NEP 2020 AND ICT IN TEACHER EDUCATION

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Abstract
Effective integration of ICTs into educational system is a complex and multifaceted process that involves in educational policy and planning, infrastructure, capacity building, language and content and financing. With the paradigm shift in the curriculum, teacher acts as a facilitator in a student centred learning and ICT based education makes the teaching-learning process effective. ICT implementation has given a magnificent opportunity for the Education Implementation specialists to reanalyze what we want our future leaders of India to be like. NEP 2020, an expert committee led by former Indian Space Research Organisation (ISRO) Chief Krishnaswamy Kasturirangan were recommended the education policy which has broaden the horizon of India education system mainly focussed on technological based education which will develop in students’ inventive thinking, higher- order thinking and sound reasoning, effective communication, and high productivity. This paper presents the highlights of NEP 2020 and various provisions for ICT in Teacher Education and the present status of ICT usage in B.Ed colleges in Nagaland along with some challenges for implementation. Lastly, some suggestions are put forward for successful implementation of ICT in teacher education in Nagaland.

Key words:

1.1. Objective of the study:
➢ To find out the present status of ICT usage in B.Ed colleges in Nagaland.
➢ To explore the NEP 2020 of various provisions for ICT in teacher education
➢ To examine the challenges for implementation of ICT as per NEP 2020
➢ Suggestions for future improvement for effective implementation of ICT in teacher education

1.2. Meaning
ICT stands for Information and Communication Technology. It is defined as the application of technology in processing of information and communication which includes the use of computers and software to not only convert and store but also process, transmit and retrieve information. National policy on ICT (NCF 2005), has defined it as all devices, tools, content, resources, forums, and services, digital and those that can be converted into or delivered through digital forms, which can be deployed for realising the goals of teaching learning, enhancing access to and reach of resources, building of capacities, as well as management of the educational system. With the merging of technologies, it has become imperative to take a comprehensive look at all possible information and communication technologies for improving teacher education in the country. Preparedness for ICT usage in teacher education, teacher-educators with varying levels of awareness of and ability to use ICT in teaching process and teacher-trainees with varied levels of exposure which led every learner to negotiate learning spaces on their own and develop their unique world views. Engauge of the North Central Regional Educational Laboratory (US) has identified what it calls “21 century Skills,” which includes digital age literacy. In 2012, Zuppo provided an ICT hierarchy, where all levels of hierarchy “contain some degree of commonality in that they are related to technologies that facilitate the transfer of information and various types of electronically mediated communication.”

1.3. Data
Primary data: telephonic interview
Secondary data: review of related literatures from Indian education sources

1.4. Methodology
Discussion on the various provisions of NEP 2020 in relating to ICT in teacher education and highlights the present usage of ICT in B.Ed colleges in Nagaland and suggestions are given based on the challenges for effective implementation.”

1.0. Teacher Education in India
National Council of Teacher Education has defined Teacher Education as – “A programme education, research and training of persons to teach from pre-primary to higher education level. Teacher education is a programme that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirements of the profession and face the existing challenges.” In teacher education, the initiative division of jurisdiction for certification of teachers for teaching at the elementary stage given to the State Department of Education and that for teaching at the secondary stage given to the universities continues to be the practice even today. The course that prepares teachers for teaching in secondary schools is called B.Ed and equivalent degrees are given by as many as 200 universities in India.

2.1. Teacher Education in Nagaland
In 1975, Nagaland established the first B.Ed college in the state by the Government of Nagaland which was called as Nagaland college of Teacher Education and later on change its nomenclature to State College of Teacher Education. There has been a massive expansion in teacher education institutions in the state. Presently there are nine (9) B.Ed colleges. As per the report of the Directorate of
Higher Education there are 2 government and 7 private B.Ed colleges in Nagaland. State college of teacher education in Kohima and Mokokchung college of teacher education in Mokokchung districts are the only two government colleges in the state offering B.Ed programme, which covers the entire state by coming up with a district wise distribution for undergoing the programme.

3.0. Current status of ICT usage in B.Ed colleges in Nagaland

In this 21st century known as the digital age where different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace. Usage of ICT is one of the way by which India’s large population base can be effectively reached. The role of a teacher plays an integral part in the learning process where teacher can utilize ICT tools to get benefits from using these tools in the area of content, curriculum, instruction and assessment.

