Teacher's Perception Regarding the Use and Challenges of ICT in Teaching-learning

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Abstract: *ICT is considered a better tool for improving the quality of education. It is an effective network to develop the whole nation through the development of education. This study explored the Use of Information and Communication Technology in teaching-leaning economics classrooms at the university level. The study focused on the Mahendra Ratna Campus of Tribhuvan University. It had two objectives, i.e., to explore the teachers' perception regarding the use of ICT in an economics classroom and to examine the challenges that economics teachers face in using ICT tools in the economics classroom. With a focus on qualitative research, the study used a phenomenological design with five purposively chosen participants from Mahendra Ratna Campus, Tahachal. The researcher's experiences and the experiences of others have to be included in the study's philosophical framework. This inquiry used the Heideggerian phenomenological research design. This study found the keen interest of economics teachers in using ICT in their classrooms. Teachers are considering ICT as a current context needs in education. However, teachers think of ICT as an emerging tool for teaching-learning and have faced many challenges in the classroom to use it.*
Keywords: *Qualitative study, Mahendra Ratna Campus, Economics teachers, Perception, Challenges*

Introduction

ICT is integral to people's daily activities and professional work; it facilitates equity and equality in access to education and learning outcomes(Pombo et al., 2016). It is considered a better tool for improving the quality of education. ICT is an effective network to develop the whole nation through the development of education (Noor-Ul-Amin, 2013; Stein & Sim Kwong, 2020). It supports decreasing the digital divide among diverse communities in a less developed country like Nepal (Jha & Pandey, 2016). The extent, embracing, and use of Information and Communication Technology(ICT) has been amended worldwide (Watson, 2001). Studies worldwide have unconcealed that the arrival and emergence of ICT haven't solely modified the socio-cultural enthusiasm of ancient social order but have enhanced the enactment of existing economies.

Instead of the significant influence of ICT, the magnitude that it will advance education usually and teaching in specific cannot be underestimated(Stein & Sim Kwong, 2020). Over the years, lecturers have grown ultimatum for ICT to be utilized by lecturers to enhance pedagogical procedures, which may go a protracted approach to improve learners' tutorial performance(Ali, 2019; Karagiannidis et al., 2014). To understand the complete waves of ICT, prevailing configurations within the enlightening process and prerequisites accommodations are going through, courses are being revised, and budget allocations are also being accustomed to form ICT integration facilities in teaching-learning. The advantages of integration to academic performance on campuses cannot be overemphasized. The combination of ICT at the university level, among alternative things, motivates students, stimulates their interests, and increases their insignificance and confidence (Bøe et al., 2015; Tokareva et al.,

2019). In addition, ICT permits more significant interactivity among students and teachers, enhancing essential thinking skills and increasing students' ability to grasp what they need to be instructed in class (Bhattacharjee & Deb, 2016; Meenakshi, 2013; Tubaishat et al., 2006).

Due to the advantages of ICT incorporation in the unconventional social order, several nation-states are gradually using it within their academic system. Therefore, an affirmative association exists between incorporating ICT and academic performance becoming potential once operative policies are created for ICT integration in education(Özgür, 2020; Wel et al., 2016). The case isn't different in Nepal.

Universities have an irreplaceable responsibility to prepare the youth for academic, professional, and global challenges. However, this responsibility obstructs if teachers are not ready for ICT excellency due to several difficulties in the present context (Arkorful et al., 2021; Guzman Mena, 2020a). Nowadays, particularly in the course of the COVID-19 pandemic, instructors in any respect stages are faced with hastily converting needs in their profession, which require a broader and extra state-of-the-art set of capabilities and talents than the preceding generations experienced, forcing them to apply ICT day-by-day as now no longer simplest the preferred, however typically their conventional teaching-learning process (Arshad, 2020; Dawadi et al., 2020; Niroula, 2021).

