

# DOL- Distance and Online Education in the Wake of NEP 2020

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## Abstract

*The age we are living in is of digitalization and Information and Communication Technology (ICT). This era is known as the advent and rigorous adaptation of novel technologies in various spheres of human life. The widespread use of the internet brought a shift in basic assumptions about education. Therefore, the role of classroom as the only place for imparting traditional formal education, access to information, and the activity of knowledge generation is seen in a challenging state. The growing use of the internet for learning, especially during the period of Covid-19 followed by lockdowns, is turning out to be supplementary for classroom teaching and learning. Eventually, it has brought education outside of the exclusive university gates and into everyone's hands.*

*In the light of this radical transformation, Online and Distance education is contributing tremendously to the creation, accessibility, and delivery of knowledge in the altering knowledge economy and knowledge society. The New Educational Policy i.e., (NEP 2020) of India is going to be in favor of rapid spread of Online and Distance education via many public, private, and foreign universities and colleges. Through this mode of learning, NEP seeks strengthening and guaranteeing Access, Equity, Quality and Affordability as the very base of 21<sup>st</sup> century modern education system of India.*

*The present research paper is a modest attempt to throw a light on the evolution of Distance and Online education in India and its remarkable growth. The researcher also seeks to explore the merits and demerits of these new modes of education and the role of NEP 2020 in its future existence.*

**Keywords:** NEP 2020, ICT, Gurukul education, policies, correspondence, modern higher education etc.

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## ➤ INTRODUCTION

Education has a noteworthy value in achieving progressive goals of any country. The Indian Education, a very dynamic element, has undergone with numerous changes in its systems, policies, and pedagogy based on its vision and mission. The journey of the first education system in India, known as a very ancient system of Gurukul, dates back in 5000 BC. In this system the students were known as shishyas, and teachers as Gurus and it used to be a residential school where the shishyas were supposed to stay at their Guru's home i.e., ashram. The aim and objective of this unique kind of education system were enhancing value education empowered with self-reliance, and strong adherence to providing healthy surroundings through which moral and ethical progress was expected. The fundamental lessons the shishyas used to learn at Gurukul were acquiring the highest knowledge, forming of character, comprehensive development, and spiritual growth. Ultimately, the shishyas were made eligible to use the gained knowledge to solve their real-life problems. This Gurukul system was the soul of ancient India mainly the Vedic age.

Until the arrival of Britishers in India in early 17<sup>th</sup> century, and the establishment of the East India Company, there was not any modern education system in India. In their initial rule in India, the Britishers' main purpose was trading. However, as time passed, due to the interferences of Britishers in country's political, social, cultural, economic, educational, and philosophical issues, the system of education went on replacing country's traditional Gurukul education system with the advent of 18<sup>th</sup> century formal education directed by Minutes of Macaulay. The education system Macaulay founded in India mainly aimed on exposing western education and subjugation of eastern philosophy by introducing English language to orientals. This Education system led by him promoted the use of English language for Indians. Consequently, the Indians got acquainted with English literature and western science.

Macaulay's education system in India hogged the credit of spreading English language in India, although due to the access to English, the Indians ran their freedom fighting campaigns in India successfully. This education lasted long in India until the independence of country in 1947.

After independence, the government of free India made launched country's national education policies. In the first decade of the country's independence, the status of literacy rate and education was in a very sorry state. As in 1951 the literacy rate of the country was only 19.3%. However, the foundation of education in free India, inaugurated with the commencement of the first National Education Policy led by Prime Minister Indira Gandhi in 1968. The primary motto of the first National Education Policy was to ensure free and mandatory education for all children under 14. This first education policy was reformed and updated with the second national education policy designed in 1986 under the leadership of the sixth Prime Minister of our country Rajiv Gandhi.

The mission undertaken in this NEP took a caution that caste, creed, sex, and religion would not be the impediments in the free accessibility of equal education. This second NEP also strengthened the idea of introducing Information and Communication Technology (ICT) in Indian Education System. Besides primary and secondary education, many public and private universities came out to contribute to the realm of higher education under the guidance of UGC founded in 1956. The act of privatization and globalization of higher education in 1991 boosted the spirit of higher education hence, the Indian students and foreign students began to immigrate for quality and affordable higher education across the globe. At this juncture, India is being acknowledged as the world's second-largest higher education system.