Undertook the survey of current status of ICT usage in State College of Teacher Education in Kohima, the availability of educational technology related aids that are utilize for teaching-learning process and how much these ICT tools are used for educational purpose.

3.1. Demographical Information

The study had selected respondents who were around the group of 25-50 years. This set of samples was taken from both B.Ed teacher-trainees and teacher-educators comprising of 15 teacher-educators and 110 teacher-trainees from both pre-service and in-service teachers around the state. The researcher approaches the concerned college authorities and sought permission for conducting the test on the students and the educators.

3.2. Respondents’ division of ICT usage and their scores

Fig.3.1. Respondents of teacher-educators’ division and scores of ICT usage.

Fig.3.1. indicates the division and scores of ICT usage of teacher-educators. The figure represents according to the division and scores of the teacher-educators from highest to the lowest percentage of ICT usage. The figure showsthat the teacher-educators highly used of ICTs like internet, smartphone, laptop, social media, projector and PPT during teaching. Followed by interactive white-board, Wikipedia, e-learning materials, web-camera, camera, tablet, scanner/printer, television, microphone/speaker, tele/video conferencing and lastly, least usage is tape recorder/voice recorder.

Fig.3.2. Respondents of teacher-trainees’ division and scores of ICT usage.

Fig.3.2. indicates the division and scores of ICT usage of teacher-trainees. The figure represents according to the division and scores of the teacher-trainees from highest to the lowest percentage of ICT. The figures shows that the teacher-trainees highly usage of ICTs like internet, Smartphone and social media. Followed by Wikipedia, scanner/printer, projector, PPT, tablet, camera, television, tape recorder/voice recorder and the least usage is e-books.

2.0. Various provisions of NEP 2020 for ICT in Teacher Education

In recent rise of pandemics demands digital platforms on ICT based educational initiative. In this regard, the National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online/digital education can be reaped while addressing or mitigating the downsides. In the meantime, the existing digital platforms and ongoing ICT-based educational initiatives must be optimized and expanded to meet the current and future challenges in providing quality education for all.

➢ According to NEP 2020, the use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged to standardized
training programmes can be administered to large numbers of teachers within a short span of time.

- The National Educational Technology Forum (NETF) will be created to provide a platform for free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration, and so on, both for school and higher education.

- According to NEP 2020 that educational software will be available for both the teachers and students at all levels including students in remote areas and Divyang students. Setting of e-content for teaching and learning developed by all states in their regional languages and by NCERT, CIET, CBSE, NIOS, etc., and will be uploaded in the DIKSHA platform.

- Technological interventions for improving teaching learning and evaluation processes, supporting teacher preparation and professional development, enhancing educational access, and streamlining educational planning, management, and administration including processes related to admissions, attendance, assessments, etc.

- According to NEP 2020 that Suitable ICTs equipments will be made available to teachers at schools so that teachers can suitably integrate e-contents into teaching-learning practices.

- NPE 2020 stressed on suitable training and development for effective online educators for the teachers. It cannot be assumed that a good teacher in a traditional classroom will automatically be a good teacher in an online classroom. According to NEP 2020 emphasis on setting up the building of digital infrastructure, digital content and capacity building will be created in the Ministry to look after the e-education needs of both school and higher education. With the rapid advancement of technology, we needs specialists to deliver high quality e-learning, a vibrant ecosystem has to be encouraged to create solutions that not only solve India’s challenges of scale, diversity, equity, but also evolve in keeping with the rapid changes in technology, whose half-life reduces with each passing year. This centre will, therefore, consist of experts drawn from the field of administration, education, educational technology, digital pedagogy and assessment, e-governance, etc.

Given the emergence of digital technologies and the emerging importance of leveraging technology for teaching-learning at all levels from school to higher education, this Policy recommends the following key initiatives:

(a) Pilot studies for online education: Appropriate agencies, such as the NETF, CIET, NIOS, IGNOU, IITs, NITs, etc. will be identified to conduct a series of pilot studies, in parallel, to evaluate the benefits of integrating education with online education while mitigating the downsides and also to study related areas, such as, student device addiction, most preferred formats of e-content, etc. The results of these pilot studies will be publicly communicated and used for continuous improvement.

(b) Online teaching platform and tools: Appropriate existing e-learning platforms such as SWAYAM, DIKSHA, will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners.