The primary stakeholder of ICT integration in education is the teacher who uses ICT in the classroom. There is a need to change the teaching-learning pedagogy from teacher-centric to student-centric to integrate ICT in pedagogy (Fajardo & Mendoza, 2021). The teacher needs to transform into an ICT leader, not the user, to use ICT in teaching-learning. First of all, teachers need to motivate to use ICT in the teaching process then then then they must have competencies for it (Ifinedo et al., 2019; Lin et al., 2012). Several factors influenced the teachers to use ICT in the classroom, such as motivation, availability of prerequisites, administrative support, student attitude, and so on (Ifinedo & Rikala, 2020; Raman et al., 2019; Raygan & Moradkhani, 2020; Chandan Singhavi & Prema Basargekar, 2019).

There is a need for a comprehensive policy to close the identified holes in traditional teaching pedagogies to use ICT in teaching-learning (Dabrowski et al., 2020; Irrinki, 2021). A practical kind of technology-enhanced teaching is made possible by using social media networking in higher education, especially in environments with limited resources(Vandeyar, 2020). The time has come for the educational system to transform all educational institutions to offer flexible learning options that are skillfully combined with learner-centered education technologies to reach the most underserved and disadvantaged students and achieve quality education targets in line with the SDGs(Fontanos et al., 2020). To satisfy the demands of the new society, which is a society of information, communication, and systems, a shift in the education paradigm, consisting of the change from instrumental to communicative rationality, is necessary. In light of this, it is vital to create a system of education that serves as a method of understanding-based communication. This system should be at the core of pedagogical practice(Kaluyu & Ndiku, 2020; Pombo et al., 2016; Vandeyar, 2020). The educational quality of a country mainly depends upon its teacher's grades and pedagogical quality, so there is a

reasonable need to investigate how the teachers perceive or take part in the use of ICT for pedagogical purposes. Lack of motivation of teachers is mainly a hurdle in integrating ICT in the classroom (Bice, 2021; Ismail et al., 2020; Chandan Singhavi & Prema Basargekar, 2019). This study attempts to explore the teachers' perception regarding the use of ICT in an economics classroom. It also examines economics teachers' challenges in using ICT tools in an economics classroom.

Developing countries like Nepal face unique challenges of national development through developing every sector of the economy. For example, ICT is a significant driver of the economy's growth in Nepal (Editorial, 2021,August,2; Lim et al., 2020). Moreover, ICT in education helps reduce the digital divide in the overall economy (Scheerder et al., 2020). However, in Nepal, ICT and ICT- integrated education access is not readily available at the school and university levels (Kandel & Kaphle, 2021; Rana & Rana, 2020). This condition hurdles the job opportunities o the youth of Nepal in the competitive market.

In the Nepalese context, however, the government of Nepal and Tribhuvan University seriously focused on using ICT in the classroom, but the reality is different. One of the eight areas included in the Digital Nepal program aims to help Nepal utilize its potential for growth by using disruptive technologies and promoting socioeconomic development (Giri, 2018; Rana & Rana, 2020; Tribhuvan University, 2019). This program makes the following recommendations to the Nepal government in the areas of technology and infrastructure: Make internet access a fundamental right for all citizens, increase spectrum availability to operators to improve service coverage and quality, take the lead in promoting 5G adoption in South Asia, and establish a national fiber network.

Tribhuvan University's case initiated ICT-related policy in the last decade (Gautam, 2021; Tribhuvan University, 2019). Tribhuvan University established the Open and Distance Education Centre(ODEC) and Information Technology Innovation Centre(ITIC) to apply and accelerate ICT integration in the classroom. These two centers work together in Tribhuvan University to assimilate IT in the whole process, i.e., pedagogy and other official sectors. The University Grants Commission(UGC) focused on integrating ICT in pedagogy in all universities of Nepal. So Tribhuvan University is taking several steps to use ICT and run virtual classes during and after the COVID- pandemic(Kandel & Kaphle, 2021; University Grants Commission, 2020). ODEC has provided training to university faculties in Moodle and Teams.