It is crucial to know that in the last decades of 20<sup>th</sup> century, the use of computers grew in all sectors of life in India including schools and colleges. IT revolution appeared in India during this phase, smoothed a way for the country's education system so that the utilization of new technologies in the schools, colleges, and universities became need of an hour. As a result of this hike in use of Information and Communication Technology (ICT) and the outbreak of Covid-19 has been the root causes to the popularity of Distance and Online education across the world, and India is not an exception to it.

The third National Education Policy was launched in 2020 under the guidance of Prime Minister Narendra Modi. It made a conducive surrounding for Distance and Online Education in India as it mainly focuses on enhanced technology driven education. NEP 2020 aspires Distance and Online Education to contribute the Gross Enrollment Ratio (GER) on higher education from 26% to 50% by 2030.

## ➤ RISE OF DISTANCE AND ONLINE EDUCATION IN INDIA

The fundamental factor responsible in remarkable rise and spread of Distance and Online Education in India is its flexibility. The important elements influencing the expansion of online education include internet invasion, cheap cost of online education, convenience of course completion, government efforts, employer recognition, and bridging gap.

## ➤ DISTANCE EDUCATION

### 1. Introduction

In the world's history, accessibility of education had been restricted to a very few people belonging to the royal upper-class families. The students of upper-class families used to visit their master's home or residence to gain knowledge and education. This very old method of imparting knowledge was deeply seated in the soil of the western education system. Until the 18<sup>th</sup> century, this conventional strategy of teaching and learning continued to be dominant worldwide. As this orthodox and rigid education system didn't allow any other alternative methods of instruction to grow and develop as parallel systems to it. This education system, especially meant for higher level society, denied the status of correspondence study proposed by many contemporary scholars and educators, criticizing it as inferior and unproductive. However, correspondence education had a very genuine appeal of providing equal access for education to common masses setting democratic principles.

### 2. Birth of Distance Education in India

It is apt to say that conventional education system of India could not cope up with speedy changes in country's changing demands, requirements, and current needs of education. Therefore, Distance education turned to be the need of an hour throughout which current and future requirements of education can be coped with par excellence. Consequently, Distance education/learning, also known as correspondence education, came into limelight at

global level in 18<sup>th</sup> century. It is a mode of education developed especially for distant students in such a way that it minimizes that physical gap between students and teacher. In the context of higher education at global level, the University of Chicago pioneered the path of distance education in 1800s. It was the first attempt at delivering education through the channel of correspondence wherein the teacher and the students were located at different locations. The credit for initiating the first distance education course internationally is in the name of Sir Issac Pitman in 1840s. Through distance mode he taught his students a system of shorthand.

This novel approach in imparting knowledge later became the benchmark in the journey of distance education worldwide. Moreover, in 1858 University of London welcomed distance education as a new strategy in imparting extended education through its various corresponding courses.

This novel trend is seeking to emerge as distance education, backed up with radio and television mediums invented in the mid of 20<sup>th</sup> century. Therefore, many schools and universities initiated their lessons imparting through this newfound expertise. As a part of its growing popularity, these new technologies employed in conveying corresponding instructions, served a startling role in teleconferencing which was later welcomed in the fields of public schools, universities, business, and military. Due to the height of success of corresponding i.e., distance education, many open universities emerged on the horizon of distance education.

### 3. Distance Education Progress in India

Distance education emerged in India six decades ago. The University Grants Commission (UGC) founded in 1956, in its initial stage, saw that expansion of higher education is possible only if distance education is strengthened to cater to the needs of higher education of a newly independent country like India.

The University Grants Commission (UGC) strengthened the ideas for evening colleges, correspondence programs, and the awarding of external degrees in its first report released during 1956-1960. In its Third Five Year Plan, the Planning Commission recommended that correspondence education be established across the country after carefully considering this issue. In response to the Planning Commission's conclusions, the Central Advisory Board on Education proposed setting up an Expert Committee under the direction of Dr. D.S. Kothari. In the light of this, University of Delhi stood the first Indian university coming forward in 1962 to launch a correspondence course for its students. It was a venture in the sphere of distance education in India. Though, in initial stage, it was a pilot project in the form of a sapling later held as a role model for many universities, schools, institutes, and colleges across India.

