Understanding the Lived Experience of ICT-trained Teachers in Online Classes

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Abstract: ICT in education is the mode that uses ICT to support, enhance, and optimize the delivery of information and make the teaching and learning process easy and interesting. Teachers who are ICT-trained are often expected to excel and exceed in their teaching compared to the non-ICT trained faculty. The fundamental reason for this appeared that ICT teachers were perceived as experts who knew everything about ICT. Many empirical studies have been conducted to examine issues in delivering online courses and the ICT teachers' roles, however, limited studies focused on the experiences of ICT-trained teachers in teaching online in terms of delivery and preparation of instructional materials. It is then in this premise that the researchers investigated the lived experiences of ICT-trained teachers in teaching online. This study employed the qualitative research descriptive phenomenological approach. Results showed that ICT-trained teachers are equipped with ICT knowledge, skills and adapt easily to online classes. However, they also face different challenges in online classes. The teachers' lived experiences focused on the following themes; *Reassessment of ICT knowledge and skills, Feeling of pressure from colleagues and administrators, Adaptability to online teaching, Using of online tools and applications in teaching, Challenges in Online teaching, and Passion to acquire and share ICT skills.* Hence, the administration may consider these results to guide them to improve teachers' and students' ICT skills.

Keywords*:* ICT-trained, ICT teachers, ICT skills, ICT teaching, online class

1.   Introduction

Information and communication technology (ICT) is a scientific, technological, and engineering discipline, as well as a management approach, that is used to handle information, as well as its application and linkage with social, economic, and cultural issues (UNESCO, 2002). ICT in education is the mode of education that uses ICT to support, enhance, and optimize the delivery of information (Team, 2017). ICT which is now broadly used in the educational world enables the teachers, students, administrators and every person related to education. Teachers use ICT for making the teaching learning process easy and interesting (Bhattacharjee,2016).

International studies have demonstrated that ICT can increase student learning and teaching techniques. Incorporating technology into the curriculum and using ICT in schools more frequently have a significant and positive impact on students' academic achievement, according to a study by the National Institute of Multimedia Education in Japan.The results specifically showed that the students who are continuously exposed to technology through education has better 'knowledge', presentation

skills, innovative capabilities, and are ready to take more efforts into learning as compared to their counterparts (Team, 2017).

The COVID-19 pandemic that caused the sudden change in the educational landscape made most higher education institutions, teachers shift from face-to-face to online teaching-learning modality regardless of their skills in using computers and other technologies (Manco-Chavez et al., 2020.) Teaching online was recommended and became a common type of instructional delivery in Philippine schools and abroad in the basic and tertiary education. Kebritchi (2017) said that online education changes all components of teaching and learning.

There are problems with giving education online. Issues pertaining to online learners, instructors, and content development were three significant categories of findings.Issues in delivering online education were identified. Three major categories of findings were: issues related to online learners, instructors, and content development. Concerning training, challenges that teachers faced included shifting faculty roles, going from in-person to online learning, time management, and instructional methods.The role of instructors in developing content, the incorporation of multimedia into content, the use of instructional methodologies, and concerns for content development were among the content-related problems.Salehi (2012) study findings indicated that although teachers had a strong desire to use ICT in the classroom, they were encountered with some barriers. The biggest obstacles preventing teachers from integrating ICT into the curriculum were thought to be a lack of technical support in schools and limited access to Internet and ICT. Another major obstacle preventing teachers from integrating Technology into the classroom is a lack of class time.

ICT professional development courses for teachers help to improve the teachers' ICT skills and knowledge (Abuhmaid, 2011). ICT-trained teachers are then expected to excel and exceed in their teaching compared to the ICT non-trained faculty. However, Deryakuluh (2007) studied on the analysis of computer teachers' online discussion forum messages about their occupational problems, the results indicated that role conflict, inadequate teacher induction policies, lack of required technological infrastructure, technical support and the status of computer subjects in school curriculum were the most frequently mentioned problems. ICT teachers undertook many roles in their schools apart from the assigned positions determined for them. The fundamental reason for this appeared that ICT teachers were perceived as experts, technical staff or personnel who knows everything about ICT (Topu & Goktas, 2012). Further, there occurred some differences and ambiguities between the education they took and the assigned roles and due to these ambiguities, that even the ICT teachers could hardly define their assigned roles in schools was observed (Burcu, et.al 2021).