Though the university takes steps to integrate ICT in pedagogy, the use level and the perception of university faculties are pretty different. Faculties are suffering from integrating ICT into pedagogy due to a lack of infrastructure on campus and at home. Also, there is less supportive administration on campuses to provide facilities to use ICT; some faculties do not want to make the extra effort to take classes whatever the usual schedule (Lahera, 2021). There was lack of studies regarding this issue in the teaching-learning case of university level in Nepalese context. So this qualitative study explored the teacher's perception of ICT integration in economics classes in the case of Mahendra Ratna Campus.

Objectives of the Study

The objectives of this study are to explore the teachers' perception regarding the use of ICT in economics classrooms and to examine the challenges economics teachers face in using ICT tools in economics classrooms.

Research Questions

This study has the following research questions based on objectives:

1. How do the economics teachers perceive the use of ICT in the classroom?
2. What challenges are economics teachers facing in using ICT tools in economics classrooms?

Methods and Materials of Study

This research is part of a more extensive study that employed both qualitative and quantitative methods to investigate the teachers' perception regarding the use of ICT in economics classrooms and aims to examine the challenges economics teachers face in using ICT tools in economics classrooms. This paper used a phenomenological research design. My experiences and my comments on them, as well as the experiences of others, have to be included in the study's philosophical framework. So, this inquiry maintains a Heideggerian phenomenological viewpoint(Bas, 2017). This viewpoint is evidence that meanings are co-developed from the shared experience of being human in the world we all share. The researcher used unstructured in-depth phenomenological interviews with participants for the data collection. The researcher has collected data through five economics (four males and one female) faculties of Mahendra Ratna Campus Tahachal, Kathmandu; among them, two teachers were involved in master's level teaching and three in bachelor level. The sample was selected by the researcher herself through purposeful sampling.

The researcher collected data in a natural setting through an open-ended questionnaire using her life-world experience. The data collection process was continued until the data saturation was based on the research question. Immediately following the interviews, field notes were taken. Although the interview procedure was open-ended to unearth unforeseen categories and themes, the interviewer employed a semi-structured interview strategy as a guide. The procedure questions were split into two categories: (1) Perception of ICT use in economics classrooms; (2) challenges economics teachers' faced when implementing ICT tools in economics classrooms. To fully understand the participants' perspectives, follow-up questions were frequently asked. Each subject had a single interview session that lasted about 30 minutes, and depending on the research demands, each subject had additional contacts and interviews. All the interviews were recorded in a digital recorder and later transcribed for analysis. The interviews were carried out through face-to-face meetings, messenger, and Microsoft Teams, and they were then transcribed verbatim for analysis. A thematic analysis approach was used for data analysis manually.

Result and Discussion

Regarding the results, it examines obtained using study methods; this study mainly focused on two research area themes. These themes are discussed here based on text data from empirical studies.

Teachers' Perception Regarding the Use of ICT in Economics Classroom

This study concentrated on economics faculties' perception of the use of ICT in the classroom or in a pedagogical way. In this section, the researcher explored the economics teacher's beliefs and attitudes regarding using ICT in the teaching-learning process. Providing the content is less important than making students capable, creative-minded, and capable of planning, so teachers need to use modern tools and innovations in the classroom (Floria, 2016; Hooper & Rieber, 1995; Nji & Idika, 2018).

Participants of this study believe in the usefulness of ICT in the classroom context and this modern era. They are motivated to use digital technology in this 21st century, where there is the essentiality of ICT in every workplace. I found the positive perception of all participants regarding ICT use in economics classrooms. However, though the economics faculties were encouraged to use ICT in the classroom, some participants did not use it in their classrooms. Participant I stated:

> ICT is inevitable in innovating ultramodern teaching-learning methods in the present context. ICT is vital to interact with students through the internet and in any type of teaching-leaning, i.e., virtual and face-to-face. ICT is essential in the teaching-learning process in our subject and all subjects in this 21st century. It makes learning more accessible and long-term.

