

ICT Usage in Learning and Instruction of Teacher Trainees from Teacher Education Institutions (TEIs) of Bhopal, Madhya Pradesh India.

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ABSTRACT

Teacher education plays a pivotal role in any education system and the same role of School Internship and Teaching Practice is for any teacher education programme. It produces the quality teachers for any country. Integration of ICT in teaching learning process is one of the indicators for quality teaching and learning. Now, ICT integration is inevitable. Hence, the researchers intended to explore which type of technology is used by teacher trainees in their academic endeavors. The present study was carried out to explore the uses of ICT integration in learning and instruction of teacher trainees studying in Teacher Education Institutions (TEIs) of Bhopal city of Madhya Pradesh (India). The descriptive survey method was adopted to accomplish the objectives of the study. Simple Random sampling technique was employed to select the 239 Teacher Trainees from intact classes of six TEIs of Bhopal. Researchers' self-constructed questionnaire was administered to the teacher trainees of selected TEIs. The data was analyzed through Frequencies and Percentages. The findings revealed that 72.8% of teacher trainees had used their Computer/ Laptop/Services/ ICT devices/ tools for accomplishing teaching-learning activities at home; 83.7% of them responded that ICT and Internet helped in preparing lesson plans; 90.8% of them reported that ICT and Internet helped in preparing teaching aids for delivering their lesson; 93.7% replied that ICT and Internet has helped them in preparing their assignments; 98.3% of them used social media for their teaching-learning related activities. Only few (i.e. 10%) of them found difficulties in using computer or laptop. Excessive uses of the ICT and internet have created medical, psychological and socio-emotional problems for 72.8%, 73.2% and 74.5% of teacher trainees respectively.

KEY WORDS: ICT USAGE, TEACHER EDUCATION INSTITUTIONS, TRAINEES,

INTRODUCTION

In recent past, Information and Communication Technology (ICT) usage has become more significant and flourishing in human life. In fact, it is now an inseparable component required for performing routine activities of our lives (Bhattacharjee & Deb, 2016). Nowadays, ICT usages means using of computers (Khan et al., 2011) along-with internet either in household or academic activity or in any occupation. Without internet the computers have now been used rarely (Hrastinski, 2019).

The emergence of Internet has proved a revolution in the field of ICT by providing impetus in its integration. Using internet totally depends upon computers, laptops, smart-

phones and tablets through which we are performing each and every task of our daily life. Application of ICT has made our lives more standard and luxurious. We are so dependent on ICT tools/ gadgets/ devices that we feel ourselves handicapped without them. If we do not use ICT and its gadgets for a while, we feel helpless, uneasiness and become restless. Today, these ICT tools/ devices/ gadgets are being used by each and every person in almost every sphere of life (Javed et al., 2020) viz. in performing household activities, academic work, business, recreational activities, online trading, purchasing, selling of almost all goods and commodities even medicines too, and so on irrespective of age, profession and geographical boundaries. It is being now acknowledged that ICT has interwoven with each and every aspect of our life. Teaching profession and teacher trainees are also not exception to it (Singhavi & Basargekar, 2019, Hasan and Mirza 2020, Javed et al., 2020).

Applying and integrating ICT in any field is now considered a basic digital literacy. Rather, digital literacy and ICT skills

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have become essential competencies and proficiencies for 21st Century's teacher (Bhattacharjee & Deb, 2016). Therefore, ICT competencies must be addressed and improved among prospective teachers / pre-service teachers / teacher trainees (Lovianova et al., 2021) because it helps the teachers in planning and executing their roles and duties effectively. Through the ICT, they benefitted in gaining learning experiences themselves; transferring same to the students; and preparing students as independent learners by enabling them self-directed learner. Also, ICT helps to enhance the e-learning capacities and proficiencies among the teacher trainees (Abdallah & Abdallah, 2022).

Hence, the teachers are more willing now for using the ICT tools and digital technologies in the classroom. Findings of the Digital School Survey conducted in India by Ocansey and Sharma (2020) revealed that the usages of ICT in preparing and delivering the lessons by school teachers are 81.5% and 83.3% respectively. It enhances the learning achievement of the students (Khan et al., 2011; Seifert & Feliks, 2021) by improving teaching competencies as well as teaching effectiveness of teachers (Ghavifekr & Rosdy, 2015; Manjunath, 2015; Kundu, 2018; Sharma, 2021).

