

Teachers' Experience of ICT Training for Professional Development

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Abstract

This article discusses on teachers' experience of Information and Communication Technology training for their professional development and in teaching and learning in the context of Nepal. It also discusses the policy documents which are brought to train the teachers focusing on the use of ICT in teaching and learning highlighting the problems that appear to implement the IT policies and teachers' professional development. It also examines the teachers' knowledge of ICT and their perception of using it in teaching. This study was based on a qualitative interpretive design that follows the semi-structured interviews with the participants and observation of schools to find out the teachers' experiences of using technology for their professional development and the availability of IT resources, and tools at schools. The findings indicate that most of the teachers are not trained in ICT for their professional development and some of the teachers have taken TPD training in which there is not any association of information and communication technology. Teachers are so curious to learn Technology for their professional development but the lack of teacher training is the main problem. This study was carried out to find out the existing practices of using new technology for professional development which resulted in teaching and learning. Although this is a small study, this provides insights to fill the gap between training policy and the problems that exist at the practice level which will be helpful to improve education in Nepal.

Keywords: Information and communication technology (ICT), teacher professional development (TPD)

Introduction

The use of Information and Communication Technology (ICT) in teaching and learning has become the new trend in education. Teachers are eager to use technology in their teaching to make their teaching interactive and effective. For this, they need to get training on it. Teachers can also use new technology for their professional development which is very helpful to be updated with new ideas, and techniques of teaching. Information and Communication

Technology can be defined as the combination of technological tools and resources that are used to get information in different fields. Information and communication technology includes different electronic and networking tools which are widely used in the field of education (Sánchez & Alemán, 2011). In this age of technology, traditional methods of teaching and learning have become useless and new teaching techniques have been introduced as the demand of time (Kaware & Sain, 2015). Nowadays technology has become a part of learning, which plays a very important role in the process of teaching-learning activities. The use of technology supports student-centred learning to construct the knowledge to develop a problem-solving attitude, and to create interest in the study (Kaware & Sain, 2015). ICT is used to develop the professional knowledge, skills and capacity of the teacher to conduct the technology-friendly teaching-learning activities. As the quality of education is determined by the professional competence of teachers (Sharma & Pandher, 2018), teachers can enhance their professional competence through ICT training for their professional development.

Teachers' Professional Development (TPD) is the educators' capacity-building process which enhances the capacity to use the knowledge and abilities they have acquired. Teachers' professional development is a continuous and all-encompassing process that begins with pre-service education and training (Bharati & Chalise, 2017). TPD is a collection of organized activities in educational environments to prepare teachers for their jobs. (Pokhrel & Behera, 2016). ICT plays a vital role in the professional development of teachers to enhance their knowledge, skills and competency in teaching and learning. All teachers need to be provided with technological training for their professional development. *School Sector Reform Plan 2009–2015* emphasized the use of ICT in educational planning, teaching and learning, and administrative activities (MOE, 2009). When it comes to teachers, there is a need to enhance the link between their participation in professional development programs and the improvement of the learning process in the classroom. Teachers should be

encouraged to assess their training requirements so that they can become more motivated, effective, and qualified (MOE, 2016a).

The use of ICT tools and devices is very common in Western-developed countries with sufficient development of technological infrastructure but in Nepal, there are some problems. Teacher training courses can help teachers adopt technology and new ways to implement ICT into their profession (Abuhmaid, 2011). Integration of Information and Communication Technology policy into all levels of education supports the importance of the development of teachers' skills in using modern educational technologies (Hidayati, 2016). Planning the basic teacher-training module with the use of new technology in mind would help teachers stay relevant and advance their skills in the classroom (Bhatta, 2008). In 1980, a distance-learning program based on radio marked the beginning of ICT use in teacher preparation in Nepal. Multipurpose media centres were built in Educational Training Centers with an emphasis on media-based teacher education systems when the Teacher Training Project was established in 2002 (Dixit, 2009). Nepal government's policy document, Education Master Plan 2013, emphasized the use of ICT in higher education and classroom instruction despite sufficient financial resources to implement it practically. The use of ICT in education and its promotion to turn traditional pedagogy into modern learning strategies are also emphasized in the School Sector Development Plan 2016–2023 (Rana & Rana, 2020). Training in modern technology is very beneficial to teachers' professional development because it allows them to develop new skills, knowledge, and techniques. Teachers can help students by utilizing various tools and multimedia (MOE, 2016b). This means that teachers can search some information by using the internet, which can be very helpful for their professional development and also to create interest in the students. This article reports a study of teachers' experiences of ICT training for professional development. In particular, it aims to find out the teachers' experiences of ICT training for their professional development and their skills for the implementation of capacity development training in their teaching and learning activities.

