ministry of Education system; and introducing a school-based integrated IEMIS, including an Equity Index, school profiles, and unique student IDs to improve governance and management effectiveness (CEHRD, 2016).

Issues and Challenges of Integrating ICT in ELT in Rural Context

Several barriers hinder ICT integration in ELT, including individual challenges (such as lack of confidence, time, and resistance to change); and school-level challenges such as lack of infrastructure, technical support and access to resources. Nepal's underdeveloped ICT infrastructure, geographic diversity, and lack of basic resources exacerbate these issues. Teachers in rural areas face challenges such as insufficient buildings, stable power supply, low-skilled teachers, and little security (Rana et al., 2022). Despite some progress, many rural schools still lack internet access, limiting their ability to update digital content regularly. Additional challenges include the availability of equipment, little or low ICT knowledge, cultural barriers, insufficient funds, limited time, difficulties in adjusting to the rapid technological changes, and a shortage of trained teachers (Poudel, 2020). Addressing both individual and institutional challenges is crucial for effective ICT integration in ELT.

The above literature indicates the growing use of ICT in English language classrooms in schools in rural Nepal. However, limited studies are focusing on the teachers' experiences and the challenges of using ICT in rural community schools in Nepal. This study has bridged the gap in this area and raised the voices of the teachers based on their experiences.

Methodology

This study adopted a qualitative research method, specifically a narrative inquiry (Savin-Baden & Van Niekerk, 2007) research design. To elicit the data, five English teachers from various secondary community schools in Rammechap district of Nepal were selected using a purposive non-random sampling strategy. The primary tools for data collection were in-depth interviews. The qualitative data were gathered through participants' live stories which were collected in a relaxed and natural setting.

The systematically collected data have been descriptively analysed and interpreted using a thematic analysis approach. Themes have been developed to directly address the research questions, with some sub-themes created, analysed and interpreted qualitatively

Results and Discussion

Seven exclusive major themes have been developed subsuming numerous subthemes, based on data collected from five English educators. These themes have addressed the tools implemented, challenges faced, and potential solutions for integrating ICT in secondary schools of rural Ramechhap. This study uses the pseudo-names for all the participants in all the cases of data presentation, discussion and interpretation.

ICTs Utilised by the Teachers in Classroom Teaching

Participants involved in the study reported that many teachers used ICT tools such as smartphones, laptops, multimedia projectors and some social media such as Facebook and YouTube in their classrooms. Regarding the practices of ICTs in the research field, one of the respondents, Bandre said, "We mainly use laptops, projectors, smartphones, Facebook closed groups and television." Similarly, another participant, T4 noted of using various tools based on availability, affordability, usability, effectiveness, and appropriateness. They included YouTube videos and printers to capture students' attention. As Bhoj articulated:

> Yes, I utilise a range of tools considering their availability, cost-effectiveness, ease of use, effectiveness, and suitability. Commonly used ICT tools include television, laptops, smartphones, projectors, and slides. Additionally, I

> incorporate YouTube videos and printers to engage students effectively. I also motivate students to utilise these resources to enrich their learning experience.

From the snippets, it is evident that the educators utilised a variety of ICT tools that were accessible, adaptable, pertinent and beneficial for their teaching and learning endeavours. Summing up all the responses, the teachers employed diverse ICT resources such as laptops, digital recording devices, mobile gadgets, multimedia projectors, internet connectivity, Facebook groups, speakers, PowerPoint presentations, pen drives, printers, and televisions. ICT tools play a crucial role in contemporary education, introducing new methods of English language teaching (ICT Policy of Nepal, 2015). Common ICT tools in Nepal include slides, scanners, printers, digital boards, audio tapes, films and videos, digital books, TV broadcasts, email, internet, and cell phones (Shahi, 2022).

ICT Implementation Environment

A conducive educational environment significantly improves students' learning. For ICT to be effectively integrated, the School Management Committee (SMC) must be active and supportive. Talking about the environment of ICT practices in the school, Santu expressed,

> In managing the ICT environment in schools, the School Management Committee (SMC) should take a proactive role. However, in our school, the head teacher, Parent-Teacher Association (PTA), and SMC chairperson often engage in political struggles. This political dynamic prevents the effective utilisation of available resources.