Many empirical studies have been conducted to examine issues in delivering online courses and the ICT teachers' roles, however, limited studies focused on the experiences of ICT-trained teachers in teaching online in terms of delivery and preparation of instructional materials. It is then in this premise that the researchers investigated the lived experiences of ICT-trained teachers in teaching online. This study describes the lived experience of ICT-trained teachers in their online classes during the covid-19 pandemic. Further, this study explored the extent to which these teachers apply their ICT skills in their online teaching to keep their students engaged in learning.

Literatures reviewed includes the use of Information and Communication Technology (ICT) in teaching and learning is of significant importance to a country's development and the social growth of individuals (Mukhari, 2016). In the past twenty years, a gradual transformation has occurred in education; now, teachers are being required and expected to use educational technology in one form or another in their classrooms (Schrum, L., Shelley, G., & Miller, R., 2008). The outbreak of the COVID-19 and the subsequent pandemic which caused social distancing measures and lockdown led to a rapid switch to remote and online learning. This move to teaching in the online environment has required a significant paradigm shift for many staff, even those already involved in distance education.

Rogers (2000) mentioned that having the required computer skills represent a vital factor which influences professors' choice of whether or not to integrate computer technology in their teaching. Therefore, faculty members are required to develop appropriate technological skills to be able to use the various kinds of technological instruments so that effective teaching can take place (Valentine, 2002). Computer experience has been considered as one of the most influential factors affecting computer usage (Glass & Knight, 1998; Laabidi, 2016). Also, they found that computer users who are highly experienced believe that computers are more useful and more valuable than those users who possess less computer experience.

Much of the research on instructional technology had focused on the pedagogical benefits of instructional technology, and the factors that influenced the adoption of instructional technology by faculty. Although research in these areas produced valuable information about instructional technology and its adoption, there was little research focused on the experiences of ICT-trained faculty who adopted instructional technology in their teaching processes. Phillips (2005), Georgina and Hosford (2009), Georgina and Olson (2008), Somekh (2008), and Spotts (1999) finds that faculty technology literacy and skills, faculty support and training all influence faculty adoption of instructional technology. Faculty who had a base level of skills were likely to look for new instructional technologies that would enhance their teaching. However, Salter's (2005) finding that faculty who perceived themselves as being technologically advanced were more likely to adopt technology than those who didn't, was not supported.

Cakir (2013) conducted research on the development of ICT instructors' professional careers in terms of their pedagogical perspectives and skill sets and the results showed that Despite having a favorable self-perception of their own expertise, ICT teachers encountered challenges such as classroom management, student numbers, and hardware-software problems when trying to use technology, particularly cutting-edge technology, effectively in the classroom. Time constraints, inadequate information technology (IT) class design, a lack of flexibility in their teaching responsibilities, crowded classrooms, and classroom management concerns, in their opinion, significantly impacted teachers' ability to utilize technology in the classroom.

2. Methodology

This study employed the qualitative research method which determined what people think, feel and do through observation, interview and analysis of documents. Phenomenological approach was utilized in this study, particularly the descriptive phenomenological approach. This is concerned with the study of the experiences of online teaching from the perspective of the ICT-trained teachers. This paved the way to understanding their experiences, acquiring insights into their motivations and actions, and cutting through the clutter of assumptions and conventional wisdom (Dowling & Cooney, 2012; Norlyk & Harder, 2010). The research's scientific rigor was maintained because the researchers consistently acknowledged biases and carefully focused their attention on the text, theme-based analysis, and participants' verification of the findings. The interview excerpts support the emerging central themes. Five (5) research informants were selected using criterion sampling, which means they were chosen based on pre-determined criteria such as being ICT-trained teachers working in a higher education institution with at least five (5) years of experience. In priority were the teachers who gained certificates in ICT training. The informants were informed about the study, its benefits, and the expected form of participation though a consent form prior to the gathering of data. Intensive data collection was done through one-on-one interviews utilizing the open-ended interview guide. It was done via an online platform - Google Meet or Zoom. Interviews were unstructured in order for the researcher and participants to have a free-flowing and flexible discourse. The average duration of the interviews were 30 minutes. Interviews were recorded and transcribed.