Literature Review

Many studies have been conducted in the field of teaching and learning. To conduct this research, the studies which were conducted in the field of ICT training and professional development were reviewed. The literature review was done developing two themes.

Accessing ICT and Training

Many studies have been conducted regarding ICT training and teachers' professional development. For example, Dixit (2009) said that quality education is based on skilful and

trained teachers and all the teachers need to be well-trained in using technology in teaching and learning. In his study, Abuhmaid (2011) found that teacher training courses can help teachers learn and find ways to integrate ICT into their profession. Mukuna (2013) stated that teacher education institutions need to make plans to improve the teaching-learning process and ensure that all teachers are well-prepared to use ICT in the classroom. Rana et al. (2021) carried out the research and said that the Nepalese government has adopted a policy of integrating Information and Communication Technology into education and developing teachers' skills in the use of modern educational technologies. Rana et al. (2021) further stated that though the policy focuses on the importance of preparing skilled teachers to change the traditional pedagogy through the use of technology, TPD training could not provide the skills to integrate new technology in teaching and learning. Pokhrel and Behera (2016) found that teachers expect need-based training with the collaboration of teachers and trainers which will be very fruitful to solve their classroom practical problems.

Professional Development for Learning

Many other studies were also found about using ICT in teaching and learning. Alemu (2015) mentioned that professional development is not only to develop the teachers' abilities to use ICT tools but also to support the outcome of teaching and learning. He means to say teachers need to understand the importance of integrating technology into teaching and learning. Sancar et al. (2021) carried out the research and wrote professional development (PD) for teachers is necessary to enhance student outcomes. In their study Kaware and Sain (2015) wrote that in this age of technology, traditional methods of teaching and learning have become useless and new teaching techniques have been introduced as the demand of time. In one of the studies, Rana and Rana (2020) wrote that technology can improve students' achievement with the help of interaction between teachers and students that gives them the chance to discuss their problems, ideas and feelings. In another study, Rana et al. (2021) stated that the worldwide literature also suggests that teachers need to be updated with emerging ICT tools and e-pedagogies for their professional development which is very helpful in teaching and learning. Rana et al. (2021) further explained that ICT training helps teachers to develop their ability to work with students and enhance the students' learning outside the classroom. In the research regarding technology and language learning Cakici (2016) wrote that the use of technology can be taken as a new method in teaching and learning which allows students to be familiar with a variety of media and to develop the skills to enhance language learning.

Methodology

This study was based on a qualitative interpretive design as it aims to explore the teachers' experiences of using technology for their professional teaching and learning. The data collection process helps us gather information about our research questions regarding people, objects, and phenomena (Chaleunvong, 2009). The study followed semi-structured interviews with the participants and observation of schools to find out the teachers' experiences of using technology for their professional development and, the availability of IT resources, and tools at schools.

In this case study, sixteen teachers from four schools were involved as participants. As suggested by Denzin and Lincoln (2011), the participants were randomly selected by following a simple random strategy. The participants were followed by semi-structured interviews, as suggested by Denzin and Lincoln (2011), to explore their experiences of ICT training for their professional development and also for teaching and learning. The observation of schools explored the resources and ICT infrastructure and teachers' practices of using ICT for their professional development. Some previous studies and policy documents related to the topics were analyzed for qualitative information gathered through interviews and observations.

Before taking the interview, I got institutional consent and informed them about the purpose of the interview. Getting permission from the head teacher, I took the interview in their leisure time. The interviews were recorded with their permission and the observation notes were made. The audio recordings were transcribed, and the information was systematically organized under key themes. As suggested by Braun and Clarke (2006), the themes were generated by analyzing the interviews and observation. Ethics of research was maintained as suggested by Lune and Berg (2017) as the researcher developed the consent, took permission from the head teacher and participant teachers before the interview, protected the anonymity of the informants and so on. The names of schools and participants were replaced by demo names when the data were transcribed. The researcher politely requested the head teachers and participants for an interview and their recording.

Findings

This section comprises the interpretation and analysis of transcribed data which were collected as raw data in audio record mode and observational notes. The analysis of data was very helpful for the findings of the study.