The primary objective of gradual expansion of distance education in India aimed to create a more effective and affordable approach of higher education in the context of Indian national development. Secondly, the viewpoint distance education carried forward was to facilitate higher education to those who were eligible and hopeful to opt for it despite their inability to attend regular university classes due to their individual and financial conditions. The third and main motivation sought after the expansion of higher education was to educate the citizens by which they can maintain their knowledge updated and complete their education without compromising their present employment. The educators and academicians contributing to this field started focusing on management and designing the coursework, and learning management system, thus, the sapling of distance education, grown into a huge tree.

At this juncture, we have 10 universities dedicated to Distance Education and about 60 Institutions/Directorates of Distance Education affiliated to traditional education. Among these universities Andhra Pradesh Open University (1982), IGNOU (1985), Kota Open University (1987), and YCMOU (1989) have been remarkable in their progress. In addition to this, six state open universities, in Bihar, Gujrat, Madhya Pradesh, West Bengal, Karnataka, and UP are recent extensions of Distance Education.

#### ➤ STRUCTURE OF DISTANCE EDUCATION

In 1980s execution of distance education courses in India got remarkable clarity as the proposed support system served as roadmap for smooth conduction of distance courses. The following facilities are the base of Distance Education.

- a) the creation and development of course materials
- b) the circulation of course materials
- c) student assignments i.e., response sheets
- d) facility of establishing study centers, availability of library access.

- e) review and assessment of pupils' progress
- f) personal visits- casual visits by the students to meet the faculty.

There are many merits and demerits of the Distance Education system which can be mirrored in the overall growth of the system. Let us point out some of them briefly.

MERITS OF DISTANCE EDUCATION	DEMERITS OF DISTANCE EDUCATION
<p><b>1. Time Saving-</b> Distance learning education saves time of students as they need not to travel on daily basis. This saves money and time that would be spent on travelling back and forth.</p>	<p><b>1. Status Barrier--</b> In traditional universities it is found that Distance Education departments are marginalized and given less status therefore sufficient facilities are not provided to these departments. Consequently, the huge potential of the system rests unutilized.</p>
<p><b>2. No Physical Barrier-</b> Additionally, distance learning is a fantastic tool for reaching students who live in distant locations and may not have easy access to educational facilities or who wish to explore options other than those provided by their local schools.</p>	<p><b>2.No freedom from campus-based Education-</b> It is a common observation that distance education departments are controlled by the university regulations therefore it limits the experimentation. Moreover, there are chances that the faculty of regular departments may turn obstacles on the way of these departments.</p>
<p><b>3. Fairness of Opportunity-</b> Distance Education courses are logically integrated and therefore don't hamper family life and the work environment of students.</p>	<p><b>3.Staying Motivated is challenging-</b> For students completing their courses through distance education are basically working professionals. So, like regular students, they are not updated daily. They need to be self-motivated to be in touch with their study centers proactively, thus, they can be tuned in with the academic activities they are meant to carry out during the coursework. Perhaps, it is more challenging for the students enrolling for such a system of education.</p>

Thus, the researcher has covered the meaning, birth, evolution and merits and demerits of Distance education. Now let us throw a light on the journey of Online Education in India in a nutshell.

## ➤ ONLINE EDUCATION

### 1.Introduction

Online Education is an innovative phenomenon which exposes how technology can be utilized thoroughly during the teaching and learning process in the age of Internet and World Wide Web. The birth of online teaching and learning has changed the overall scenario of higher education across the globe. In the late 20<sup>th</sup> century, there had been a remarkable development in competency of technology in solving various critical issues. At this juncture, people saw a huge potential in personal computer machines as a vehicle of communication and exchange of information. It is the beginning of cumulative utilization of personal computers, telephone technology, and networks. The period after 1900s witnessed a remarkable revolution in the higher education system of world's top developed countries due to advent of technology and growing demand of higher education.

The liberalization, privatization, and globalization in higher education were the key factors of the startling hike in the enrollment ratio of graduate students in these top economies. The sudden growth in higher education stood as a disturbing factor for these universities in developed countries. Hence, it raised some technical and practical challenges of coping with the rising strength of university graduates as classroom face to face teaching to a large group of students found simply unrealistic. The top economies like UK, US, France, Japan, and Germany invited some novel ways wherein the lecturers and staff involved in teaching learning process needed to acquire some new skills and technology by using internet and online teaching methods. Therefore, it promoted students' self-directed learning outside the classroom. In this context, we can state that this was the real beginning of employing online mode in higher education.