Following Collaizi's (1979) steps in thematic analysis, the interview transcripts were read and re-read to obtain the general sense about the whole content. Significant statements that pertain to the phenomenon under study were extracted. Meanings were formulated from the significant statements. Going back and forth to the data, similar formulated meanings were collapsed together to form the initial themes which described the central themes of the lived experience of the ICT-trained teachers. The findings were presented in themes to discuss the meaning of the lived experiences of the participants. In order to match the researcher's descriptive results with the research participants' experiences, validation of the findings from the participants in the study was sought.

The research underwent a review by the Research Ethics Committee (ERC) in the University. ERC clearance was secured, the researchers identified prospective participants and they were contacted and informed about the study. Those who agreed to participate in the study were asked to sign the consent form. The researchers then set up the interview day and time, as well as sent the participants a Google Meet or Zoom link. The interview may be terminated at any time during the course of the interview if the participant so desires. Any data obtained from the study were treated with utmost confidentiality. The participants' real names were not divulged in any way during the data analysis.

Moreover, the participants were given provisions for snacks and communication allowance for their participation in the study.

3. Results and Discussions

Covid-19 pandemic has transformed teachers' way of teaching. Teaching and learning process that is usually done in the classroom has to be conducted by implementing a distant learning process. Technology plays a vital part in the process of teaching during pandemic because it enables teachers and students to still conduct the meeting without having to meet directly in the classroom since it's forbidden to do so (Aminatun et al., 2021). The ICT-trained teachers in this study were investigated as to their lived experience during online class. The responses resulted to the following themes below;

Theme 1: Reassessment of ICT knowledge and skills

The investigation showed that ICT-trained teachers need to reassess their ICT knowledge and skills. While it's true that the ICT-trained teachers are technology-savvy, they revealed that despite the education and training they attained, they are far from knowing everything about ICT. Aside from investing time and effort in helping others, they also have to persevere to improve their own technological knowledge and skills. They still consider themselves as learners who continually seek information that can widen their knowledge and improve their skills.

> *"I still consider myself as a learner and I want to be trained more on ICT" (P1)*
> *"Daghan pa ko ug gustong mahibaw-an to improve myself (I want to learn more to improve myself)" (P5)*
> *"ICT training is still important for me even if I have trainings before to learn more" (P2)*
> *"I do self-learning from Youtube" (P1)*
> *"I study from materials online" (P4)*

ICT-trained teachers still see the need for ICT training to enhance their skills. These findings support the notion that several teachers reassess their skills and reshape their educational practice to address the demands of the time (Flores 2020; Hadar et al. 2020). These results imply that teachers need further training. It is then recommended that school administrators may consider constant training in ICT in education for teachers. This is to provide the knowledge and skills that fits into the needs of time and preparation for instruction for possible health outbreaks.

Theme 2: Feeling of pressure from colleagues and administrators

ICT-trained teachers feel the pressure from some colleagues and administration. They were given extra tasks and assignments by their school's head to assist ICT-related activities and concerns which affect their schedules in teaching. Colleagues in school think that ICT-trained teachers know everything about ICT. They became a one-call-away teacher whenever others have ICT technical concerns. They were given school tasks to manage ICT laboratories and its equipment during the pre-pandemic time.

> *"Abi nila ug maayo na jud kaayo sa ICT, but mo help gihapon ko. (They thought I am an expert in ICT but I still help them" (P4)*
> *"Anytime they called me when they have concerns in their computer hardwares or softwares." (P1)*
> *"They always think of me as somebody they can call of help when they have concerns in school" (P2)*

They added that they are constantly asked to conduct ICT-trainings to cascade their learnings which resulted to an increase in their workloads.