Teachers' Experiences of ICT Training

They emphasized the use of technological tools for their professional development and in teaching and learning but they raised many problems regarding the use of modern technology. From the interviews, it was found that some of the permanent teachers got TPD training which was provided by government training centers at the district level but there was no association of ICT part in the training courses. In the interviews, the teachers revealed that they are using technology for their professional development and in teaching by learning themselves with collaboration and form the workshops at schools which were conducted by schools to take online classes. For example,

I learned with the collaboration of teachers. During the pandemic time, our school managed the ICT-based training (short workshop) to conduct online classes. At that time, we learned to take online classes through technology, sir. We use to share skills and experiences and learn. (Teacher A)

I have got one in-service training but I didn't learn technology in that training. We sometimes get training at school from our colleagues which is organized by our school. We get content-based and ICT-based training at school. I also learned computer skills at school. (Teacher B)

I am not competent in ICT sir. Once our school organized ICT training for one week during the COVID-19 period. At that time I learned to take online classes with the help of new technology. I also learned with the help of my friends. We collaborate to share our experiences. (Teacher C)

Teachers further raised problems regarding the use of ICT for teachers' professional development and ICT training. They explained that teachers are not getting sufficient training though the government has different IT policies and strategies. According to the teachers, schools also are not conducting the training regularly to uplift the standard of the teachers. The teachers are not well equipped with technological tools and there is no support from the government and administration as well. It was also found that some teachers have no interest and willingness to learn and use ICT for their professional development. For example, one teacher said:

Teachers are not equipped with technological tools, administrative and managerial problems, problems in the technological skills of teachers, no implementation of technological training, and so on are the problems in ICT. (Teacher D)

Shriya's comments indicate that the weak implementation part of ICT training from the policy level, and administrative and managerial problems are the main problems

regarding new technology. Further discussion with other participants identified that there are some disadvantages of using ICT in teaching and learning. It was reported that when students use technology, they become lazier, and their creativity is decreased. In this regard, one of the teachers said:

Students are getting lazier because they do their tasks from Google searches. From this, their creativity will be decreased. Teachers are not well equipped with tools. Even teachers are using ICT only for searching documents and showing them to the students. This is also harmful to the teachers. (Teacher E)

The respondents also provided some suggestions regarding the problems of new technology for teachers' professional development. As reported by the respondents, ICT training needs to be provided to all the teachers from the policy level. It was suggested that teachers need to be enthusiastic to use ICT and schools should support and manage ICT tools and internet facilities for all the teachers for their professional development and effective teaching-learning. For example,

Firstly, teachers should be provided with technological training making them clear about what technology is and how to use it in teaching and learning. Teachers should be self-learners. Schools should support the teachers by conducting ICT training regularly. (Teacher F)

ICT training should be managed and the teachers should also be interested and they should be innovative in their professional development. They should not ignore the new trends in teaching being the traditional type of teacher. (Teacher G)

Firstly, the government should make a clear policy for ICT training and all teachers should be provided with teacher training. Secondly, the school administration should be supportive of creating ICT friendly environment at school..... (Teacher D)

From the above-mentioned suggestions of respondents, policies should be implemented effectively. It was also reported that schools have a role in maintaining techno-friendly teacher-learning environment and on the other hand, teachers need to be motivated towards learning through technology and making their profession perfect. It was also found that most of the teachers do not have ICT training and they are learning to use new technology with the help of collaboration and self-learning from different sources.

Role of ICT for Teachers' Professional Development and Teaching Learning

In the interviews, respondent teachers also revealed the role of ICT in their professional development as well as in teaching and learning. Most of them reported that new

technology plays a vital role in teacher learning and teaching. They described the contribution of ICT to teachers' professional development differently. For example,

New technology helps us to search for materials on the internet, make teaching-learning materials, to present the materials in class. We can increase our efficiency in teaching through ICT. To be updated in new techniques, methods, and approaches we can use technology. (Teacher A)

.....ICT is used for learning all language skills, vocabulary and grammar. It is also used to find out new innovative techniques through online resources, and different online or virtual classes can be taken to uplift academic proficiency. For professional development, we can conduct webinars, seminars
(Teacher F)

From their opinions, it can be said that ICT helps teachers to enhance their profession by assisting them to learn new ideas, techniques, and strategies of teaching and also to prepare the teaching materials which are so useful and romantic in teaching. They also said that technology is used to improve all language skills, vocabulary, and grammar. Furthermore, they revealed that ICT is used to conduct different online programs and e-research as well. Teacher respondents also focused on the use of technological devices in teaching and learning. It was reported that students become so happy in ICT-based classes and they learn easily and interestingly. In this regard, one of the respondents from School D said:

Students are interested in learning, they are motivated, they can learn fast and the learning through ICT is long-lasting. They can search the materials and prepare notes. They can have self-study through ICT tools. (Teacher H)

This view of the respondent revealed that when the teachers learned to use technology they could use it for learning themselves which ultimately resulted in teaching and learning. They can make their classroom interesting and lively with the help of ICT. A similar view was expressed by another respondent from School B as he said:

Yes, in technology-based teaching, students pay much more attention, they are curious to know happiness, and it reduces the monotony of the students. Listening skills can be developed well through ICT. (Teacher I)

From the respondents' opinions, it was found that students' learning achievement can be improved if the teachers teach through the use of new technology. It is helpful to increase the motivation of students and lessen their monotony. In their interview, they also reported that there is a relationship between professional development and teaching and learning. Only

professionally competent and skilful teachers use ICT to enhance their profession and to improve teaching and learning. In this regard, respondents also focused on the teachers' willingness to use ICT for their professional development and in teaching and learning. For example,

A teacher must be innovative and dynamic and should be updated with contemporary issues and curricula which are possible through the use of ICT. So, being updated in the profession and learning new trends in teaching is teachers' professional development. (Teacher J)

..... and not for professional development. If it is used properly by teachers and students, it can be one of the most effective modes of learning and creating new materials of our own..... (Teacher K)

Overall, from the interviews of the respondent teachers, it can be interpreted that teachers do not have training experience in technology from the policy level. Some of the teachers have taken TPD training to boost their profession but they didn't get any chance to learn ICT. Few teachers shared their experiences of using technology in teaching more or less which they learned from their collaboration and mini-workshops that were organized by their schools. They reported that they use technology for their professional development and in teaching and learning. They do not use ICT in teaching regularly because of many problems which were reported by all the respondents. They also provided some suggestions to mitigate the problems of ICT and to use it in the field of education and for teachers' professional development.

Discussion

The result of the study indicates that most of the teachers have not taken any ICT training. Teachers shared their experiences of using new technology for professional development teaching and learning. The study found the gap between training policies and the reality of trained teachers. Although IT policy emphasizes the use of technology in teacher education by providing different pieces of training for teachers, the implementation aspect seems to be very weak. Some teachers are provided professional development training but they don't get any chance to learn technology. The study also finds the gap between what teachers expect from professional development programs and what they are getting. They expect a sufficient training period with the association of technology but there is not any connection of technology in TPD training programs. Trainers need to be experts in subject matter and technological skills with more experience. Though some of the schools organize workshops to facilitate the teachers with technological skills, they are not regular. The study

(Rana et al., 2021) also reported similar findings that teachers are not getting any training in technology despite the existing TPD training provisions from the policy level.

The use of ICT is helpful for teachers to prepare teaching materials, learn language skills, and be updated with the cross-cutting contents in the field of teaching which help them to develop their profession and be competent teachers. The study finds that lack of training, insufficient technological tools for the teachers, and less support from school administration and management at school have created problems in making use of new technology in teaching. Teachers' low level of ICT knowledge and their ignorance of using it is another remarkable aspect. ICT-based teaching enhances the students' learning achievement as the students are motivated to learn. For this, teachers should be tactful enough to make proper use of technology. Therefore, the demands of teachers are to be collected and the training courses need to be designed. Training needs to be provided effectively and the teachers need to be more interested and responsible to learn new skills and techniques of teaching and those skills need to be entered into the classroom teaching. The study (Pokhrel & Behera, 2016) also reported similar kind of findings that teachers should be provided the TPD training for their professional development and their expectations should be addressed in training.

Conclusion

Overall, ICT training plays a vital role in teachers' professional development and teaching and learning but the teachers cannot handle the technology without training. Even though IT policies were made, they were not effectively implemented at the practice level in the context of Nepal. Teachers are very curious to learn the technology and use it in their teaching but they do not have any opportunity to take trainings. Some of the teachers are using technology with the help of skills and knowledge that they learn themselves and sometimes from the workshops organized by schools. Teachers in this study expressed some concerns about teacher education and government teacher training which did not cover the use of technology. Some problems were also reported like insufficient technological tools for the teachers, less support from school administration and management at school, lack of teacher training and so on. Despite these problems, the use of new technology is advantageous for teachers to prepare teaching materials, learn language skills, and be updated with new content in the field of teaching which helps them to develop their profession and be competent teachers. Furthermore, the integration of ICT in teaching and learning enhances the students' learning and motivation. Therefore, the use of technology in education needs to be increased mitigating the problems and managing the teacher training with the focus on new technology and its use.

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