Hence, the dawn of 21<sup>st</sup> century was the welcoming of Internet in higher education, as one of the beneficial resources and by product of globalization. From this period onwards many universities began to implement a virtual learning environment.

## 2. Birth of Online Education in India

Online Education is not a new phenomenon in Indian education system. As we have discussed earlier, 1960s onwards Indian education system regularized mode of distance education by the initiative of University of Delhi. To speed up higher education across the country, University of Delhi used to design education sources and broadcast them through the channels of Door darshan and All India radio. It is as an arrival of online education in Indian education system. The educational programs run by these broadcasts were specifically meant for the students studying outside the physical premises of the educational institutes. The journey of online education was boosted little bit in 1986 due the arrival of Internet in India. with a lower speed as the country was still in dire need of technological revolutions. Although, Internet began in India in 1986, the period from 2004 to 2010 held crucial in the field of ICT. Both Google and BSNL started their services in India in 2004.

This period witnessed the arrival of famous social networking sites such as Orkut and Facebook. The internet speeded up in this period from 2G to 3G. Due to this growth in ICT the renowned Indian institutions like MHRD, ISROU, and IGNOU began to employ two-way video communication to deal with their stakeholders through online. However, these efforts were insufficient due to the limitations of available technologies. Despite these shortfalls in the development and growth in technology and its utilization in higher education, continuous research and innovations were being carried out in Online Education and its pedagogy. Consequently, the concept of smart classrooms and satellite education came in the limelight and slowly but steadily India saw a future of Online Education.

## 3. Distance Education Progress in India

With broadcasting space granted by All India Radio and Doordarshan for telecasting recorded educational programming for both higher education and school-age children, online learning has a long history in India. Even though All India Radio and Doordarshan provided services to various educational institutions, including UGC, IGNOU, and NCERT, there was still a need for student engagement because all these broadcasts were in recorded form.

In 2008, Online Education sector did not remain untouched by the entry of private sectors. The market of Online Education opened to be captured by many private platforms by designing technologically sound smart classrooms, although, it was impossible to replace conventional campus-based face-to-face education with it. The period from 2010 to 2020 has seen several EdTech platforms grown in India for example, BYJU'S, Unacademy, iQuanta, Trainer Central, Vedantu, etc. The real upliftment to online education in India is marked at the advent of covid-19 virus. On July 2020 India witnessed the first covid case in Kerala. It was an outbreak of virus followed by 4 successive lockdowns. During this period academic activities such as classroom education were shut down and the education system was undergoing many adverse effects. However, it is a mercy of Indian technological advancement so that the system could adapt virtual learning classrooms to bridge the physical barriers.

Teachers and students in 2020 must consider themselves lucky to have access to so many two-way mobile communication apps. The current difficulty is not with technology, but with concepts for making online instruction more beneficial. The traditional educational system has been impacted by technological advancements. Online learning tools have rapidly spread to K-12, higher education, and informal learning, among other educational levels. With the advantage of being easily scalable, online learning is now a required component of all schools, institutions, and even enterprises in India. Additionally, the Indian government is allowing universities to provide fully online degrees, which might have a huge influence on the country's education industry.

This is crucial to know that half of India's population is young and below 20 to 25. The Internet penetration ratio in India is rising significantly. The positive state of country's economy has tremendous impact on the development of online education in India. Today's India is growing as a knowledge economy and knowledge society. As compared to traditional generations of youngsters, the youngsters living in this digital and competitive age need to be more professional and skillful in whichever sector they work. Therefore, despite being working professionals, they require to enroll for some higher degrees or certificate courses without hampering their jobs. For these professionals' online education serves as a boon.

Thus, at prima facie, it can be stated that future of online education in India is a boon to the society as it could be accessed by every section of the society. Like Distance Education, Online Education has both merits and demerits as well.