Similarly, another respondent, Bhoj emphasised the need for proper training and skills among teachers to effectively use ICT tools. Thus, an encouraging environment, coupled with adequate training and resources, is mentioned to be essential for successful ICT integration. The school authorities, teacher groups, students, their guardians and the school management committee together are responsible for it. The effectiveness of ICT in education heavily depends on the school's environment and management (MoE, 2013).

Factors Motivating in the Use of ICT

Regarding the motivating factors in the use of ICT, Bandre noted that ICT materials are clearer and more effective than handmade ones. One of the excerpts from Min reported,

> I use ICT because my students enjoy it. When I asked them if they liked it, they expressed that they were more interested and found the lessons clearer when ICT was used in the classroom. Teachers also utilise ICT because they believe it helps in better managing classroom materials…...

The teachers believed that using ICT improves material presentation and saves time, thereby, encouraging student participation. Factors such as computer skills, attitudes towards technology, institutional goals, and well-equipped classrooms further enhance motivation. In this concern, Bhole said, "It saves teachers' time and encourages students a lot". Likewise, colleagues' and friends' encouragement, curriculum requirements, contextual factors, previous research findings, and personal interests were mentioned as significant sources of motivation. Additionally, computer proficiency, positive attitudes towards technology, institutional objectives, personal needs, and well-equipped classrooms further boost motivation. Motivation is crucial for effective ESL/EFL teaching and learning using ICT in classrooms. ICT-based materials make lessons more creative, critical, precise and explicit (Joshi & Poudel, 2019).

Challenges Faced While Integrating ICT in ELT Classroom

Integrating ICT into teaching and learning is complex and fraught with challenges. The challenges mentioned by the participants are concerned with the teachers, students, and schools. They have been more specifically discussed and interpreted in the following sections.

Challenges for the Teachers

The teachers reported that they were facing several personal challenges in using ICT tools which have been specifically mentioned in the subsequent discussions under more specific subthemes.

Loaded Works

Explaining their own experience, Bhoj explained that teaching six periods a day, extended library duties, prevented regular use of ICT tools. Here is an excerpt of what he reported:

> I have to teach six periods a day. In such a situation how can I design my slides and prepare for the next day? Not only this, but I am also the library in charge and I have to look after the library also. I am almost busy in the school hours. And, in my leisure period, I have to maintain library records. How could I design my slides and prepare for the classes in such a critical situation?

This snippet is enough to speak of the challenges of teaching in rural and traditional classes. The teachers mentioned that they were often overloaded with teaching periods and additional responsibilities, leaving little time (Salehi & Salehi, 2012) to prepare ICT-based materials

Lack of Time

The teachers involved in this study highlighted the difficulties of balancing school duties and personal responsibilities, limiting the use of ICT to once a week. As Bhoj explained,

> I teach six periods a day, and in addition to this, I am responsible for managing the library as well. This keeps me occupied throughout the school hours. During my free periods, I must also maintain library records. As a result of my heavy workload, I am compelled to rely on traditional lecturing methods.

Similar is the experience of Santu who reported,

> I understand the benefits of using ICT tools for both students and teachers, but due to time constraints, I am unable to use them regularly in all classes. Coming from a rural area and a family of farmers, I need to assist with farm work after school. This leaves me with little time at school and at home to design slides and prepare for my classes.

These excerpts portray that due to the busy schedule teachers even couldn't celebrate their personal lives. Their use of the available technology once a week obviously could not result in a better technological atmosphere in education. Another of the challenges reported by all the teachers was that the teachers, despite understanding the benefits of ICT, had to struggle to find some time to integrate it into their classrooms (Salehi & Salehi, 2012).

Difficult Geographical Setting

They had to walk for hours to reach the schools through the geographically complicated paths. It becomes clear from how Bhole described saying, "The main difficulty I face is the distance to the school. It takes me an hour to walk there, which leaves me little time to prepare for my classes. The route is narrow and slippery, posing a safety hazard." An incident illustrates this challenge when he further adds,

> Initially, I used my laptop, slides, videos, audio, and web sources in class. One day, while walking to school, I slipped and broke the school-provided laptop. Since then, I had to repair the laptop myself, and since then, I rarely bring it to school anymore.