It provides the opportunity for student-centric-constructivist-approach to the teachers. Hence, it is the need of the hour to introspect our teaching process, to provide institutional support for establishing ICT infrastructure (Avidov-Ungar & Forkosh-Baruch, 2018) and to integrate the ICT in education (Dharwad, 2016) so that the reflective practices can be promoted in teacher education (Killeavy & Moloney, 2010; Kalk et al., 2019). In the present study, effort has been made to explore how the ICT is being used by the teacher trainees in teaching-learning process at Teacher Education Institutions of Bhopal city of the State Madhya Pradesh (India). Since some decades, lot of studies on ICT related variables have been conducted in developed countries; as a result, efforts have also been made to integrate ICT in teaching learning process (Lim & Pannen, 2012; Romeo et al., 2012). However they are relatively rare and new for developing countries, especially in Indian context. In order to develop an understanding on methodology of the research conducted, researchers included the studies those conducted from the year of 2000.

Sources of research database revealed that Sinha (2004) conducted a research in Barak Valley of South Assam, and discovered that access to the internet has improved the standard of research, academic activity for faculty and students or the entire academic community, and e-commerce for corporate sector/business groups. These services have also made it possible for these groups to obtain information instantly for a variety of purposes. This shows that teachers as well as students, nowadays, have favorable attitude towards internet rather they are addicted to it. But, the study of Çinar et al. (2021) revealed that e-learning readiness among in-service teachers was found to be average level. Though, this readiness differed significantly according to gender, school-type, teaching experience, and teaching level, e-learning experience and Internet usage.

Digital divide in terms of access of ICT gadgets have been observed in some researches which is surely related to development of those regions. Availability of ICT infrastructure and digital literacy has a cause and effect relationship, (Cinar et al 2021).

Polat (2021) reported low levels of digital literacy among pre-service teachers. On the other hand, findings of some studies revealed that the students reported issues and problems encountered while integrating and applying the ICT such as, lack of ICT resources/ infrastructure (Agyei & Voogt, 2014) like computers, ICT labs or Smart Boards in their institution (Crawford, 2003; Merc, 2015); using the technology in the classrooms; lack of exposure to ICT integrated lesson plans; lack of ICT infrastructure in cooperating schools and lack of experience of using the Smart Boards (Merc, 2015). Such types of situations are still prevailing in some part of the world like African and South Asian countries. These situations have been exposed more during the recently handled pandemic. Therefore, it is quite pertinent that for increasing the digital literacy, our teacher education institutions must have enhance the ICT infrastructure. It is also an urgent need to equip our prospective teachers with ICT integration skills so that such type of issues may be controlled.

Studies show that the access and uses of ICT infrastructure and internet access has been increased significantly. Hanauer, et al. (2004) conducted a survey at a diverse community college to examine accessibility and usage of the internet. Findings of this study revealed that while all students had free access to the internet at their school, only 97% of them actually used it. Of those who did, 81% said they used the internet primarily for schoolwork and 80% for e-mail and chat. Luambano and Nawe (2004) reported that most of the university students didn't use the internet for academic related activities they also felt the need for enhancement in training of ICT infrastructure and services whereas, Romeo et al. (2012) reported that proficiency programs in ICT education for pre-service teacher have been initiated at broad level in Australia. A Capacity building program in developing ICT competencies among pre-service teachers in Asia-Pacific region has also been reported by Lim and Pannen (2012). Saunders and Pincas (2004) studied the student's attitude towards ICT usage in teaching and learning in the UK. Their findings revealed the opinion of the students towards ICT has a significant role in imparting teaching-learning experiences.

In a study of engineering students from Punjab, Haryana, and Himachal Pradesh, Kumar and Kaur (2006) found that the internet has become an essential tool for their instruction, research, and learning processes. By giving teachers and students access to the most recent knowledge and global information, the internet facility has allowed them to improve their academic performance. Mishra et al. (2005) undertook a research study to find the internet usage habits of first-year students at the Govind Ballabh Pant University of Agriculture and Technology, Pantnagar. The findings revealed that, most students (85.7%) used the internet. Also, 51.6% of women and 61.5% of men used the internet to prepare assignments.