MERITS OF ONLINE EDUCATION	DEMERITS OF ONLINE EDUCATION
<p><b>1. Effectiveness</b> Online learning allows teachers to successfully deliver courses to students. All the online learning tools, such as podcasts, PDFs, and videos, may be used by teachers to prepare their lessons. By incorporating internet resources into their lesson plans in addition to traditional textbooks, teachers may improve the quality of their instruction.</p>	<p><b>1. Trouble Concentrating on Screens</b> Their inability to pay attention for long stretches of time is one of the biggest challenges of online learning for many students. Additionally, there is a greater chance that students who learn online may be easily distracted by social media or other websites. Teachers must strive to make their online classes as succinct, engaging, and interactive as possible if they want their pupils to pay attention to the material.</p>
<p><b>2. Availability of Space and Time</b> Another advantage of online education is the freedom it gives students to attend classes wherever they like. It also allows schools to interact with a larger network of students and releases them from the restrictions imposed by geographic boundaries. It is also possible to record, save, and distribute online lectures for later use. Thanks to the flexibility of time and location offered by online education, students may now access the course materials at any time.</p>	<p><b>2. Technology Problems</b> Another key problem for online learning is internet connectivity. Even if the number of people using the internet has significantly expanded in recent years, it might be challenging to find a trustworthy connection with suitable speed in smaller cities and towns. There could not be adequate consistency in the child's education without a dependable internet connection for both pupils and instructors. This will be detrimental to the educational process.</p>
<p><b>3. Accessibility</b> Another advantage of online education is lower costs. Online education is far more affordable than traditional education. This is so that when students are learning online, there are no expenses for their food, transportation, or—most importantly—real estate. Additionally, because all the course or study materials are available online, there is no need for paper, which makes learning more affordable and ecologically beneficial.</p>	<p><b>3. Staying Motivated is challenging-</b> For students completing their courses through distance education are basically working professionals. So, like regular students, they are not updated daily. They need to be self-motivated to be in touch with their study centers proactively, thus, they can be tuned in with the academic activities they are meant to carry out during the coursework. Perhaps, it is more challenging for the students enrolling for such a system of education.</p>
<p><b>4. Adapts to Different Learning Styles</b> Every learner has a different way of learning and a different learning style. While some children learn best by seeing things, others learn best by hearing things. In a similar way, some children flourish academically while others learn best on their own and are easily distracted by large groups. The online learning system may be customized in several different ways thanks to its multitude of options and resources. This strategy is the best way to create a perfect learning environment that caters to the needs of every student.</p>	<p><b>4. Teacher Education</b> Teachers who use online learning must have a fundamental grasp of using digital learning tools, this isn't always the case, though. Teachers frequently possess a very fundamental grasp of technology. They occasionally even lack the equipment and resources needed to conduct online lessons. Schools must make an investment in providing teachers with the most recent technological advancements for them to conduct online lessons smoothly.</p>

## ➤ **STRENGTHENING OF DISTANCE AND ONLINE EDUCATION IN THE LIGHT OF NEP 2020**

The Ministry of Education unveiled and published the New Education Policy (NEP) 2020 in July 2020. The goal of NEP is to revamp and restructure India's educational system. Its major goal is to make education available to everyone from preschool through high school. NEP aims to dismantle the stereotyped version of mimicry and imitation of colonized mindset seen in modern education system of India. Therefore, NEP seeks to transform colonized and imitative educated mind into a new colonized and thinking mind which should advocate Indian culture and ethics.

Education is an evolving and dynamic phenomenon. From ancient times there have been tremendous experiments that have occurred in the delivery of education and in the pedagogy of teaching and learning. Education gets reformed based on changing circumstances and realities. The Covid-19 pandemic witnessed by the world during 2019-2021 altered the foundation of human life and challenged the systems of human activities and education sector was no exception to it. The traditional education system in India caught in trouble during the pandemic, thus, alternative tools and mode of education was in great demand. Now, it seems clear that National Education Policy 2020 strongly promotes the significance of technology in education despite its common deficiencies and lacunas.