The experiences were consistent across other participants too. It indicates that the geographical terrain and distance of the school negatively impacted the teaching and learning environment. Walking to and from school every day, except on Saturdays, left them fatigued and less motivated to integrate digital tools into their classes. Rural school teachers face challenges related to distance and terrain (Rana et al., 2022).

Heavy Reliance on the Mobile Networks

In rural areas, the lack of reliable internet access forced the teachers to rely on slow mobile data. They did not have other ways or options available at the schools for using ICTs. As Santu said,

> I also believe that teachers should utilise modern ICT tools. However, it's much more challenging in rural areas compared to urban settings. In cities, there's access to broadband and high-speed internet, whereas here, we rely on mobile data to search for materials. We receive no financial assistance to explore the internet, and the connectivity is so slow that it can take hours to download just one video or other materials.

This is supported by what Bandre expressed, "We are burdened with a heavy class schedule, and our school lacks Wi-Fi, as a result, we rely solely on mobile data to access the internet. However, the mobile network is unreliable and often doesn't work inside the classrooms." It can be interpreted that they had a greater dependence on the use of mobile data as only one partially available internet connection. Also, due to poor connection, they had the challenges of using mobile data to search for materials, leading to limited ICT integration.

Low Technical Confidence

Many Nepalese educators face a significant skills gap either due to little knowledge or low confidence. Related to this case, Bhoj shared,

> Although the school has installed projectors and provided laptops, I struggle to use them effectively in class due to my limited knowledge. Once, during a power cut, I couldn't restart a slide show, even with students' help and had to seek assistance from colleagues. Since then, I've found it challenging to confidently utilise ICT tools.

The similarities were the other's experiences. It shows that the challenge of adapting to online learning and technology in classrooms has become widespread in the district. Despite technological advancements in education systems, educators in rural Nepalese schools are still learning to use technology. In the current era of teaching and learning, information and technology need to be deeply integrated (Poudel, 2020).

Low or No Motivation

In this regard, Min lamented reporting,

> I used ICT tools initially, but I felt discouraged when the school administration failed to acknowledge or differentiate between teachers using ICT tools and those

who don't. If there's no recognition for my efforts, why should I invest in using ICT tools and designing innovative classes?

These types of scenarios were common in the schools. This discouraged the teachers from adopting ICT tools, as they would see little benefit in doing so due to no or low professional recognition. If ICT tools are to be adopted, everyone must use them; or those who do should be encouraged and acknowledged. Like in other sectors, performance appraisal is crucial in motivating teachers. However, this was lacking in the rural schools (Rana et al., 2022).

Unrepaired Devices

Proper repairmen are essential for prolonging the life of ICT tools, but this was not seriously taken (which may be due to other reasons too e.g. financial or else) in the rural schools of Ramechhap. It is obvious from the snippet taken from Bhole which was noted as, "In the past, I used projectors and laptops in teaching, but now they are not in good condition and haven't been repaired. We lack local technicians, so repairs often require sending equipment to Kathmandu, with long delays". Other participants share similar experiences. The reality is, that in comparison to urban schools, rural schools face challenges in promptly maintaining ICT tools. Delays in repairs lead to irregular use of ICT tools- they could only be used when functioning properly.

Challenges for Students

Teachers who participated in the interviews reported that many students faced ICT-related challenges in English language classrooms. For example, insufficient ICT tools, lack of adequate knowledge of ICT skills, and the challenges related to socio-economic barriers.

Insufficient ICT Tools

One of the major challenges for the students in the implementation of ICT was due to the insufficiency of ICT tools. The absence of essential tools like laptops and computers at home and school lessened the students' ability to engage with technology. As Bhole reported, "Students cannot complete assignments or presentations because they lack access to computers at home and school. This disparity in access affects their ability to utilise technology effectively." This indicates that the lack of ICT tools at home and school prevented the students from becoming proficient in technology, hindering their educational experience.

