

## Use of Online Resources for Teaching Learning Process in NEP



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**ABSTRACT:** An effective teaching and learning process is the key to the dissemination of knowledge. In this age of abundance of information, effective teaching is developmental and dynamic. Teaching learning process is no longer passive in nature, on the other hand, it is very interactive and it is growing continuously as it construct new knowledge and change the beliefs and levels of comprehension of the learners. The New Education Policy (NEP, 2020) emphasises heavily on inclusive learning. Driven by the principles of social justice and democracy, equality and inclusion interventions aim to ensure that background characteristics, and should not impinge on one's access to and success in higher education (Malish, 2022). In the present age, the creation of an inclusive learning environment can be enabled by the use of modern Information and Communication Technology (ICT). The ICT supported variety of online learning resources (learning content and learning tools) encompasses the inclusive education in a meaningful way and facilitates the students to create the learning environment that is most appropriate for their personal learning needs and preference. The aim of the study is to analyse the importance and use of Online Resources for teaching learning process.

**KEYWORDS:** NEP 2020, Teaching Learning, E-learning, Online Learning Resources, ICT

### I. INTRODUCTION

Teaching is the art of integration of knowledge and wisdom and it can be regarded as a skill which values in real-world learning, exchange of best practices and a lifelong love of learning. It is the process of paying attention to people's needs, experiences, and feelings and intervening in order for them to learn particular topics. The primary purpose of teaching is to make learning useful and meaningful. Learning takes place when the process would get completed as an outcome of teaching. That is why; teaching and learning process can be defined as a transformation process of knowledge from teachers to students. It is a combined process where a teacher assesses understanding needs, establishes particular learning objectives, formulates teaching and memorizing strategies, enforces a plan of work, and assesses the outcomes of the instruction.

### II. TEACHING AND LEARNING PROCESS

Learning is a part of the human condition to crave for knowledge. It is the acquisition of knowledge, ability to understand, procurement of skills, attainment of cognitive ideas, etc. People are wondering how learning takes place, how a learner's first-ever learning starts in an active environment and what conditions facilitates learning. Consequently, many scientists, psychologists have developed the following learning theories:

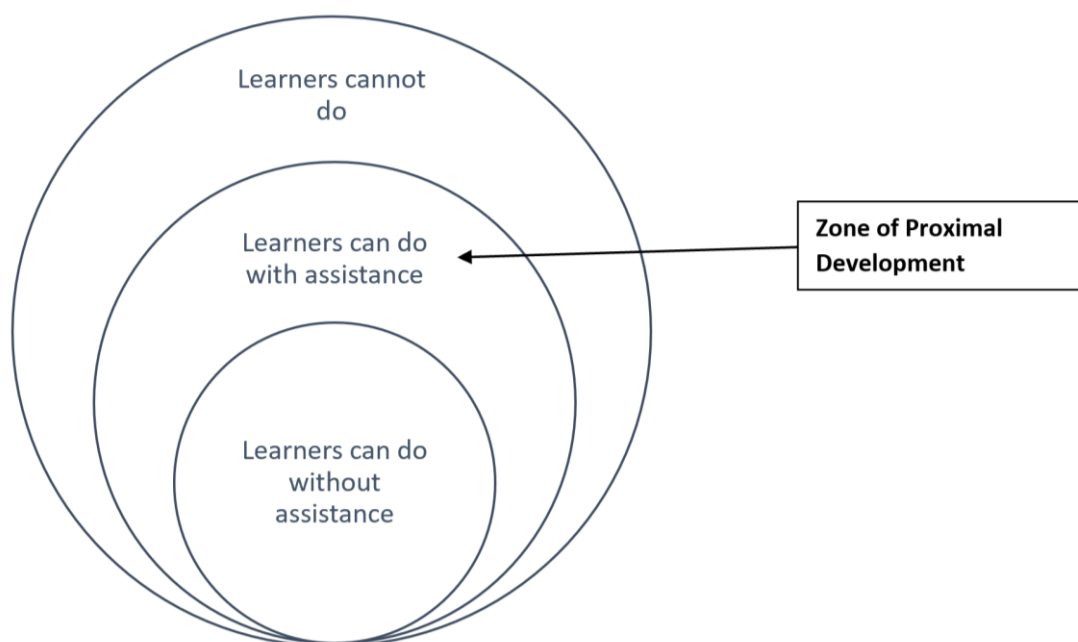
Theory	Explanation
Humanism	A "learner-centric approach" in which the potential is the focus rather than the method or materials {Maslow, Rogers & Bugental (1900)}
Behaviourism	Behaviourism is only concerned with observable stimulus-response behaviours, as they can be studied in a systematic and observable manner {Watson & Skinner (1930)}
Cognitivism	Learning relies on both external factors (like information or data) and the internal thought process {Piaget (1936)}
Constructivism	The learner builds upon his or her previous experience and understanding to "construct" a new understanding {Piaget (1936)}

