INTEGRATION OF E-CONTENT IN EDUCATION

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Abstract

Over the last two decades there has been a rapid growth in the field of ICT and it has become one of the most important topics in the field of education. Integration of ICT in teaching will facilitate teacher educators' in meeting the requirement for technology-based teaching and learning. India is a global unicorn in the field of ICT and other cutting-edge domains, and there is a bidirectional relationship between technology and education. The Ministry of Education emphasises the importance of integration of technology in teacher education. In keeping with the digital age, teacher educators' must integrate ICT in their teaching learning process and reduce the usage of traditional methods in teaching. The aim of this research is to study perceptions of teacher educators' on ICT integration to enhance the teaching and learning processes and also to analyse the challenges encountered by the teacher educators in successful integration of ICT. A questionnaire was distributed to the teacher educators from the state of Odisha. The results indicate that the teacher educators' are well-equipped with ICT tools and facilities and their perception regarding this is mostly found to be positive. The results also indicate that the challenges faced by the teacher educators' are lack of training in integration of ICT, competence, lack of appropriate softwares and materials as well as limitation of time .

Keywords: Information and Communication Technology, Teacher Educators'.

Introduction

In the present situation, there is a compelling need for a shift of education from the conventional and traditional method to the modern teaching methods. One of the most important developments in the field of education is technology. Integrating technology in education refers to the use of computer-based communication that is integrated into the daily classroom instructional process. In addition to preparing students for the current digital era,

teacher educators are seen as key players in incorporating technology into their daily classrooms. This is due to information and communication technology's ability to create dynamic and proactive teaching-learning environments. (Arnseth & Hatlevik, 2012). ICT adoption is a continuous process that fully supports both teaching and learning as well as information resources. (Young, 2003).

Teacher Educators' are always on the lookout for innovative methods of teaching to make their classes more communicative and innovative in nature. Technology integration in classes not just makes the teacher educators and learners dynamic in nature but it also provides multiple opportunities to go beyond chalk and talk methods. Using e-content is also an important technological tool that provides an opportunity to the learners to see, listen, speak and write at the same time. This integration of technology allows teacher educators and learners to think beyond the four walls of the classroom and explore worldly knowledge just by sitting stationery in one place..

ICT provides assistance and complementary support for both teacher educators and learners (Jorge et al., 2003). ICT is not meant to be a substitute for skilled trainers but they are considered as a supplement to improved teaching and learning. Due to the fact that technology enables teaching and learning to occur not only in the classroom, but also when teachers and students are geographically separated, ICT integration is critical in education.

Rationale of the study

ICT is utilised in various ways to help both teacher educators and learners in learning about their respective topic areas. Some of the examples of technology based teaching and learning are educational movies, music, mind mapping, simulation, data storage and brainstorming which makes teaching- learning experience meaningful and relevant. (Finger & Trinidad, 2002). Previous research has established that integrating ICT into the classroom improves the learning process and promotes students' capacity for active learning. From the past few decades, the education system has changed tremendously mainly because of technology. This is because technology has the power to make teaching and learning more proactive, accessible, and comprehensive. The ministry is making significant efforts to ensure that technology is used to its full potential in classrooms where teachers are integrating technology to improve the quality of their instruction. Despite all efforts, most institutions are experiencing issues where teachers are not able to make the most of the technology available. This is a serious issue as many previous researches have proven the usage of ICT in teaching and learning process could improve learners' achievement in many fields and if they are unable

to utilise it to its maximum, it simply means that they are not devoid of the best benefits of the technology in the field of education.

Tezci, E. (2011) aimed at studying the perception of pre-service teachers on ICT competencies The researcher identified ICT skills for communication and networking, Media usage for teaching and content creation. The results indicated that pre-service teachers had high competencies in regards to ICT skills for network and communication as it was seen that pre-service teachers used e-mails, chat online, etc for communication with students. However, in case of media usage for teaching and content development was reported to be integrated by few pre- service teachers only as it was found that they were not competent to use technology in curriculum content transactions. Hence, it was recommended that regular training for integrating ICT must be imparted to pre-service teachers. Padmavathi (2013) conducted a cross-sectional survey to study the perception of teacher educators in integration of ICT . The results highlighted that teachers had positive perception towards the transformative role of ICT as it improves teaching –learning process, enhancing learning of the students by holding their attention and providing continuous motivation. Khawaji (2016) conducted a study to study the perceived factor affecting technology integration of University English language teachers. The teachers with more usage of technology for personal use found to use it more for classroom transactions. The most perceived way to use technology was for practising, drill, tutorials and for providing information through CD- ROM and internet surfing.