Some studies revealed that ICT usage has boosted the effectiveness of learning and instruction. Maharana et al. (2009) conducted a study on usage of ICT in medical students and revealed that 77% of the students were in favor of having ICT in medical education syllabus. Almost all students had a viewpoint that an ICT lab should be established in their college. Almost 78% of them perceived that their education has become ineffective without ICT. Khan et al. (2011) reported that 48.8% of the students had access of ICT at their institutions and students had great level of ICT usage. Students also opined that ICT accelerate their learning process. About 39% of the students use the internet on daily basis, 20.7% twice a week, 33.5% use weekly and 6.7% of them uses on monthly basis. Their information retrieval skill was found to be good but they use the internet sometimes for academic purposes; only 50.6% of them use it for academic activities. Most of them 76.8% were users of Google search engine whereas 26.2% were Yahoo users. Researcher also revealed that teachers use ICT sometimes during classroom lecture. Sahin (2018) found no significant difference in the use of ICT by male and female teachers but significant difference reported between teachers of rural and urban backgrounds.

Kaur (2019) conducted a study on Role of Teachers' Attitude and Belief regarding use of ICT in Indian classroom and found no gender differences in the use of ICT by teachers. This research was carried out with a major objective to study the ICT usage in learning and instructional activities by teacher trainees of Bhopal city. It is evident from the review of related literature, that the investigators have found numerous studies conducted across the globe on ICT usage and related variables. But the investigators did not come across any specific study where the usage of ICT in learning and instructional process among teacher trainees studying in Teacher Education Institutions of Bhopal, Madhya Pradesh has been carried out or reported. Also the investigators intended to know whether the teacher trainees are using any specific kind of ICT in their learning and instructional activities or not? And if yes, then up to what extent they are utilizing the ICT in their learning and instructional process. All these queries motivated the investigators to plan and execute this study.

Operational definitions of the technical terms: ICT usage: It is defined as the activities performed with the help of softwares, tools and technology of computers or laptops or tablets or smartphones based on internet.

Learning: It is a process of acquiring either of the knowledge, comprehension, application, analysis, synthesis or evaluation about any skill or competency or proficiency or ability through formal or informal way or through experiences or self-study or instruction. It is a cognitive process and outcome that reflected in the learner. It is typically self-directed and may occur spontaneously without any formal instruction. It involves making connections, synthesizing information and internalizing the concepts.

Instruction: Instruction refers to the process of imparting and transacting the knowledge, skills or attitude to others in a

formal setting. It is a deliberate act of providing information or guidance to facilitate learning. It is often structured and planned by an instructor or teacher. It involves pedagogy of approaches, methods, strategies, techniques, maxims and activities designed to support and enhance the learning. It may be performed through various modes like; lectures, demonstrations, discussions, questioning, brainstorming, mind-mapping, or hands-on activities.

Teacher Trainees: Those student-teachers of B.Ed. program of Government and Private TEIs who are undergoing internship.

Delimitations of the study: The study confined to the following limitations: The sample for the present study consisted of 239 teacher trainees only. Only two types of TEIs (Government and Private) have been taken for study. The study has been confined to Bhopal city only. Only teacher trainees of B.Ed. program have been taken for the sample.

MATERIAL AND METHODS

Descriptive survey method was followed to carry out the present study. Teacher Trainees studying in the Government and Private Teacher Education Institutes of Bhopal City was the population of the study. To carry out the study, two Government and four Private Teacher Education Institutions (TEIs) were selected through simple random sampling technique and intact classes of those TEIs were taken as sample. In this way, sample comprised of 239 Teacher Trainees out of which 106 were male and 133 were female. In all, there were 92 teacher trainees from Government TEIs and 147 from Private TEIs.

Initially, permission was taken from the Heads/ Principals of identified six TEIs and accordingly teacher trainees were informed about the purpose of data collection. Also, they informed that their participation is completely voluntary and they may quit at any stage. They were assured about keeping their data confidential and shall be used for research purpose only. Afterward instructions were given them to respond the questionnaire.

In order to collect the data pertaining to the usage of ICT and Internet by the teacher trainees, a self-made questionnaire was used. In which there were 30 items. Each item has two responses, "YES" and "NO". Although there was no time limit for completing this questionnaire, but it takes generally 15-20 minutes to complete it. For analyzing the obtained data frequency and percentage were used and result was presented in tabular and graphical form.

