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Challenges Of Teacher Education In India With Reference To Implementation Of Ict

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Abstract: As we know that in the year of 2015, a committee led by the Cabinet Secretary T.S.R. Subramanian was created for framing the National Education Policy and thereby the committee presented the report to the Ministry of Human Resource Development (MHRD) which was then publicly announced as a draft in the year 2019 and it was approved by the Union Cabinet of India on 29th July, 2020. The policy The NEP 2020 states that “envisioning an India-centred education system which contributes directly for transforming India sustainably into an equitable and vibrant knowledge society by providing high quality education to all” (Govt. of India, 2019). The policy focused the Indian educational system from every perspectives addressing various levels and types of education viz; pre-school education, school education, higher education, professional education, technical education and teacher education etc. 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.

Index Terms: NEP 2020, Digital Platform, ICT, Challenges.

I. Introduction:

Education is considered as the basic foundation for the development of the nation from all perspectives. Country cannot be developed to its extent until and unless it imparts education to all its citizens irrespective of caste, creed, sex, religion, etc. According to Wikipedia, Information and Communication Technology (ICT) is an enhanced and extensional term for information technology which focused on the role of the integration of telecommunications, computer and required enterprises such as software, audio-visual aids. It is worth to mention that in today's generation, the new advancement of science and technology have impacted the way we live as compared to the early centuries. Moreover, it is highly imperative in the sense that ICT occupies a foundation in the contemporary society where the rapid changes in the applications of computer technological based have drastically impacted the educational system to a global extent. As per the report of (UNESCO, 2000), the entire nations either of developed or developing countries should focus on training the youths for playing a prominent role in the modern society. It is noteworthy that the exigent demand of ICT and the applications of technological gazettes, e-learning, virtual classroom, digital learning platform and digital libraries are considered as the gifts of the contemporary society in the perspective of education. As we know that in the year of 2015, a committee led by the Cabinet Secretary T.S.R. Subramanian was created for

framing the National Education Policy and thereby the committee presented the report to the Ministry of Human Resource Development (MHRD) which was then publicly announced as a draft in the year 2019 and it was approved by the Union Cabinet of India on 29th July, 2020. The policy The NEP 2020 states that “envision an India-centered education system which contributes directly for transforming India sustainably into an equitable and vibrant knowledge society by providing high quality education to all” (Govt. of India, 2019). The policy focused the Indian educational system from every perspective addressing various levels and types of education viz; pre-school education, school education, higher education, professional education and technical education, etc.

II. Objectives of the Study

1. To address the challenges on the Implementation of ICT in teacher education level.
2. To give remedial measures regarding the effectiveness of the implementation of ICT

III. Delimitation of the study

- The study is limited to implementation of ICT related to NEP 2020 only.
- The study is limited to only secondary sources of data.

IV. Methodology

Descriptive method has been adopted for the study. This research is based on secondary sources of data and observation method. This paper is theoretically analytical in nature. Here, the data are being collected from government reports, journals, books, official websites, etc. As the study was based on personal observation, it is also exploratory in nature.

V. Results and Discussions

Objective 1: To address the challenges on the Implementation of ICT in teacher education level.

Some of the main challenges for implementation of ICT in teacher education as per NEP 2020 are as follows;

- **Access to technology:** Many students from low-income families are hardly able to afford to smart phones, laptop and a reliable broadband connection. Besides this, most of the students don't have smartphones or laptops which are a serious matter to contemplate about the loss of getting access to e-learning. Moreover, millions from Government schools and colleges especially residing in rural areas also may not have access to e-learning. According to the Key Indicators of Household Social Consumption on Education in India report, based on the 2017-18 National Sample Survey, less than 15% of rural Indian households have Internet facilities (as to 42% urban Indian households).
- **Lack of specialists and professionals to operate lab as per NEP 2020:** Most of the teacher educators belonging to any disciplines of social science are not well equipped to operate the lab w.r.t. ICT. Moreover, no any supportive person is also available for any smart classes, since it is costly resource and therefore it may not be possible to keep a trained resource for the support in each of the disciplines of social science and humanities.
- **Schedule Management:** Schedule management is one of the most difficult task for the e-learners as online courses requires a lot of time to deal with either theoretically or practically to deliver the content or in making any concept learner to the students. Furthermore, most of the students may have to skip the classes or may not be able on time due to problems of internet connectivity and various other shortcomings. Online learning lacks a predetermined schedule which leads to a poor time management and inflexibility in delivering the content. It is not always possible to alter the class at an actual time based on learners' reaction and comfort.
- **Lack of control:** It is dynamic in the sense that instructor may not be able to mould the concentration level of the students whether the instructions that has been systematically designed has effectively influenced the learners to learn or not as there may be the risk of losing attention towards the learners from time to time rather than just going through the material without paying any attention in learning process. It is a fact that, ICT labs with a screen and a projector operates on one to many learning format.

Therefore, whenever the teacher has to plug in the ICT lab and plays a video which may be watched by at least twenty-thirty students present in the class and while doing so, some students may get excited to watch the audio-visual content which may lead to an enhancement in their understanding of the topic while some of them may seem to be much tactile in the process of learning who likes reading the textual content more than the virtual content.

- **Overloaded Information:** While dealing with virtual classroom, the powerful impact of this powerful medium is often diminished by information overload. As in virtual classroom students are being provided with so many ideas or concepts including back to back materials all at once which leads to be bewildered and perplexity and thus actual optimization of teaching outcomes may not be achieved.
- **Poor network of Wi-Fi connectivity in the institution:** The modern classroom entails an interactive space to promote collaborative learning, digital problem solving and also for increasing students' engagement. However, key to this development is the only way of increasing the use of technology, but this trend may be problematic for unreliable school Wi-Fi, dated physical IT infrastructure and slow institutional broadband networks.
- **Shortage of computer and e-learning materials:** Another perspective presents the obstacles in the use of ICT in most of the educational institutions pertaining to the insufficiency of number of computers, projectors, copies of software, etc. Various research studies indicated several reasons for the lack of access to technologies. Additionally, in Sicilia's study (2020), teachers complained about how difficult it was to always have access to computers. However, the author stated the reason that "computers had to be booked in advance and the teachers most frequently would forget to do so, or even they could not book them for several periods in row whenever they had to work on several projects with the students." Similarly, Cox.et.al. (2022) revealed that majority of teachers agreed regarding the insufficient ICT resources in the institution and associated with access to computers to their teaching practices.

Objective 2: To give remedial measures regarding the effectiveness of the implementation of ICT.

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 wide spread 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.
- . Course content relating to ICT should be re-structuring as per— NEP 2020 and should be based on action-oriented. Higher educational institutions should play an active— participation, initiative and compassion towards the society to enhance ICT implementation.
- In the 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.
- The institutions must have at least one lab with fully equipped ICT facilities in each department including social science and humanities. Moreover, adequate access of internet facilities in the classrooms to enhance teaching instructions should be facilitated.

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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