NEP 2020 emphasizes how the optimum advantages of online/digital education can offer high quality education to all. Thus, it focuses on increasing the number of digital platforms technology driven education courses. In this regard Ministry of Education Government of India has extended an initiative to empower digital education by considering the group of India K-12 education and higher education as well. The prominent initiatives of Government of India to promote digital platforms are as such:

### 1) **DIKSHA (Digital Infrastructure for Knowledge Sharing)**

A national platform for school education, DIKSHA (Digital Infrastructure for Knowledge Sharing) is a project of the National Council for Educational Research and Training (NCERT), which works under the guidelines of the Ministry of Education (MoE), Government of India. Since its 2017 launch by the Honorable M. Venkaiah Naidu, Vice President of India, all States, Union Territories, and central autonomous bodies/boards, including CBSE, have accepted DIKSHA. Students and instructors may use DIKSHA anywhere in the nation, and it presently supports 36 Indian languages. Each State/UT utilizes the DIKSHA platform in a unique manner.

### 2) **SWAYAM**

SWAYAM i.e., Study Webs of Active-Learning for Young Aspiring Minds is a Massive Open Online Course (MOOC) platform formed in 2017. It is run by the Indian government that offers educational opportunities to an enormous number of college and university students. The courses available on SWAYAM are available in four steps such as video lectures, reading material, self-assessment tests, and online discussion forums.

### 3) **PM-VIDHYA**

It is a comprehensive program launched on May 17, 2020, with the goal of integrating digital and online learning with educational initiatives for increased accessibility and reach of e-learning. It had a plan of assisting about twenty-five million students nationwide. It will enable digital/online/ on air access to education.

These digital learning platforms aimed to equip students with innovative training resources, content, student centric assessments to capture the attention of energetic students. In New Education Policy 2020, Ministry of Higher Education seeks to build a parallel system of online and digital education wherein the committed experts from the fields of education, technology, administration, and industry will contribute their novel ideas to meet with the growing and diversifying needs of higher education. National Education Policy 2020 considers the limitations of online and digital education as there is lack of digital equality in country in terms of reasonable computing mechanisms.

## ➤ **KEY INITIATIVES SET IN NEP 2020 FOR STRENGTHENING DISTANCE AND ONLINE EDUCATION**

**1. Digital Literacy:** National Education Policy 2020 observes that the teachers involved in the virtual classrooms should be well taught and skillful. For this it cannot be assumed that each teacher may be well-versed in handling resources employed in online education. Thus, a teacher should have not only a reasonable knowledge of pedagogy of

online education but also be acquainted with the techniques of online assessment alike to regular education. In this regard NEP 2020 promotes rigorous training for teachers as content creators.

**2. Contributing Agencies for Online Education:** The Ministry of Higher Education has identified some agencies, such as the IGNOU, IITs, NITs, etc. to come out with how the traditional education can be tuned with online education simultaneously, addressing its pitfalls as well. These agencies will research the impact of online devices on mental health of students and student centric styles of designing e-content. This research will be ideal for continuous improvement in the field of Online Education.

**3. Fight to meeting the digital gap:** It is found that majority of Indians are deprived of digital access. Therefore NEP 2020 highlights the optimum utilization of the mediums such as television, radio, and community radios for telecast broadcasts. In the light of growing number of students these such educational programs will be made available 24/7 in different languages.

**4. Content formation, digital reserve, and spreading:**

Student-friendly resources, such as apps, gamification of Indian art and culture, in many languages, with clear operation instructions, will also be developed for fun-based learning.

➤ **CONCLUSION**

Technology use and integration is the goal of NEP 2020, which aims to provide students a route towards making India a globally competitive knowledge economy and a society that is empowered by technology. ICT integrated Distance and Online education also makes education available to those living in rural sections of the nation. It can be concluded that Distance and Online education increased extensively after covid-19 pandemic is expanding very rapidly and has become the need of an hour. In this regard, the role of National Education Policy 2020 serves as a roadmap on which the journey of Distance and Online education in India seems secure and reliable. Thus, well organized and delivered Distance and Online education can fulfil the four targets of National Education Policy 2020 i.e., Access, Equity, Quality, and Affordability.

**REFERENCES**

Naved Mohd, Nayyar Anand, Advances in Distance Learning in Times of Pandemic. London: Chapman & Hall/CRC Press, 2023. Print

Mandal Keshab Chandra, National Education Policy 2020: The Key to Development in India. Chennai: Notion Press, 2022. Print

Goel Aruna, Goel S. L, Distance Education in the 21st Century. New Delhi: Deep & Deep Publications, 2002. Print