RESULTS AND DISCUSSION

The obtained results have been summarized and presented in the table 1 below:

Table 1 shows the increased usage of computers in learning and instructional activities. It also indicates that fear of using computer and computer anxiety has been reduced over a

period of time as reported in earlier studies (Abdullah et al., 2016). This can proved to be helpful in enhancing the

confidence and satisfaction among learners and thereby lead to better academic performance (Al-Busaidi & Al-Shihi, 2011).

Table 1. Item-wise responses on ICT usage in learning and instruction by teacher trainees

S. No.	Items	YES %	NO %
1	Do you have computer/ laptop at home?	40.6	59.4
2	Do you have internet access at home?	88.3	11.7
3	Do you use your computer/ laptop/ mobile for accomplishing teaching-learning activities at home?	72.8	27.2
4	Do you have ICT lab with internet connection in your College/ Institute?	95.4	4.6
5	Do you use ICT lab of your College/ Institute for carrying out teaching-learning activities?	92.1	7.9
6	I enjoy doing work through the internet.	79.5	20.5
7	I am tired briskly by using the internet.	31.4	68.6
8	I have learnt a lot of new knowledge by using the internet.	81.6	18.4
9	The ICT and Internet have proved really helpful in preparing and delivering my lesson plans.	83.7	16.3
10	I feel comfortable working with internet.	79.1	20.9
11	Working with internet makes me nervous.	19.7	80.3
12	Using the internet is very frustrating.	16.7	83.3
13	I prefer to do as little work with internet as possible.	12.1	87.9
14	Working through Computer/ Laptop is difficult for me.	10	90
15	I feel sad, frustrated and irritated when I get my internet connection is not working properly.	97.9	2.1
16	ICT and Internet have helped me in selecting and preparing the teaching aids for my lesson plans.	90.8	9.2
17	Working on computer without Internet is boring.	97.5	2.5
18	I am able to send e-mails for communication.	77.4	22.6
19	I can use different search engines to explore the desired content on their web pages.	69	31
20	I feel scared by the internet.	66.9	33.1
21	The excessive usages of the ICT and internet have created medical issues for me.	72.8	27.2
22	The excessive usages of ICT and internet have created socio-emotional problems for me.	74.5	25.5
23	The usages of ICT and internet have created psychological problems for me.	73.2	27.8
24	The use of ICT has enhanced my slandered of living.	66.1	33.9
25	The ICT and Internet have helped me in preparing the assignments.	93.7	6.3
26	The ICT has created unemployment for unskilled persons.	65.3	34.7
27	The internet is a fast and efficient means of gaining information.	79	21
28	Carrying out Teaching-learning activities through ICT has become easier and faster for me.	74.5	25.5
29	I have at least one account on social media platform like; Face-book, Whats-App, Twitter, Linkedin, Instagram, Telegram, etc.	100	0
30	I use social media only for my teaching-learning related activities.	98.3	1.7

However, this study indicates that there is still lack of access of ICT gadgets and internet to a considerable proportion (i.e. 40.6% and 88.3% respectively) of the participants of developing country. It is a positive sign that, these are being used in preparing assignments (93.7%); selecting and preparing instructional aids (90.8%) and preparing the lesson plans (83.7%) by a large number of participants among those who have access to ICT resources and internet either at their home (72.8%) or at their institutions (92.1%). They enjoyed (79.5%) and felt comfortable (79.1%) while using internet despite being tired (31.4%) and scared (66.9%) of using the internet. More than 97% of participants express the feelings of sadness, irritation, frustration and boredom in working without internet or interrupted connectivity. This might be due to our over dependency on internet being used in online activities. But, the positive point which may be inferred that the availability or uninterrupted access of internet can bring joyfulness among students if utilized in systematic way (Gan & Balakrishnan, 2017).

In this regard, smart-phones of students may be utilized for their self-directed learning. With the same psychology of enjoyment and fun, all of the participants have used either of social media platforms. On the contrary, some of them exhibited computer anxiety such as nervousness (19.7%); frustration (16.7 %); escapism (12.1%); difficulties in working (10%). Probably the reason behind this may be most of the participants were first generation learners or belongs to rural areas. In such type of circumstance, it is quite natural to have some difficulties in integrating new ideas and design (Kim et al., 2012).

