Information and Communication Technology in Relation to National Education Policy 2020: Its Role in Teacher Education

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Abstract

Novel Coronavirus Disease (COVID-19) has disrupted the whole education system in last two years in the world. In this situation education system set off a paradigm shift from traditional classrooms to online learning environments. The Indian Union Cabinet Ministers designed, revised, and adopted the National Education Policy in the 1st decade of the 21st centenary on July 29, 2020. In accordance with this policy, all facets of education in general and teacher preparation in particular should be revised and modernized, including the incorporation of ICT. The country is being transformed into a society and economy that is fueled by technology due to the Digital India project. To provide a platform for the open discussion of technology applications, the National Educational Technology Forum will be constructed. By 2030, higher education institutions (HEIs) will require school teachers to hold a 4-year integrated B.Ed. as a minimum degree. E-content of teaching-learning will be developed by the NCERT, CIET, NIOS, CBSE and other institutions. Schools and higher institutions will better integrate technology-based learning systems like ePathshala, DIKSHA, SWAYAM, and NISHTHA. Through this paper "**Role of Information and Communication Technology in Teacher Education in relation to NEP 2020**" the author tried to focus on ICT mediated Teacher Education. It will cover all the aspects of ICT which makes effective teacher education leading to quality education.

Keywords: Information and Communication Technology, Teacher Education, NEP 2020

Introduction

Education is essential for realizing one's full potential, promoting social justice, and influencing public opinion. India's continued rise and dominance in the global arena in terms of economic development, civil rights and fairness, logical development, community cooperation, and social conservation depend on everyone having access to a high-quality education (NEP, 2020). Indian education has a lengthy history. Numerous students from all over the world were able to attend the archaic Indian institutions Takshashila, Nalanda, Vallabhi, and Vikramshila to pursue rigorous multidisciplinary studies. The English Education Act of 1835, the Hunter Commission, 1882, the University Commission, 1902, the Calcutta University Commission of 1917, the Sargent Plan of 1944, the University Education Committee of 1948, the Secondary Education Commission of 1952, the Indian Education Commission, 1964–1966, the National Education Policy of 1968 and 1986, the National Curriculum Framework of 2005, and the National Education Policy of 1986 are just a few of the numerous education commissions that were established and arrangements made in India from Charter Act 1813 to the present day.

The 21st century is a technological and scientific age.. The prospering necessity of Information and Communication Technology (ICT) and new advances including man-made consciousness, AI, block chain, shrewd board, handheld figuring programming and equipment will change learning and showing process in our country. The newly discovered Covid virus (COVID 19) initially surfaced in Wuhan city, china in December 2019. The World Health Organization (WHO) received the initial response on December 31, 2019, and on January 30, 2020, WHO declared a general well-being crisis of global concern (WHO, 2020). In India on and after 25th March, 2020 all instructive foundations were shut. In this present circumstance Online Schooling was utilized as elective mode for keeping on showing growing experience. Presently we understood the significance of up close and personal and online advanced method of educating educational experience.

Objectives of the Study

1. To look into National Education Policy 2020.

2. To be aware of the connection between teacher education and National Education Policy.

3. To understand how ICT integrates into NEP 2020 in teacher education.

National Education Policy, 2020

The National Education Policy 2020, which aims to address the numerous concerns that are increasingly important to our nation, is the first and foremost policy on education of the 21st century. This strategy suggests updating and restoring every aspect of the educational formation, including its guidelines and administration, in order to construct a new framework that is designed to meet the ambitious goals of twenty-first century instruction while lean on India's practices and value frameworks.(*NEP_Final_English_2020.Pdf*, n.d.)

Teacher Education

The development of a pool of educators who will help to create a new era depends critically on teacher education. The selection of educators is a decision that calls for the integration of diversified perspectives and intelligence, the growth of humor and beliefs, and the growth of training under the most qualified school teachers. By 2030, the multidisciplinary academic foundations' 4-year combined B.Ed. degree will be a marginal degree option for teachers. By 2030, these multi-disciplinary advanced education foundations' combined 4-year B.Ed. will be the required degree for school instructors and the minimum standard of teacher competency. The four-year incorporated B.Ed. will be a dual significant; thorough four-year certification in education as well as a specific field like history, language arts, music, mathematics, software engineering, science, financial matters, handicraft, actual schooling, and so forth. Past the instruction of state of the art instructional methods, the educator will remember establishing for humanism, history, science, brain research, youth care and training, primary proficiency, and numeracy, information on India and its qualities, ethos, craftsmanship, and customs, and that's just the beginning. The higher education institution that offers the 4-year combined degree in education may offer a two year bachelor of education program who already have a 4-year certification in a specific discipline. A one year B.Ed. may also be made available to participants who have completed a 4-year bachelor degree in a particular field. (*NEP_Final_English_2020.Pdf*, n.d.)

Information and Communication Technology (ICT)

ICT is a development of information technology (IT), according to Wikipedia that is responsible for coordinating communications between PCs and media communications (phone lines and remote signs), as well as other crucial tasks like

programming, middleware, storing data, and using a variety of media to enable users to access, send, understand, and control data.(*NEP_Final_English_2020.Pdf*, n.d.)

Digital Education

A far-reaching set of suggestions for advancing web-based training in the new ascent of plagues and pandemics to guarantee readiness with elective methods of value schooling at whatever point and any place customary and in-person methods of schooling are unrealistic, has been covered. To handle the e-training needs of the two schools and higher education, the MHRD will create a dedicated unit to manage the structure of computerized foundation, computerized content, and limit construction.(*NEP_Final_English_2020.Pdf*, n.d.)