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Connectivism

Informed by the digital age, connectivism departs from constructivism by identifying and remediating gaps in knowledge {Siemens & Downes (2004)}

Despite the fact that, learning theories range in lots of ways, including their standard assumptions and guiding principles, many rest not on a common basis. Those theories vary in how they predict that gaining of knowledge occurs. "Just as no two people are the same, no two students learn in the exact the same way or at the exact same rate. Effective educators need to be able to pivot and craft instruction that meets the needs of the individual student to address the needs of the 'whole child.' Sound knowledge in multiple learning theories is a first step to this and another reason why great teachers work their entire careers to master both the *art and the science* of teaching."(Roggeman ,2021). So the role of the teacher becomes pivotal for the learning process. Teachers can act as a catalyst to give momentum to the process of learning. Their function now includes counselling students, mentoring students, being a facilitator and more importantly teaching them a way to use and follow knowledge in their lives. Vygotsky's Zone of Proximal Development which has become the foundation of much research and theory in cognitive development has advocates the space between what a learner can do without assistance and what a learner can do with adult guidance or in collaboration with more capable peers (Vygotsky, 1934).



**Fig.1 The Zone of Proximal Development (ZPD)**

**Source:** Encyclopaedic dictionary of psychology. Retrieved from Credo Reference database

One must acknowledge that learning can be challenging, and hence teachers need to offer a helping hand to students to develop the mind-set and self-efficacy that will support students' diligence towards learning. Learning involves a change in attitude or behaviour. This change does not necessarily have to be an improvement always. Learning can be considered as change that is permanent in nature because change is brought into students by a teacher through techniques like developing special skills, changing some attitudes, or understanding specific scientific law operating behind a learning environment (Sequeira, 2012).

### III. NATIONAL EDUCATION POLICY (NEP) 2020

National Education Policy (NEP) 2020 is a comprehensive and radical plan intended at restructuring and renewing India's higher education sector in the global education scenario. The policy is wide-ranging and based on the solid foundational principles. The aim of the policy is universalizing quality higher education by restructuring and consolidating Higher Education Institutions (HEI) to become multidisciplinary, equipping the educated with 21st century knowledge and skills. As a result the students will have well rounded personality and well prepared to cope with the fast changing world. The policy demands a sweeping change in the curriculum and pedagogical structure in the multidisciplinary framework as well as providing an optimal learning environment and support to students, ensuring

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equity and inclusion, granting faculty and institutions freedom and autonomy in pursuing high quality research over and above world class education.

NEP 2020 envisions a complete overhaul and re-energising of the higher education system to overcome these challenges and thereby deliver high-quality higher education, with equity and inclusion. One of the policy's visions emphasises "increased access, equity, and inclusion through a range of measures, including greater opportunities for outstanding public education; scholarships by private/philanthropic universities for disadvantaged and underprivileged students; online education, and Open Distance Learning (ODL); and all infrastructure and learning materials accessible and available to learners with disabilities" (Clause 9.3, NEP 2020). To achieve the vision of 'increased access' and 'inclusion through a range of measures' is possible through Open Educational Resources (OER). Recent developments and advancements in hardware and software have augmented adoption of technology-enabled learning in the institutions in varied manner. Both formal and open and distance education institutions have incorporated technology in teaching and learning transactions (Sharma, 2023).

### IV. OBJECTIVE OF THE STUDY

The objective of the study is to analyse the use of Online Resources for teaching learning process and availability of such online learning platforms at different institutions.

### V. LITERATURE REVIEW

The review of literature part consists of two parts. One part delve into to find out literatures about understanding the teaching learning process and other part tries to find out the use of online resources for teaching learning process in the context of NEP.