ICT in education produces high-quality human resources that can compete with other countries' human resources in the working field(Işik et al., 2012; ONOJA, 2020). ICT-integrated pedagogy embedded 21st-century skills, i.e., communication, computing, conceptualization, creativity, coordination, collaboration, critical thinking, information literacy, media literacy, technology literacy, flexibility, leadership, initiative, and social skills to the student's mind (Bhattacharjee & Deb, 2016; Kereluik et al., 2013). These skills are inevitable to keep up with the lightning pace of today's worldwide competitive market. In this study, participant II was exposed to view to use of ICT in the classroom as follows:

> ICT is today's emerging need. During and after COVID-pandemic it plays a significant role in alternative teaching-learning activities. For example, during the pandemic, we completed our course by taking a class in virtual mode; it was possible due to technology. Moreover, virtually conducting studies reduces students' compulsion to stay in the main urban area by paying costly rent and other expenses. Instead, they could take the class in their homeland cheaply.

Teachers can enhance the student's capability in problem-solving, analysis, and other higher–order thinking skills through ICT-integrated pedagogy than conventional teaching methods (Chandra & Mills, 2014; Daniela, 2019; Zarabanda, 2019). Through ICT, teachers can conduct students center diverse teaching methods to interact with learners. Using the technology, teachers can provide equal and equitable access to all heterogeneous groups of learners in face-to-face and virtual classes(Bowen, 2012; Meenakshi, 2013; Meza & Gracia, 2018). Though the importance of ICT in the classroom is excellent, there is less

useful in a real classroom in our university-level classes. Participant III of this study strongly believes in the importance of ICT in the classroom; however, the use is never. Participant III expressed as:

> ICT is essential in the present, but I never use it in my face-to-face class. Fewer students are in my classes, so it is easy to write by hand rather than use technology. Still, ICT is emerging, especially in economics, because economics produces the human resources that are equally needed in every country in the world.

However, there is no environment to use ICT in the classroom, and there is an irregularity of electricity and internet on our campus. Teachers are also lazy to use innovation by thinking time is running, as usual; why is there a need for extra effort? There are no complaints of students using technology in the classroom and no administrative support, so I am not using ICT in my face-to-face classroom. Participant IV was exposed to view to use of ICT in the classroom as follows:

> Studying virtually eliminates the need for the student to incur high living costs, such as rent, in the main urban center. Instead, they might enroll in the course for a nominal fee in their country. ICT is crucial to teaching-learning in our field and all fields in the twenty-first century. It increases the accessibility and durability of learning.

ICT is inevitable in the education sector after the global COVID pandemic, and the Nepalese context also falls in this situation (Arshad, 2020; Dawadi et al., 2020; Niroula, 2021). Without the skill of technology, teachers became outdated at the school and university levels. Participant V expressed the perception in the following way:

> ICT is inevitable to run based on a time framework. Virtual classes are compulsory due to the COVID pandemic. Some documents of our subjects are unavailable in written form, so we need to use ICT to access them in the database, but I never use ICT in my face-to-face class. Students are also happy with class notes rather than slides.

But the concern in this study is to explore the perception of the main stakeholder of, i.e., teachers, regarding the use of ICT in the classroom. So researcher concluded that all economics teachers at the university level are highly interested in integrated ICT in their classrooms, but the user level differs from their beliefs. Nevertheless, economics teachers accept the usefulness of ICT in pedagogy and are ready to use it when there is a supportive part for them.

Challenges Faced by Economics Teachers to Use ICT Tools in Economics Classroom.

However, the importance of ICT is well known among all economics teachers, and the use level is low on the natural ground ((Joshi, 2022). Despite keen interest in using ICT in the classroom, most teachers do not use technology in teaching-learning. So researcher interviewed them on the challenges of easily integrating ICT into pedagogy. Participants explored the several obstacles to using ICT in their classroom. Participant, I exposed the challenges in this way:

> There are limited projectors on our campus, but there is no access to the internet in the economics classroom. They are dramatically showing the projectors but not for regular class

purposes. Internet facility is available in the only computer lab but not all classes on campus. The classroom has no desktop and laptop facility; most students are from rural areas and have no computer access.