> *"Every time we need computer-related trainings, we were tapped always by our school heads" (P2)*

"I was tasked to train my co-teachers on ICT-related topics" (P4)

These results showed that ICT-trained teachers were added with school tasks and responsibilities. Teachers who underwent ICT training were subjected to the pre-conceived notion that they are very knowledgeable and skilled when it comes to the use of computers and technology. This is supported by the study of van del Spoel et al. (2020), that during the epidemic, instructors were under a lot of time pressure and had an increased workload.ICT teachers undertook many roles in their schools apart from the assigned positions determined for them. The fundamental reason for this appeared that ICT teachers were perceived as experts, technical staff or personnel who knew everything about ICT (Topu & Goktas, 2012). It then implies that ICT-trained teachers were trusted with additional tasks which made them overworked. It is suggested that administrators will find ways to consider giving due credit to these additional tasks. Collie and Martin, (2016) mentioned in their study that teachers were forced to adapt to new teaching-learning modality in a very short time. It is supported by the finding of Mishra, Gupta & Shree (2020) on teachers teaching online, that there are some challenges in implementing the change in teaching-learning modality, which are primarily related to the novel perspectives of online education and their technological complexities. Teachers are having difficulty adapting to the sudden education change because they are not technologically competent. Therefore, faculty members are required to develop appropriate technological skills to be able to use the various kinds of technological instruments so that effective teaching can take place (Valentine, 2002).

Theme 3: Adaptability to online teaching

ICT-trained teachers learned to adapt to online teaching. For them, online teaching is manageable. They were able to adapt and adjust easily.

"A bit easy for me since I know some of the applications that help my teaching." (P1)
"Medyo kabalo ra ko unsaon pag handle sa online class. (I get to learn how to handle online class). (P2)
"Dali ra ko naka adjust sa online teaching kay naa na koy experience sauna. (It was easy for me to adjust to online teaching because I have already had an experience before)." (P4)
"My prior knowledge and skills in ICT help me to easily adapt to the transition from face-to-fact to online teaching". (P5)

These results then further means that teachers trained with ICT helps a lot in their transition to online teaching. They easily adapt to change. ICT-trained teachers effectively react and respond in constructive ways to the changes in the environment. Though, adaptability of teachers in online classes includes the availability of resources, institute support, skill development and engagement have significant contributions to the adaptability of faculties and students to online teaching-learning. The pandemic situation has enhanced the adaptability of online teaching-learning during the COVID19 pandemic and also students and faculty are ready if any other similar man-made or natural disruptions occur (Patil & Kamerikar, 2023). According to Comi et al. (2017), teachers' use of ICT in the classroom and their capacity to incorporate it into their instruction will determine how effective it is.

Theme 4: Using of online tools and applications in teaching

ICT-trained teachers used different applications in teaching online. They were able to apply their knowledge in their teaching. The frequent and competent use of this technology makes them ahead of their craft compared to those who don't have the necessary skills and training. Adapting to a new online platform, navigating and exploring varied tools and sources to be used for online teaching is not as tedious compared to colleagues who lack the necessary skills as shown in their responses.

"I used online applications in my online teaching." (P1)
"It is not very difficult for me to work on online tools." (P3)

Additional training courses upgraded technical skills of looking for educational tools that can be used offline in teaching. Students like the approach on assessment more using varied applications. The creative interactive instructional materials created guide students how to maximize and enjoy

technology by allowing them to manipulate them on their own, leaving students to learn not just the content but also appreciate the functionality of the tools. Students who enjoy the experience become empowered and capacitates themselves to assist other classmates.