Little Knowledge of ICT Skills

Both the students and teachers in rural areas have low abilities in digital skills to fully utilise ICT tools. An excerpt from Bhoj in this regard is, "Students struggle to join online groups or use digital platforms due to their unfamiliarity with modern technology. This gap in digital literacy poses a challenge for teachers trying to introduce new ICT tools." Thus, insufficient digital skills among students and teachers hindered the adoption of ICT tools in rural education (Bax, 2003).

Socio-Economic Challenges

Students from low socio-economic backgrounds face additional challenges in accessing technology. Indeed, this was the reality with the students of the schools selected in the study. This becomes clearer from the saying of Bandre as "Many students must manage household responsibilities due to parents working outside the village. This limits their time and opportunities to engage with ICT tools." This shows that the students also had to take social and economic responsibilities at their homes which directly influenced their access to and engagement with technology, also affecting their educational outcomes.

Challenges for the Schools

The challenges of the schools are generic and common in the rural areas. Despite the enthusiasm for using ICT tools in teaching and learning, the schools were facing numerous challenges

that hindered the effective implementation of ICS, some of the major ones are analysed and interpreted here.

Low Investment.

The schools were struggling due to limited funds allocated for ICT management from the concerned stakeholders. This becomes obvious when Bandre said,

> Our school lacks adequate funds because some staff salaries are paid by the school itself, and we cannot charge fees due to government policies on free education. Local authorities also provide insufficient funds, making it nearly impossible to purchase new ICT tools.

Thus, the lack of funding from the governments (local and central) restricted the scope of ICT implementation in secondary schools in rural areas, severely impacting both financial and human resources as many schools had low investment in ICTs (Shahi, 2022).

Inconsistent Electricity Supply

Reliable electricity is crucial for ICT use, but rural Ramechhap experienced frequent power cuts. For example, Bhoj complained, "Frequent power cuts prevent us from using projectors and other devices effectively. While we have solar power, it's insufficient, forcing us to revert to traditional teaching methods during outages." The unreliable electricity supply in rural areas disrupted ICT integration in classrooms. It resulted in the low attention of the schools in the implementation of ICTs.

Inadequate Manpower

Teacher shortages (Das, 2019) further complicated the ICT integration in those schools. This is what Bandre mentioned in this regard, "Our school has only 16 staff members, including non-teaching roles. We need at least four additional staff members to operate smoothly." Rural schools first had low manpower, and second, they lacked skilled ones which was responsible in making it challenging to manage the implementation of modern technologies and ICT tools effectively.

Prevailing Illiteracy

Despite the benefits of digital technologies, such as smartphones and computers, in education, parents in rural Ramechhap often resisted these innovations. They were less conscious of those devices. Related to this context, Santu shares, "Parents oppose modern tools, believing that they distract children and hinder learning. They prefer traditional teaching methods and raise concerns during parent-teacher meetings." This resistance from parents and society impeded teachers' efforts to adopt ICT tools in education. From the parents' perspectives, the content-based traditional classes were more needed than the use of ICTs- which from their perspectives were spoiling the reading habits of their children.

Way-outs Sought to Overcome the Challenges

The integration of ICTs in schools presents both explicit and implicit challenges. Such issues in education cannot be tackled in isolation. The data reveals interconnected levels of challenges, prompting teachers to adopt various strategies to overcome them. Some major way-outs or the strategies that the schools, teachers and students sought are as follows.

Restricted Use of ICTs

Teachers, facing time constraints and skill limitations strategically deploy ICT for specific content areas such as grammar, pronunciation, and visual descriptions. Support from peers and administration aids in navigating ICT tools effectively despite skill gaps. Due to the challenges mentioned in the earlier sections, the teachers would make limited use of ICTs. As Santu explained,

> Due to my time constraints, I only use ICT for topics that students find challenging, such as grammar, pronunciation, and picture/map descriptions. Additionally, I rely on support from peers, the administration, and others to operate tools and devices, as my ICT skills are not strong. Preparing materials takes me a lot of time.

Similarly, Bhole added, "In grade nine, we have a well-functioning projector. When needed, we move the students to that classroom." This indicates how the teachers were compelled to limit the use of ICT tools in and outside their classes either due to the low availability of the materials or due to poor skills or little support from others and so on (Das, 2019).