However, there are certain problems and issues reported by sizable number of participants those who have used the ICT and Internet excessively such as, tiredness (31.4%); medical issue (72.8%); socio-emotional problems (74.5%); and psychological problems (73.2%). The main findings of the study have been presented as below: Form the above Table 1 and Fig. 1, it is evident that almost 40.6% (97 out of 239) of the teacher trainees had their personal computer/ laptop at home whereas sizable number of teacher trainees (59.4% i.e. 142 out of 239) didn't have this. It was also evident that majority of teacher trainees i.e. 88.3% (211 out of 239) had internet access at homes whereas few of them i.e. 11.7% (28 out of 239) didn't had this service at their homes.

Further, it was noted that 72.8% (i.e. 174 out of 239) teacher trainees had used their Computer/ Laptop/ Mobile/ ICT devices for accomplishing learning and instructional activities at home but 27.2% (i.e. 65 of 239) couldn't use it for their academic activities. This finding is substantiated by the study of Gan and Balakrishnan (2017) reporting that (94.2%) of the students of higher education used their mobiles for learning. It was also found that 95.4% of them (i.e. 228 out of 239) reported that their institution has ICT lab with internet service. This finding is substantiated by the report of Ocansey and Sharma (2020) stating that 91.2% of schools have internet facility. It was observed that 92.1% of the sample (i.e. 220 out of 239) used the ICT lab for learning and instructional purposes whereas 7.9% (only 19 out of 239) of them did not use for learning and instructional purposes, (Ocansey and Sharma 2020).

This is in line with the finding of study of Gan and Balakrishnan (2017) which revealed that 95.7% of students of higher education institutions access the internet through their mobile devices. Furthermore, 79.5% (i.e. 190 out of 239) of teacher trainees opined that they enjoyed while working through the internet. Whereas more than one-fifth of them couldn't enjoyed while working through the internet. It was noted that almost one-third (75 out of 239) of teacher trainees (i.e. 31.4% of the sample) were getting tired when using the internet whereas mostly (164 out of 239) teacher trainees (i.e. 68.6%) weren't tired. It was found that more than 4/5 (i.e. 195 out of 239) of teacher trainees (i.e. 81.6%) believed that they gained new knowledge through internet. Further, 83.7% (i.e. 200 out of 239) of teacher trainees believed that ICT and Internet have proved helpful in preparing and delivering their lesson plans whereas 16.3% (39 out of 239) of them didn't believe so. This finding is supported by the report of Ocansey and Sharma (2020).

It was also explored that 79.1% (i.e. 189 out of 239) teacher trainees felt comfortable working with internet. It was noted that almost one-fifth (i.e. 19.7% or 47 out of 239) teacher trainees felt nervous working with internet. This showed their less exposure to the working on internet. Moreover, it was also found that some (i.e. 16.7%) teacher trainees (i.e. 40 out of 239) got frustrated while using the internet. This might be due to low speed of data or other connectivity issues. It was also observed that some (i.e. 12.1%) teacher trainees (i.e. 29 out of 239) intended to avoid the use of internet which shows their low confidence in using the internet. It was explored that a few of them (i.e. 10% of the sample) found difficulties in working through computer or laptop. Therefore, it may be inferred that proper assistance and support should be provided by the teachers so that they may enhance self-directed learning with technology (Sumuer, 2018).

It was noted that almost all (i.e. 97.9%) 234 teacher trainees felt irritated when internet connection gets interrupted. This shows the wider usability of internet. It was found that most (i.e. 90.8%) 217 teacher trainees reported that ICT and internet proves helpful in preparing instructional aids for their lesson plans. Further it was also noticed that almost all (i.e. 97.5%) 233 teacher trainees felt boring in working on computer without Internet. It was also noted that 77.4% (i.e. 185 out of 239) teacher trainees were able to send communication through emails. It shows that most of the teacher trainees are now learnt to communicate through emails.

It was also observed that 69% (i.e. 165 out of 239) teacher trainees were able to use different search engines to explore the desired content which proves that the necessity is the best teacher. Moreover, it was also found that 66.9% (i.e. 160 out of 239) teacher trainees felt scared of internet. This shows that every technology possess some threats. The only thing that matter is how ethically and judiciously we are utilizing these technologies. It was explored that excessive uses of the ICT and internet have created medical issues for 174 out of 239 (i.e. 72.8%) of teacher trainees.

This indicates that one should use the technology in a balanced way. It was also noted that excessive usages of ICT and internet have created socio-emotional problems for almost three-fourth (i.e. 74.5%) or 178 out of 239 teacher trainees. Again, it implies that we should take some measures and adopt some strategies to avoid excessive use of technology like, taking short-break during the usage of ICT or exploring some alternative ways to do that work. It was observed that excessive usages of ICT and internet have created psychological problems for 175 out of 239 (i.e. 73.2%) of teacher trainees.