(c) Addressing the digital divide: According to NEP 2020, to create a digital platform, existing mass media, such as television, radio, and community radio will be extensively used for telecast and broadcasts. Such educational programs will be made available 24/7 in different languages to cater to the varying needs of the student population. A special focus on content in all Indian languages will be emphasized and required; digital content will need to reach the teachers and students in their medium of instruction as far as possible.

(d) Virtual Labs: According to NEP 2020 that existing e-learning platforms such as DIKSHA, SWAYAM and SWAYAMPRABHA will also be supported for creating virtual labs so that all students have equal access to quality practical and hands-on experiment-based learning experiences. The possibility of providing adequate access to SEDG students and teachers through suitable digital devices, such as tablets with pre-loaded content, will be considered and developed.

(e) Training and incentives for teachers: Teachers will undergo a diligent training in learner-centric pedagogy and develop in a way that how to become high-quality online content creators themselves using online teaching platforms and tools.

(f) Online assessment and examinations: Appropriate bodies, such as the proposed National Assessment Centre or PARAKH, School Boards, NTA, and other identified bodies will design and implement assessment frameworks encompassing design of competencies, portfolio, rubrics, standardized assessments, and assessment analytics.

(g) Blended models of learning: While promoting digital learning and education, the importance of face-to-face in-person learning is fully recognized. Accordingly, different effective models of blended learning will be identified for appropriate replication for different subjects.

(h) Laying down standards: As research on online/digital education emerges, NETF and other appropriate bodies shall set up standards of content, technology, and pedagogy for online/digital teaching-learning. These standards will help to formulate guidelines for e-learning by States, Boards, schools and school complexes, HEIs, etc.

3.1. Challenges for implementation of ICT in Teacher Education as per NEP 2020

With the coming of new NEP 2020 has brought us into an era of new technology world to meet so many challenges in the field of education. New challenges for
3.2. Suggestions for effective implementation of ICT in teacher education

In this present era developing countries are facing so many challenges for preparing their societies and governments for globalization and the information and communication revolution. Policy-makers, educationists, academics and concerned citizens are actively working together to make their societies competitive in the emergent information economy. Uses of ICTs in education are widespread and it is generally believed that ICTs can empower teachers and learners, making significance contributions to learning and achievement. The main purpose of ICT implementation in education is to provide the prospect and trends of integrating and ICT into the general educational activities. Some of the suggestions for successful implementation of ICT in teacher education are as follows:

- Teacher educators should be well equipped with all the digital equipments and to enhance in using ICTs skills among teacher-trainees.
- Provide proper resource and funding in developing software and hardware facilities in the teacher education institutions.
- Professional training in ICT usage should be organized for teacher educators to keep the latest technological up to date.
- Ratios of teacher educators and teacher-trainees should be maintain so that enough assistance should be provided to teacher-trainees in using ICT tools and materials for better teaching learning process.
- Course content for ICT should be restructuring as per NEP 2020 and should be based on action-oriented.
- Teacher education institutions should play an active participation, initiative and compassion towards the society to enhance ICT implementation.
- Teacher educators and teacher-trainees should be aware of the social change in their teaching activities and be part of the global change in learning and teaching modification.
- In teacher education institutions proper ICT equipment’s should be provided in all the classrooms such as computers, LCT projector, internet access, television, e-white boards, etc. for effective use of technology.
- Teacher educators must play an active role in utilizing ICT facilities in their everyday lesson’s transaction in order to act as role model for the teacher-trainees.
- The administrative, Higher Education department and all the concerned authorities should be collaboratively working together for organizing timely training courses on ICTs.
- Teacher education institutions must have at least one lab with fully equipped ICT facilities.
- Adequate access of internet facilities in the classrooms to enhance teaching instructions.

Conclusion

Teacher has a key role in the whole process, whereas in-case of ICT based education, various ICT tools are supplemented to make the teaching-learning process effective. There was a rise of pride created and interest generated among the teachers and students for gaining ICTs and its opportunity. ICT has the potential to remove barriers that are causing the problems of low rate of education in the country. ICT as a tool can overcome the issues of cause, less number of teachers and poor quality of education as well as to overcome time and distance barriers. In these regard teacher education play a critical role in transforming and improving educational processes and outcomes. The NEP 2020 recognizes the importance of technology while acknowledging its potential risk and dangers. NEP 2020 also stated that carefully designed and appropriately scaled pilot studies to determine the benefits of online/digital education. The existing digital platform and ongoing ICT-based educational initiative must be optimized and expanded to meet the current and future challenges in providing quality education for all.
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