Experience of Participant I is the natural ground of the Mahendra Ratna campus. In my experience, there is no easy access to the internet and other devices to use the teaching-learning purpose. Mainly the ICT tools are used on campus only for administrative purposes and to take classes in ICT-related subjects. The availability of the internet and other equipment to use ICT on campus is seen in the surface area. Still, there is challenging to get access in regular classes like a whiteboard(Enrique Hinostroza, 2018; Chandan Singhavi & Prema Basargekar, 2019).

Challenges are seen in teachers' interest and intention sometimes to assimilate innovation like ICT. Some teachers are less skilled in technology, some are suffering in financial crisis to manage the equipment, and some do not want to provide extra effort to the classroom(Guzman Mena, 2020b; Ifinedo et al., 2019; Chandan Singhavi & Prema Basargekar, 2019). Administrative enforcement and motivation are the common obstacles in every institution to use innovation in the classrooms (Joshi, 2022). The successful integration of ICT in the classroom largely depends on instructors. Using modern pedagogy effectively depends on their level of acceptance of Technology. One of the most significant barriers to ICT adoption at the grassroots level is teachers' reluctance to use it in the classroom. This participant II expressed the challenges of using ICT in the classroom in this way:

I do not feel a conducive setting for using ICT in the classroom, and there is occasionally no light or internet access on campus. Teachers are also lazy since we believe that our jobs can be completed efficiently, pupils never voice complaints, and the administration never enforces teacher monitoring. Regarding their devotion, teachers are not evaluated. I have no interest in novelty. I will employ ICT-like virtual mode teaching in the physical classroom if the administration gives the facilities and training.

The researcher maintained an intimate relationship with participants during investigation time, frequently phoning and meeting them and discussing other teaching-learning processes and teaching with them. Due to long and often meetings, I can dig out the inner perception of participants. In this process, participant III exposed the problem of using ICT for teaching-learning purposes. Participant said

There is discrimination among teachers by campus administration on our campus. For the teaching-learning purpose of using ICT, there is a loan facility for permanent teachers on our campus but no provision for part-time teachers. So, I am not interested in using ICT on campus by feeling injustice. However, I use ICT in my home for teaching purposes.

The above expression of economics teachers exposed the unique hurdle to using ICT in the classroom(Blundell et al., 2020; Raygan & Moradkhani, 2020; Rodríguez-Abitia et al., 2020). Due to the discriminatory behavior of administration teachers who are demotivated to use novelty in their classrooms,

making ICT-friendly universities in the Nepalese context is a serious issue. Participant, IV exposed the challenges in this way:

I want to use ICT in teaching-learning, but on our campus, students are weak in English, so there is a problem with using ICT in the classroom virtually and face-to-face. Internet and device problems are significant hurdles in our campuses to use ICT. Carrying my own device daily to teach on campus is uneasy for me.

Challenges regarding the student's backgrounds were seen based on the participant's experience. They also expressed the administration's less interest in managing the internet and devices in the classroom to use ICT in teaching-learning. This result is similar to the finding of other studies(Bice, 2021; Mynaříková & Novotný, 2021; Chandan Singhavi & Prema Basargekar, 2019; Warren, 2020).

Conclusion

Several conclusions can be drawn based on the research on economics teachers' perceptions and challenges to using ICT in the classroom. Based on data analysis, economics teachers involved in this study positively perceive using ICT for teaching-learning purposes. All participants agree as ICT is a present need in the classroom. They have shown keen interest in using ICT in their classroom as their students can compete with others in the workplace worldwide. Data showed that teachers expect a favorable environment and facilities from campus and university to use the novelty in their classroom.

This study demonstrates that economics teachers have many challenges in using ICT in the classroom. The significant challenges are limited internet facilities, ICT equipment, and less administrative motivation and support. Another challenge is the teacher's laziness, low motivation to use the novelty, and lack of training facilities. Finally, some teachers felt discriminated against by the administration, so they were demotivated to use ICT in their classes. So the solution would be to provide sufficient prerequisites for ICT use in the classroom, train teachers, and motivate them through various rewards and incentives.

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