(Sequeira, 2012) gives insight into a few concepts of teaching and learning, especially at the higher levels of education. Many countries make it mandatory for teachers to undergo formal course on education principles where the concepts of teaching and learning are taught. However, this exposure to teachers is non-existent for professional teachers who enter into teaching profession without any exposure to formal training in education. This sometimes may act as a constraint in the process of effective teaching and learning process.

(Lumpkin, 2020) describes "An effective teaching and learning process requires five sequential steps. Teachers who care about the learning of students first preview how the course's disciplinary content is organized. Teachers then convince students how and why listening and learning will personally benefit them. Next teachers lead interactive classes utilizing a variety of instructional approaches interspersed with engaging learning activities. Through learning assessments, teachers reinforce and reward student learning. In enacting their action plans, students actively use new knowledge and skills learned. Educationally sound course design, instructional strategies characterized by interactive lecturing and active learning, and use of a variety of assessments facilitate student learning, but only when students perceive personally beneficial outcomes and realize how knowledge learned can be used. Engaged students are more likely to think critically and build on prior knowledge and experiences to construct new knowledge. Evidence of learning documented through use of a variety of assessments prepares students to use what they have learned. Assessments evaluate students' understanding, growth in critical thinking, development of skills in problem solving, while strengthening their application and analytical abilities". (McTighe & Wiggins, 2013) summed up the essence of a well-designed, delivered, and assessed course, "...an educator's job is not to simply cover content. Our role is to cause learning, not merely mention things...". This is most successful when students feel they personally benefit from and can actually use content they learn. In combination, five steps converge resulting in more effective teaching and learning.

(Eisner, 1991) suggested that content and pedagogy are the systole and diastole of teaching. He added that "No curriculum teaches itself, it always must be mediated, and teaching is the fundamental mediator". This highlights the criticality of teacher agency. Material making, apart from being an end in itself, can also be instrumental for strengthening teacher development and agency. As teachers and teacher educators engage with materials/content and the complexities of marrying educational aims, contexts, and diverse learner communities, they will need to think of creative approaches to develop rich and contextual materials (Kasinathan, 2022).

(Munna & Kalam, 2021) argue that the teaching and learning process can be defined as a transformation process of knowledge from teachers to students. It can also be referred as the combination of various elements within the process where an educator identifies and establishes the learning objectives and develops teaching resources and implements the teaching and learning strategy. They tried to assess the teaching effectiveness in a higher education setting. In their study they have evaluated various academic journals, pedagogy, and inclusive practices to assess the teaching effectiveness within the higher education setting. The research findings suggested that providing positive and adequate formative and developmental feedback, introduction of role-play have a profound positive impact on the students' confidence and self-esteem. It was also revealed that, active learning

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environment promotes inclusivity and improve the faculty and student academic performances. These findings will enable the educators to help create and implement an inclusive teaching and learning environment to improve the learner's expectation and academic performance.

However, in order to be an active learner in higher education, each student expects to be treated as an adult learner who has some right over the learning ambience in the form of asking questions and clearing of doubts (Michael & Modell, 2003).

(Lebenicnik et al., 2015) have opined that the learning resources that were used in the education of university students were often available online. The nature of new technologies caused an interweaving of formal and informal learning, with the result that a more active role was expected from students with regard to the use of ICT for their learning. The variety of online learning resources (learning content and learning tools) facilitated informed use and enables students to create the learning environment that was most appropriate for their personal learning needs and preferences. In contemporary society, the creation of an inclusive learning environment supported by ICT is pervasive. The model of Universal Design for Learning is becoming increasingly significant in responding to the need for inclusive learning environments. In this article, authors categorized different online learning activities into the principles of Universal Design for Learning. The findings indicate that among all students, activities with lower demands for engagement were most common. The categorization of activities revealed that student teachers are less likely to undertake activities that involve interaction with others. Among the sample of student teachers, they have found that personal innovativeness was correlated with diversity of activities. The results also showed that student teachers should be encouraged to perform more advanced activities, especially activities involving interaction with others, collaborative learning and use of ICT to plan and organize their own learning processes.