Self-developed Materials

In the absence of internet access, teachers created learning materials themselves, including vocabulary lists, model answers, posters, and slides enriched with relevant photographs. This self-development of digital materials was crucial for tailored language teaching. As Bandre stated,

> Even though our school lacks internet access, I can create my materials. I carefully develop learning resources myself, such as vocabulary lists, model answers, posters, and vacancy notices, typing them into non-authentic materials. I also take relevant photographs and include them in slides. Developing digital materials is a relatively new area for language learning and teaching. Creating e-learning materials involves several components and requires thoughtful consideration. Once the content is created, it needs to be managed, delivered, and standardised.

Creating digital materials is a relatively new aspect of developing resources for language learning and teaching. It requires careful planning and involves multiple components. After the content is created, it must be effectively managed, delivered, and standardised.

Exploring Online Materials

Teachers enhance their ICT skills by accessing online tutorials and videos, particularly on platforms like YouTube. This approach empowers them to troubleshoot minor issues independently and discover new teaching methods. As Bhoj shared, "Through experience, I've realised that with internet access, we can master any challenge we encounter in teaching and learning. By consulting YouTube, I have enhanced my ICT skills, learned to create slides, and resolved minor ICT issues." In this way, the data also revealed that teachers would find relevant materials and videos online when the internet would be available. This boosted their computer skills and helped them develop practical ICT abilities for using technologies.

Use of Personal Devices

The teachers supplemented school-provided ICTs with their personal computers, facilitating content delivery through audio clips and videos. However, limitations in displaying text and images in large classrooms persisted. This is what Min shared for this context, "I utilise ICT at home to gather necessary information and develop required materials, which I then use to facilitate student learning. I use my laptop to show audio clips and videos related to the content, but it is not feasible to display text and pictures in a large classroom setting." In today's world, technology is an essential part of life. In education, it has become a new avenue for guiding students, teachers, methodologies, and the overall educational process. In this context, teachers are found to be using their personal computers and other devices in instruction.

Engaging Higher Authorities

Teachers would advocate for improved ICT infrastructure (Education Master Plan, 2013-2017), urging school administrations and local government bodies to procure necessary tools like computers and printers. This collaboration is vital for enhancing educational practices aligned with modern pedagogy. Appealing to higher authorities, the data revealed that teachers frequently requested essential ICT tools for their schools. They also asked their head teacher and School Management Committee (SMC) to relay this demand to their local government. For example, Min expressed,

> We are continuously trying to raise parents' awareness on this matter. The headteacher informed us that he has requested the rural municipality chairperson to provide some computers and a printer. Last year, we received a computer and a printer, and this year we are expecting more computers from them.

The educational requirements of the 21st-century demand deliberate integration with current pedagogical practices to enhance learning outcomes. Unfortunately, the local stakeholders appeared to overlook this aspect of ICT deployment. Addressing these challenges requires coordinated efforts and support from local governments, not only in this region but also in others.

Workshops

To address skill gaps among students, workshops are organised, sometimes replacing extracurricular activities, to impart essential ICT skills. These workshops cater to diverse learning needs, ensuring holistic development among students and teachers alike. Bhole explained, "In class eight, we have a computer class where we teach students how to use ICT tools." Min also added, "Teachers possess considerable ICT skills, and we attend workshops organised by the schools. Our school administration encourages teachers, students, and guardians to adopt modern teaching and learning methods and makes the necessary arrangements." Thus, to challenge the ‘one size fits all approach’, to enhance the quality and bring variation in teaching; the teachers would share and receive new experiences for teaching through workshops.

Potential Way-outs to Tackle the Challenges

Every challenge presents an opportunity for a solution. Based on the participants' insights, some probable solutions to address the challenges are mentioned in this section.

Availability of Adequate Tools and Software

Ensuring sufficient ICT tools, devices, and software in rural schools encourages teachers to integrate ICTs effectively into teaching practices (SSDP 2016–2023)**.** To address this issue, one of the respondents, Bandre said, "The school administration, local government, and other relevant authorities must ensure the availability of adequate tools and necessary software to encourage teachers to use them." This indicates that schools must be equipped with adequate tools and software for both teachers and students. This could be the basic solution to implement ICTS in schools.