> *"I enrolled to ICT international training course to upgrade technical skills to look for educational tools and OERs that can be used offline" (P2)*
> *"Students like the tools and applications I used." (P5)*
> *"The creative materials I made from tools guide them to explore and enjoy technology." (P4)*
> *"Students retain the content of the lesson and appreciate the functions of the tools". (P5)*
> *"Students enjoy the experience and assist their classmates." (P1)*

These findings showed that online applications and tools help ICT-trained teachers to conduct creative and effective instruction. ICT knowledge on these applications will definitely also help teachers in their teaching. The availability and usage of ICT today is one of the most efficient strategies to raise the caliber of instruction. (Bilyalova, 2017). As a result of the pandemic, online learning has become the most popular method of instruction thanks to the advancement of computer hardware and telecommunications networks, which has allowed for the construction of a qualitatively new informational and educational environment. Studies showed that teachers' updated knowledge of ICT helps them to prepare their lesson plans to make teaching and learning effective (Ahmed, Arshad, Tayyab, 2019). It is suggested that for academic institutions to guarantee optimal implementation, may provide and encourage faculty members' personal and professional development especially in ICT for competence and literacy.

Theme 5: Challenges in Online teaching

ICT-trained teachers were not excused with challenges during online teaching. Instructors in higher education, most especially those with ICT skills and background may not have serious issues in online teaching although deep thinking is needed to plan out strategy for instruction. Even academic institutions rigorously look for ways to provide all sorts of support needed by the teachers, but the uncertainty of how long online learning will remain as the only mode of learning slowly creeps in, the pressure and challenges of the situations started to show its effects especially to the students. These challenges are comparable to the problems met by non-ICT trained teachers. According to Comi et al., (2017), studying the issues and challenges related to ICT use in teaching and learning can assist teachers in overcoming the obstacles and become successful technology users. The items below were shared by the informants.

Intermittent internet connectivity

Intermittent internet connectivity becomes the primary challenge that greatly affects this mode of learning. Students' inability to attend synchronous activities, participate in the discussion and deliver tasks on time are due to this reason.

> *"Unstable internet connectivity" (P1, P2, P3, P4, P5)*

Absence of gadgets

Teachers struggle to connect with students and let them perform other tasks instead of doing online activities because they have no gadgets to install the needed applications. Although it is also a common experience for instructors, there are those who were trained and equipped with the necessary skills but restricted to introduce new concepts to students due to the high cost of the needed gadgets (P4).

> *"Some students don't have computers and laptops at home." (P1)*
> *"There are students who don't have cell phones or tablets" (P3)*
> *"I got limits to introduce some concepts that requires gadgets for learning" (P4)*

Compromised delivery period

Teachers were not able to deliver some lesson plans due to the absence of gadgets and other limitations. There were times that classes were not implemented and some planned activities on time.

> *"I can't follow my instructional flow on time" (P1)*
> *"Activities were not done anymore due to lack of time" (P2)*

Students' poor ICT skills

Students were observed to have poor ICT skills. It is evident due to the absence of gadgets that supports learning. With the students' poor ICT skills, an extra time is needed to teach and guide students with the use of the different applications, thus delaying learning activities. It caused disappointment to teachers because they will have to devise lessons and resort to theory-based activities even if hands-on exercises are required.

> *"I need more time in my class to include teaching my students on some applications" (P1)*
> *"I spent extra time for my students to learn the applications I used" (P3)*
> *"Guiding my students in the tools I used made the learning activities delayed" (P5)*

Limited family income

Challenges to online learning are more felt by students especially those who are greatly affected by this pandemic. The economic condition of the family transitioned to introduce modular learning modality. It is very difficult to sustain the focus and attention of students whose family suffered due to the loss of income. It greatly affects the disposition of the student and the desire to attend synchronous activities is gone because the student knows if she helps mend her siblings so her parents can do extra jobs or she herself do part time jobs, she will be able to put food on the table for the family which is the top most priority (P2).