(Ullah, 2022) in his research has stated that one of the key tenets of the NEP 2020 has been the acceptance of Open and Distance Learning (ODL) as a mainstream delivery mechanism. The transition from traditional to digital learning has been witnessed as a smooth one. With the help of social media and other technologies, students and teachers have able to grasp online education. It has also been observed that ODL will remain an important element of present and future education and training system. ODL has its place, especially for students who could not otherwise attend college and given the health risks. In the upcoming future, with the help of new technologies, the government needs to reach out to every student and provide them with the necessities of water, shelter, and education. As per the Regulation 22 of the UGC (Open and Distance learning Programmes and Online Programmes) Regulations, the degrees at the undergraduate, the postgraduate and, the post graduate diplomas awarded through ODL or Online mode by Higher Educational Institutions, shall be treated as equivalent to the corresponding degrees and post graduate diplomas offered through conventional mode. He further pointed that as ODL provides a more flexible and dynamic environment for the students, ODL delivers a more practical approach to learning, unlike the traditional norm.

(Sheergugri & Malkeet Raj, 2022) have briefed that a well-defined, visionary and futuristic education policy is a must for every country because education is the key driver of economic and social progress. Taking into account their respective traditions and culture, different countries have adopted varied education systems, how New Education Policy 2020 (NEP 2020) intended to transform our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all. They also stated that this policy will bring about a paradigm shift India's education system and will transform it into a modern, progressive, and equitable one. They discussed the importance of alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible. In this regard, the National Education Policy's vision of leveraging the advantages of technology while acknowledging its potential risks and dangers are also being highlighted.

(Mir, n.d.2023)'s study is based on secondary data and highlights technology's scope and significance in NEP 2020. How the use of technology in educational institutions will help enhance pedagogical methods and student learning has been discussed thoroughly. The study also found that NEP 2020 recommends the creation of the National Educational Technology Forum (NETF) to facilitate open dialogue about how to use technology in school and higher education.

## VI. RESEARCH METHODOLOGY

In this paper the researcher tried to analyse the use of Online Resources for teaching learning process through a qualitative research design. Qualitative research is a type of research that explores and provides deeper insights into real-world problems. Here, the problem is to assess how the online resources, various e-learning platforms along with the aid of ICT help teaching learning in a more effective way. Researcher also wanted to find the availability of such online learning platforms at different institutions and how these are going to support to achieve the mission of NEP 2020's equitable and inclusive education for all. The qualitative research method was adopted to understand different aspects of NEP 2020 and conclusions drawn from critical analysis of secondary sources, viz. journals, articles, books and e contents.

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### VII. ONLINE RESOURCES

In general, web pages and documents on the internet that provide useful information are known as online resources (Kumar, 2009). Whereas e-learning refers to “the use of information and communications technology (ICT) to enhance and/or support learning in tertiary education” (Sharma, 2022). These online courses have benefits, like, **purpose-driven learning, power of imagination, building a growth mindset, boosting student motivation and shared leadership in a team environment (Bechard, 2020)**. Due to the numerous benefits of online information, online learning resources represent one of the most common sources for learning among students. Students nowadays can access an abundance of online learning resources themselves. This increases the importance of informal learning environment.

One of the thrust areas of the National Education Policy (NEP 2020) is Equity and Inclusion:

- Policies aimed to minimize disparities in access to online education.
- Efforts were made to support marginalized students, students with disabilities, and those in remote areas to ensure they could participate fully in online learning.

The emphasis on online education is possible with the rapid and improved Internet coverage, extensive use of mobile telephones and the launching of 5G networks. As a result these help the students to easily access the online learning empowerment tools. In the meantime, there is a need for relevant digital skills to be developed like effective search techniques, fact checking, spell-check and grammar tools, judicious use of social media and learning from digital media.

### VIII. USE OF ONLINE LEARNING RESOURCES FOR TEACHING LEARNING PROCESS

The National Education Policy-2020 (NEP-2020) includes broad and detailed mandates for integrating technology into all levels of education. So that various technological tools allow education systems to collect, process, incorporate, store, maintain and distribute data. Moreover, the NEP-2020’s mission of “Access, Equity and Inclusion in Higher Education” seems to be impossible without integration of technology as means of online learning resources. Inequality in access to higher education may lead to inequality in other domains and intra- as well as inter-generational inequalities (Malish, 2022).