Prompt Repair

Prompt repair and maintenance of ICT tools prevent prolonged downtime, ensuring continuous functionality and usability for teachers and students alike. As Bhole said, "I believe that the schools should have basic items like cartridges, cables, and other easily replaceable parts readily available. This way, teachers wouldn't have to wait weeks for a cable to be replaced." To sum up, for the effective implementation of the ICTs, the tools should be well repaired on time after they are damaged.

Stable Electricity and Internet

Establishing reliable power sources and high-speed internet connections in schools enables seamless ICT integration, facilitating real-time access to information and enhancing learning experiences. To address this issue, Min suggested, "The school should enlist help from different organisations to set up a solar power system and high-speed Wi-Fi. This setup would allow teachers to efficiently access and distribute essential information to students in real-time during classes." Summing up this response, it can be easily said that the electricity and internet should be made stable and well managed by the concerned authorities and stakeholders.

Training and Lowering the Workload

Addressing teacher workload by hiring adequate staff and providing regular training on ICT tools promotes effective use and adoption in classrooms. T3 added to this by saying. "The school should obtain essential funding and hire an adequate number of staffs, enabling us to have dedicated periods to plan our lessons." Similarly, another respondent, Santu shared, "The school should offer training sessions for teachers on how to use different tools effectively." As the teachers reported workload as one of the major hindrances in the ICT-based quality education; it is necessary to reduce their loads and provide more effective training.

Motivation and Supervision

Instituting mechanisms for teacher motivation including recognition and rewards for ICT integration, coupled with regular monitoring, supervision and support, fosters sustained engagement and innovation in teaching practices. To address this issue, Bhoj suggested, "The school administration, SMC, and local bodies should encourage teachers to utilize ICT tools while also implementing monitoring. Furthermore, they should recognise and reward teachers who integrate these innovative tools effectively into their classes."

As one of the problems mentioned by the teachers was low motivation in the use of ICTs, this needs to be seriously rethought. Further, once they are provided with the training, the whether it is transformed into classrooms or not should kept under the monitoring and supervision (Salehi & Salehi, 2012).

Parental Awareness

Making parents aware of the benefits of modern ICT tools (Shahi, 2022) in education and dispelling misconceptions encourages supportive attitudes and participation in their children's digital learning journey. Parents should understand that mobile phones, laptops, videos, projectors, and other digital tools can also be used for teaching and learning. As T5 said, "They shouldn't believe that teachers should only use textbooks and speak loudly in front of the class. Similarly, Bhole explained, "Parents should recognise the importance of modern ICT tools and ensure these tools are available at home for their children." In conclusion, only a school environment is insufficient to produce efficient learners. Equally important is the role of family. As such, the concerned parents should also be made aware of what positive impacts ICTs could have in education despite some drawbacks. Good education depends on all the stakeholders from schools, families and communities.

Conclusion and Implications

Based on the entire data, its discussion and interpretation, this study has come up with some important findings. The teachers in rural schools like the ones selected in this study are making use of some common tools like laptops, digital recordings, mobile gadgets, multimedia projectors, the Internet, Facebook groups, PowerPoint, printers, YouTube, and television in their ELT classrooms. Yet, they are facing different kinds of challenges in ICT use due to investment issues, their skills, motivation (Salehi & Salehi, 2012), power supplies and so on. Hence, to improve the education sector,

all the people concerned with school should have a feeling of responsibility. Further, the local and central governments should increase investment, training packages and monitoring. In the globalised technocratic world today, there is no alternative to integrating ICTs into education. In the context of Nepal in general, and rural areas, there is a need for changing the mindset of teachers and parents to bring ICTs into schools. Moreover, the existing policies should be revisited for more effective implementation; and, the ICT-based pedagogy should be promoted everywhere (ICT Policy, 2015). Only the adoption of recent technology can ensure quality education by enhancing the more creatively and critically engaged teacher-learner roles.

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