This finding suggests that we should appoint full time or hiring services part time to take consultations from the psychologist on regular basis. It was noted that 158 out of 239 (i.e. 66.1%) teacher trainees opined that use of ICT has enhanced their standard of living. This finding reiterated the strength of ICT uses and this may be enhanced if its negative effects are controlled judiciously. It was found that most (i.e. 93.7%) of teacher trainees (224/239) believed that ICT and Internet have helped them in preparing their assignments. This shows that ICT has multifarious benefits including the teaching-learning process. Furthermore, a 65.3% of teacher trainees (156/239) believed that ICT has created unemployment for unskilled persons. This shows the urge to learn new technology and institution may provide training to imbibe new skills required for any technology.

It was opined by 79% of teacher trainees (189/239) that the internet is a fast and efficient means of gaining information. It shows the economical and cost effective aspect of technology. Further, it was also opined by three-fourth (i.e. 74.5%) of the teacher trainees (178/239) that carrying out the learning and instructional activities through ICT made their task easier and faster. This also highlights the strength of the technology provided when used ethically. It was also noted that all (239) the teacher trainees (i.e. 100%) has at least one account on social media platforms like; Face-book, Whats-App, Twitter, LinkedIn, Instagram, or Telegram. This implies that ICT tools can be used constructively in learning and instruction. These technologies possess great potential of individualized learning and instruction and some of them being widely used by the teaching community in instructional and training processes like face-book (Demiraslan, et al., 2014).

It was also found that almost all i.e. 98.3% of teacher trainees (235/239) are using social media for their learning and instructional related activities which is a good indicator of stepping towards the digital India campaign. Whereas very little (only four) of them i.e. 1.7% of them are not using social media for their learning or instructional related activities. Several researches indicate that advanced technology based social media are being used widely during recently ended pandemic.

The implications of this study are very useful for teacher trainees as well as teacher educators and policy makers. On the basis of this study it may be recommended that teacher trainees should ensure the use of ICT gadgets like smart-phones, laptops, computers, smart boards, ICT tools and internet for their effective teaching practices, preparing

and delivering the lesson plans as per the requirements of the classroom delivery and planning and preparing at home. But, due to various limitations and challenges faced by both the teacher trainees and the teacher educators, they are supposed to explore, learn, apply and integrate ICT tools with pedagogy and content knowledge themselves so that their self-directed learning can be enhanced (Yan et al., 2012).

This may help them to enhance and update their technological, pedagogical, content knowledge and their integration as well. The teacher educators should motivate the trainee teachers and give assignments, projects, tasks, activities them in such a way that they may best utilize the infrastructure of ICT lab and their own devices. The administration of TEIs should ensure the internet access and other ICT based infrastructural facilities, like Computer labs, Smart-boards and Projectors in the institutions and congenial environment or learning supported culture for utilizing them as this was the major barrier which demotivates the learner (Agyei & Voogt, 2014). Finally, the role of curriculum developers and policy makers as suggested by Javed et al. (2020) is very crucial in incorporating the ICT advancement in teaching and learning. They should include the latest ICT based content in the curriculum by revising it from time to time. They should try to evolve and implement the latest and futuristic technology based curriculum at the possible extent.

CONCLUSION

The present study suggests that ICT, its tools and softwares in combination with internet has been now proved to be an inevitable component for any learning and instructional process. By virtue of these ICT skills, we can prepare a student as life-long learner so that she/ he may retrieve and apply the information from digital resources. Policy makers should design the curricula in such a way that it enable the teacher as well as student to learn and apply new technologies (Javed et al., 2020). Also, administrators must provide the accessibility of ICT infrastructure and opportunities, rather it should be made mandatory, for teachers' training to acquire the knowledge and skills required for transacting the ICT integrated education. Administrators should provide moral and logistic support and facilitate the teachers as well as students to make use of the technology in their respective areas in a best possible way. Then it becomes the responsibility of teachers to utilize the ICT gadgets and tools in the classroom so that digital divide can be minimized and students' performance can be optimized. In this way we can create a digitally empowered society and turned out India into knowledge economy globally as envisaged in its National Educational Policy (NEP) 2020.

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