The adoption of technology enabled learning management system (LMS) by the higher educational institutions paved the way for online learning resources available to students of all walks of life. These online learning resources can be regarded as a source of infinite learning opportunities. To name a few:

- (i) IITBombayX is an online platform developed by IIT Bombay, to offer Massive Open Online Courses (MOOCs) for individuals from varying backgrounds. Specialits in Hybrid MOOCs which captures the benefits of flipped classrooms, online lectures, and live interactions with the IITBombayX course instructors. They Offers Edu MOOCS, Skill MOOCS, Teach MOOCS, Life MOOCS.  
Source: <https://www.iitbombayx.in/>
- (ii) eVIDYA@IITD is an outreach initiative of IIT Delhi for delivering knowledge using Virtual and Interactive platform for Driving Youth Advancement.  
Source: <https://evidya.iitd.ac.in/>
- (iii) IIT Madras’s Centre of Excellence on Virtual Reality and Haptics: <https://opengovasia.com/indian-institute-of-madras-launches-virtual-reality-course/> Set up under the Institute of Eminence initiative, this centre will create learning experiences in virtual reality, augmented reality, mixed reality and haptic technologies.  
Source: <https://www.classcentral.com/university/iitm>
- (iv) DIKSHA (Digital Infrastructure for Knowledge Sharing) Portal for teachers. This portal, by the Ministry of Education and National Council for Education Research and Training (NCERT), provides lesson plans, teaching tools, explanation content, practice and homework, question banks and assessment to millions of learners and teachers all over the country.  
Source: <https://www.india.gov.in/spotlight/diksha-national-digital-infrastructure-teachers>
- (v) eBidya: LMS of KKHSOU Moodle is one of the most popular open source software adopted in many universities including IGNOU and state open universities as well as in formal education universities. Moodle LMS is based on the socio-constructionist pedagogy which integrates constructivism, constructionism, social constructivism, and connectivism. Source: <http://www.lmskkhsou.in/web/>
- (vi) Platforms for Divyangs: There is a greater role of technology in facilitating Divyangs. Assistive Technology is a big boon for them. Many types of software are developed to cater the needs of Divyangs. Softwares like screen readers, text-to-speech systems using Optical Character Recognition (OCR), braille screen and display magnifiers allow divyangs to listen to content on the screen or it makes the font or information on the screen in big size for

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easy reading. Technology giants like Microsoft, Google, Facebook, etc have created tools which are being used by Divyangs.

Source: [How thousands of people with disabilities shape the technology you probably use every day - Source \(microsoft.com\)](#)

E-learning is rapidly gaining importance and momentum with the advent of technology. With the government's 'Digital India' initiative aiming to digitize India, educational institutions are also working in tandem to help meet the goal. Massive Open Online Courses (MOOC) among students and working professionals are quickly gaining popularity as they help them to study at their convenience and time. One of the best key characteristics of MOOC is that these online MOOC courses allow students to access some of the top educator's content across the globe from the comfort of their own rooms, in a remote manner (<http://careers360.com>). The NEP also recommends that digital technologies should be extensively used for teaching-learning in the form of e-content, audio and video resources, e-library, etc. Apart from using digital technologies to support teachers' in "creating and learning", these technologies can also support teacher development through "Connecting and Learning". 'Creating and Learning', in Digital Platforms.

Further, the NEP suggests the substantial expansion in the use of technology platforms such as SWAYAM and DIKSHA for online training of college and university teachers as a part of their in-service continuing professional development. It recommends that teachers should be given continuous opportunities for development, including learning recent advances in their profession. Such development should be offered in blended mode, combining workshops and online courses (Kasinathan, 2022).

### IX. CONCLUSION

Technology can be a powerful tool for transforming learning. With the diminishing gap between teachers and learners, collaborative learning, blended mode of learning through the use of technology, learning experiences able to meet learners' need to a great extent. However, to actualise these, teachers have to use technology effectively. It is recommended that teachers should be given continuous opportunities for development, including learning recent advances in their profession. Such development should be offered in collaborative mode, combining workshops and online courses. If all the above are planned and executed properly then one of the main aspects of NEP which asserts the focus of integration of digital technologies for improving teaching-learning, evaluation processes, and support teachers' professional development will definitely meet. This will streamline educational planning and administration as well as will enhance educational access means equitable and inclusive education: *Learning for All*.

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- 25) <https://www.careers360.com/courses-certifications/articles/key-characteristics-of-mooc-how-do-they-impact-learning>



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