Overview

To sum up, the above quoted literature throws light on the significance of studying perception of teacher educators to integrate technology with pedagogy and content. It has been reported by an array of researchers that teacher educators with positive perception are likely to integrate technology as compared to those having neutral and negative perception. The reviews also pointed out that teacher educators with positive perception integrated technology and modelled themselves as technology integrator; if teacher educators modelled themselves as technology integrator, pre-service teachers are likely to integrate technology in their teaching-learning.

What is the perception of teacher educators in integration of technology in the process of teaching? To what extent do they feel they are competent enough to integrate technology and update themselves with the new emerging trends of the technology? Are they oriented and formally trained on how to integrate technology effectively to make the most out of the resources available to them? What are the challenges faced by the teacher educators and what

are their expectations from training institutes. The present study undertaken by the researcher will answer the above research questions.

Objectives of the study

1. To find out the perception of teacher educators' in integration of ICT in the teaching learning process.

2. To identify the challenges faced by the teacher educators' in the integration of ICT

Method of the study

Research Design

For this study, a quantitative approach was used to collect and analyse data from all respondents. The questionnaire was created and finalised by the researchers before distributing to the intended set of respondents. As a result, the questionnaire was disseminated in order to collect data from the respondents.

Population and Sampling

The total number of respondents for this study was 50 teacher educators from the state of Odisha. The questionnaire was sent randomly to the respondents with a teaching background independent of gender, age or teaching experience.

Instrument

The main tool in this study was a questionnaire with the total of 20 items. There were 15 closed-ended questions and 5 open-ended descriptive questions. The form has been completed by 50 teacher educators. The respondents were asked to read the statements and comment on a 4-Likert scale ranging from 4=Strongly Disagree, 3=Disagree, 2=Agree, and 1=Strongly Agree. The questionnaires were divided into two sections. Section A dealt with the respondents' personal information, which included items such as gender, teaching experience, specialisation area, The other section in the questionnaire focuses more into teacher's perception and the challenges faced by them in proper integration of ICT.

Results and discussions

Table 1: Teacher educators' perception of ICT integration in Teaching

"#	Items	Strongly disagree	Disagree	Agree	Strongly agree	Mean	SD
1	I feel confident in learning new technological skills	3		24	23	1.66	0.76
2	I find it easier to teach the students by the help of technology integration		4	26	20	1.68	0.61
3	I am aware of the great opportunities that ICT offers for effective teaching			28	22	1.56	0.50
4	I think that with integration of technology, teaching becomes more communicative and efficient in nature		6	24	20	1.72	0.66
5	The integration of ICT in teaching promotes the development of students communication and other skills			29	21	1.58	0.49
6	I can still have an effective teaching without the use of ICT		3	36	11	1.84	0.50
7	I think the use of ICT in teaching is a waste of time.	20	23	7		3.26	0.69
8	I am confident that my students' learn best without the help of ICT.	3	21	17	9	2.36	0.84
9	The classroom management is out of control if ICT is used in teaching.	12	30	5	3	3.02	0.76
10	Students' pay less attention when ICT is used in teaching.	18	26	6		3.24	0.65
11	The use of ICT helps teachers to improve teaching with more updated materials.		3	23	24	1.58	0.60
12	I have more time to cater to students' need if ICT is used in teaching		6	24	20	1.72	0.66
13	The use of ICT enables the students' to be more active and engaging in the lesson.		2	24	24	1.56	0.57"

The majority of teacher educators' agreed that integration of ICT in teaching provides them with better opportunities with a mean of 1.56. The integration of ICT will lead to effective teaching. Furthermore, The teacher educators also agreed with the statement that ICT integrated teaching makes learning more effective as it helps students to retain what they have learnt for a longer period of time. The data received also shows that using ICT in the classroom allows learners to be more active as well as engaged in the lesson prepared by the teacher educators' with a mean score of 1.56. This is due to the fact that students are more comfortable

with ICT and find it simpler to learn with it, allowing them to participate more actively in class. Active engagement from students makes the class interactive and lively, which stimulates more students to participate in class discussions and debates.

The data revealed the familiarity and competency of teacher educators' in integrating ICT, with a mean of 1.58. The mean value of 1.58 indicates that most teachers are confident in learning new computer skills and are able to use ICT to find teaching materials and resources. In this context, it also shows that teacher educators are receptive to the use of ICT in the classroom, rather than being resistant, and that they are comfortable learning new skills related to technology. Aside from that, the teacher educators' also believe it is easier to teach in the class while they integrate some form of ICT in their class, with a mean score of 0.61. The teacher educators' though agreed that integration of ICT brings dynamic to the class but they still believed in the traditional way of teaching and felt that they can have equally efficient class in the absence of ICT as well with a mean score of 1.84.