> *"Students who belong to low-income family felt more the hardships in online class" (P5)*
> *"Nag modular nalang ko kay wa man silay ikapalit ug gadgets. (I used modular instruction because they don't have gadgets) (P2)*
> *"Students who were greatly affected don't have focus in online class" (P2, P3)*
> *"Students don't like to focus on online class because they prefer to have part-time jobs to help their parents. (P2)*

Inappropriate communication timing of students

Modular methods may also become effective but the way to perform student follow-up poses a challenge. It was found out that students' disregard timing in terms of communicating their instructors. It is very necessary to establish boundaries with students in terms of communication. Some of the teachers' experiences are as follows;

> *"Modular is fine to use but doing follow-ups for students' submission is very difficult." (P1)*
> *"Sometimes students chatted at the middle of the night or at dawn" (P3)*
> *"Students don't mind, they contact me anytime they want. (P4P*
> *"Students believed that I am available 24/7" (P5)*

The research conducted by Cakir (2013) on the professional development of ICT teachers in terms of their abilities and teaching perceptions validated these findings. The results showed that despite their positive self-perceptions of competence, ICT teachers faced difficulties such as classroom management, number of students, and hardware-software issues regarding the effective use of technology, especially cutting-edge technology, in the classroom. Time constraints, inadequate information technology (IT) class design, a lack of flexibility in their teaching responsibilities, crowded classrooms, and classroom management concerns, in their opinion, significantly impacted teachers' ability to utilize technology in the classroom.

With these challenges in online teaching, the administrators may conduct training to improve ICT skills of teachers and students. Programs and projects may be implemented to address the lack of

gadgets in schools to help delivery period will not be compromised. Scholarships may be added to address low-income resources of some students. A seminar may be conducted to adhere to attitudes and values concerns.

Theme 6: Passion to acquire and share ICT skills

ICT-trained teachers emphasized that ICT is part of their being and that cannot delivery effectively if there is no ICT in teaching. Below are their relevant responses;

"I need ICT in my classes, it's very important." (P4)
"I felt that I am more skillful than others". (P1)
"I guess I know more applications to be used in my teaching." (P5)
"I'm happy when I was able to help my colleagues in their ICT concerns." (P1)
"My students are grateful every time I shared some applications to them." (P4)
"I like to help but I prefer to teach my students and colleagues so that next time, they will be the one to help and share to others too" (P5)

The ICT-trained teacher has seen the importance of being equipped with ICT skills and considered themselves skillful than others. ICT skills made the teacher feel more valuable. It's fulfilling for the teachers when they are able to help other people especially to the students and colleagues. The teachers are happy when they share knowledge with others. These results adhere to the study of Nagar et al., 2016, that educators' familiarity and mastery of ICT tools influence use for teaching purposes, more so than personal feelings, the ICT culture, and the availability of the tools. Philipsen et al. (2019) also said that it indicates that teachers experience a large range of feelings and that these fluctuate throughout the online teaching. However, they emphasized that they prefer teaching rather than directly fixing the concerns of the students and colleagues. Thomas et al., 2017, said that they need to develop more confidence in their individual ability at becoming computer literate teachers in order to remain relevant in the modern-day information age.

4.   Conclusion

The ICT-trained teachers are equipped with ICT knowledge and skills. They were able to adapt easily to online classes. They applied ICT skills in teaching in different creative ways. However, they also face different challenges in online classes. The teachers' experiences were focused on the following themes; *Reassessment of ICT knowledge and skills, Feeling of pressure from colleagues and administrators, Adaptability to online teaching, Using of online tools and applications in teaching, Challenges in Online teaching, and Passion to acquire and share ICT skills.* Being ICT-trained, they developed an effect towards ICT and its meaning to them as an educator. It clearly showed their dependence and tie towards the use and integration of ICT in teaching and learning. Hence, the administration may consider these results to guide them to improve teachers' ICT skills in higher education.

5.   Co-Author Contribution

The authors affirmed that there is no conflict of interest in this article. Author1 carried out the field work, prepared the literature review, carried out the analysis interpretation of the results, and prepared the writeup of the whole article. Author2 wrote the research methodology and did the data entry. Author3 carried out the discussion, conclusion and recommendation of the results.

6.   Acknowledgment

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