Technology in Education

Use and mix of innovation to work on numerous parts of schooling will be upheld and embraced, provided these medications are thoroughly and straightforwardly assessed in applicable settings before they are increased. To facilitate the open interchange of thoughts on the use of innovation to brush up education, evaluation, designing, and organization, the National Educational Technology Forum i.e. NETF, an independent institution, will be constructed. Fitting reconciliation of innovation into all degrees of instruction will be finished to further develop homeroom processes, support instructor proficient turn of events, improve instructive access for burdened gatherings, and smooth out instructive preparation, organization, and the board.

The NETF will be able to do the following:

a) Provide state and federal government entities with unbiased, fact-based guidance on mediations based on innovation;

b) Create scholarly and institutional constraints in instructional innovation;

c) Visualize important push zones in these areas; and

d) Speculate on fresh trajectories for research and development.

Digital Infrastructure:

It is important to invest in the development of an open, interoperable, developing, public computerized training framework that can be employed by different stages and point arrangements in order to address India's scale, variety, complexity, and device entrance.

Resources and Platforms for Online Education:

Fitting existing e-learning stages like e-Pathshala, SWAYAM, DIKSHA, and NISHTHA will be stretched out to give instructors an organized, easy-to-understand, and rich arrangement of assistive devices for observing the advancement of students. Devices, for example, two way video and sound points of interaction, for holding web classes are a genuine need, as the current pandemic has shown.

- **ePathshala**
  E-pathshala, a flexible application and gateway launched by the Service of Schooling, serves as a platform to allow students, teachers, and parents free access to the NCERT books and materials. For teachers and parents, there is additional dedicated material available in addition to the course readings. All NCERT course books for classes 1 through 12 are downloadable in section-by-section PDF format and are available in Urdu, Hindi, and English.

- **DIKSHA**

  The National Council for Education Research and Training has launched a public platform for educational instruction called DIKSHA i.e. Digital Infrastructure for Knowledge Sharing. The key standards of open design, open access, open permitting variation, decision, and independence were taken into consideration when DIKSHA was developed. Commitments can be made by people, educators, educationists, subject specialists, schools, states and non-government associations and so forth in the wake of enrolling and selecting themselves. These commitments can be of various kinds of content, for example, clarification vides, showing recordings, practice questions, ability based things, illustration plans and so on for any grades from 1 to 12 and for any subject as determined by the states/UTs under their separate tasks.

- **SWAYAM MOOCs**

  SWAYAM aims to bridge the technological gap for students who, up until this point, have been unaffected by the computer revolution and have not had the opportunity to participate in the norm of the information economy. Every course offered by SWAYAM MOOC is user-friendly, prepared by the greatest educators in the country, and available to all students without charge. More than 1,000 specially selected employees and educators from all throughout the country have contributed to the creation of these courses. The SWAYAM courses are broken down into four categories: (1) video classes; (2) extraordinarily well-planned reading material; (3) self-evaluation tests via tests; and (4) a web-based conversation discussion for asking questions.

- **NISHTHA**

  In order to improve learning outcomes at the foundational level through the Coordinated Educator Preparing Project NISHTHA under the Midway Supported Plan of Samagra Shiksha in 2019–20, the Department of School Education has dispatched a Public Mission. A goal-setting program for "Improving Quality of School Education through Integrated Teacher Training" is NISHTHA i.e. National Initiatives for School Heads and Teachers Holistic Advancement. It refers to developing fundamental skills among all of the professors and school administrators. The largest program of its kind for preparing educators is NISHTHA. The main goal of this intensive training program is to encourage and prepare teachers to motivate and encourage critical thinking in students. The drive is the first of its kind, allowing for the creation of public, homogenized preparation modules for all States and UTs.

Online Assessment and Examinations

The Performance Assessment Review and Analysis of Knowledge for Holistic Development i.e. PARAKH will be created as a norm-setting body to create standards, guidelines, and rules for student evaluation and assessment for all deemed educational committees in India, to manage the State Achievement Survey and conduct the National Achievement Survey, to evaluate the success of learning outcomes, and to empower and support educational committees in moving toward these goals.

Virtual Labs

Virtual laboratories will also be developed using current e-learning systems like DIKSHA, SWAYAM, and SWAYAMPRABHA to guarantee that all students have equal access to good common sense and active trial based growth chances.

Training and Incentives for Teachers

Teachers will go through thorough preparation in student driven instructional methods and on the best way to turn out to be excellent web-based content makers themselves, utilizing internet showing stages and apparatuses. There will be emphasis on the educator's job in working with dynamic understudies commitment to the substance and with one another.

Conclusion

ICT has become well-established in modern society, its data volume has increased, and it has sparked unforeseen global upheaval. Additionally, the epidemic improved the habitat for it globally. The Public Schooling Strategy is the first and primary training strategy of the last 100 years, and it took 34 years to develop such a comprehensive public approach. The strategy detected the present cultural requirements and necessities of the nation and recognized the role of both innovation and instruction. It exhaustively talked about every one of the parts of the utilization of innovation to give widespread access to quality instruction, including instructor training, schools, and advanced education. The strategy likewise surrenders the meaning of innovation to advance interdisciplinary exploration and development and to improve the picking up, arranging, and organization of schooling.

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