Most teacher educators' on the other hand, disagree with the fact that using ICT allows them to address students' needs and requirements, with a mean score of 0.66. ICT makes it easier for them to teach as well as learn simultaneously with the learners, but everything else remains the same. With a total mean of 3.26, most teacher educators' believed that integrating ICT in the teaching setup benefits both the educators and the learners in variety of ways and ICT integration is not time waste. However, there are some drawbacks to integration of ICT. The results displays that students make zero to no effort for their lesson with a mean score of 3.24, and that most teacher educators' agree that using ICT in classroom only leads to learners paying less attention, with a mean score of 3.24, indicating that educators believe that ICT integration will lead to students being overly reliant on ICT and failing to take ownership of their own autonomous learning.

Detailed Analysis of the open-ended questions

Q1.Which are the platforms that you use to explore quality e-content to support your teaching in the classroom.

The teacher educators were asked about the platforms that they use to obtain quality e-content or other relevant materials to enhance their teaching processes in the classroom. The most common answers from the respondents were DIKSHA, SWAYAM and e-pathshala. These platforms definitely provide teacher educators with good quality and authentic resources which enhances the understanding level of the learners. Other common answers among the respondents were Google and Youtube. The answers revealed that the respondents are aware

of the platforms that they can access to explore e-content and they also use it frequently to ensure effective delivery of the lesson.

Q2. Have you received any form of formal training on integration of technology? If yes, specify.

As a response to his question many teacher educators agreed that they have received training for integrating technology in the classroom. If teachers have undergone some training it enhances their knowledge and expands their understanding of technology. Some teacher educators admitted that they have not been a part of any training and they have tried to learn on their own. Some teacher educators said that they have mostly learnt about it during their M.Ed course.

Teacher educator ABC said, *"There's no official training from the government giving us proper view of using ICT in teaching and learning process. It makes me confused whether I already integrate ICT well or I still need improvement"*

This response from the respondents gives us an insight that there is a lack of training for teacher educators.and if teacher educators' are given proper training they can maximise the benefits of integrating technology in the class and also they will be more confident in their classroom management.

Q3. Have you faced any challenges with the integration of ICT in teaching? If yes, list down a few.

Teacher educators were asked about the challenges that they have faced or frequently face while integrating ICT in their day to day teaching-learning process. The respondents were very open about the challenges that obstruct efficient technology integration in their classes. The most common challenge that the teacher educators face is the lack of proper infrastructure and resources. Some of the respondents felt that lack of training also pulls back and demotivates them to explore more. Some teacher educators revealed that there is a lack of appropriate software. Lack of software discourages the teacher educators to integrate ICT in learning. Some of the teacher educators, especially from education background, revealed that there is a dearth of proper material which they can use for their teaching. Teacher educator XYZ said that *"A lot of time is wasted looking for good quality material. The materials are available but they are not content specific and also not organised in one platform because a lot of time just goes out in searching in many different places."* Some respondents said that lack of time is also a challenge. Many teachers said that they have competence and confidence in integrating ICT in

education but they still are able to make little use of technology as they are always running short of time."

Q4. What support do you need from your organisation in order to facilitate integration of ICT in your teaching?

Teacher educators were asked to share what support they need from their organisation in order to integrate ICT in their teaching more effectively. The most common answers from the respondents were training and workshops for technology integration. Other respondents also said that they would also require digital infrastructure facilities. Online subscriptions and autonomy in the usage of ICT were other common answers among the respondents.

Conclusion

With ICT integration in the classroom, learners will be able to engage in interactive tasks with a wider range of information and knowledge during their learning. At the same time, the teacher educators' beliefs and attitudes will influence them to integrate ICT in their teaching practice (Hatlevik & Arnseth, 2012; Rampersad, 2011). The results of this study show that most of the teachers are of the perception that ICT integration in teaching is useful and essential. Teacher educators' are of the view that technology brings a positive change in the output of the class only when it is carried out effectively. Teacher educators' are also aware of the various platforms available for quality content which can be really helpful for the learners. The study also revealed that some teacher educators' are not confident in using technology in the class because they have not been well oriented or trained. The respondents also reveal that training makes a lot of difference in the confidence and attitude of the teacher educators'. It was also revea;led in the study that major challenges that the teacher faces in the integration of technology is the lack of training, competence, time. Because of unavailability of softwares and resources, teacher educators' are not able to make the most out of the wonders that technology has the potential of bringing in the classroom. In conclusion, the initial stage of ICT implementation must be effective in order for teachers, educators, and learners to make the best use of it. As a result, the preparations for technology-based teaching and learning begin with adequate implementation and support from top management. If the technology integration implementation process is carried out correctly from the beginning, ICT integration will be a major success.The use of ICT, particularly in teaching and learning, is more about practise than theory, which is why teachers must be given time to learn and explore it, as well as go through the "trial-and-error" phase before they are completely comfortable with its use and able to use it for teaching and learning.

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