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CONTENTS

CONTENTS

1. Appreciated Teaching Strategies and Attention Span for Theory Paper in Commerce Education

Dr. Daman Deep Kaur Gulati
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Abstract

The national Education Policy 2020 has laid emphasis on developing augmented environment for learning. The learning should lead to the development of competencies in the students. The course learning outcomes are achieved by transacting the content in a methodical manner. The teaching strategies play a vital role in disseminating the information to the students. At higher education level, there are different teaching strategies to teach a subject. In this research paper, an effort has been made to know the appreciatedteaching strategies for theory paper in commerce education and attention span of students in the class. The descriptive research method was used to conduct the study. The opinions of 60 students who were taught a theoretical paper Business Organisation and Management by using interesting teaching strategies for the period of three months was collected by preparing a questionnaire. The results reflected that studentappreciated the LUP teaching strategy over the other strategies and 80% students agreed that their attention span is between 30 to 40 minutes in the class.

Keywords: students, teaching strategies, attention span, theory paper, Commerce education.

Introduction

Lawton defined that the teaching strategy is a comprehensive plan for a lesson. It includesaims of instructions and an outline of planned ways to implement the strategy Sarode (2018).Teaching strategies are the ways to deliver the content to the students. A teacher can choose and redesign the strategies to meet the needs of the students. In commerce stream the task of teaching a theory paper is challenging. A deliberate thought process is involved in choosing the right strategy. The first step for teaching a subject is to make students ready and aware about the importance of the subject. Readiness to learn will help in achieving the aims of instructions. Students will be eager to know about the new concepts and understand the practical implications.

There is no one best strategy to teach the whole curriculum. But the whole curriculum can be taught by using the variety of teaching strategies. A passionate teacher makes a topic lively and interesting by introducing the right strategy.Lecturers should use innovative methods so that the students' learning process remainsunrestrained. Theadopted methodology should also be conducive to learning. Innovative teaching and learning methodologies such as short lecture, simulation, role-playing, portfolio development and problem-based learning (PBL) are very useful in addressing the rapid technological advances and developing workplaces that will be required in the likely future (Nicolaides, 2012).In the higher education, lecturing is the commonly used method but new teaching strategies helped in improving student'sretention (Oliver &Utermohlen, 1995).(Seechaliao, 2017) found that instructional strategies using questions, classroom discussion, self-directed study, inductive and deductive thinking, media or social media make students engage in learning activities and create innovation in learning.Puranik (2020) reported that application of innovative methods of teaching and learning like role playing, flipped classroom, multimedia tools and active learning has resulted significantly in the student performance also found that there is an improvement in the classroom attendance.Berk (2009) emphasizes the use of multimedia and video to enhance learning in the college. The authors universally believe that attention span of students is 10 to 15 minutes in the class. Bradbury (2016) believed that if a teacher presents the content with passion and uses rich experience in the class the attention span may vary in the students. In this research paper an attempt has been made to use the different teaching strategies of LUP (Listen, Understand & Pin down),Case Study based discussion, ME, WE & SHARE ,Videos based discussion and Explore and Express to know the appreciated strategies among the graduate students for a theory paper. It is also a known fact that aims of instructions are achievable if students pay attention in the class. The span of attention helps in gaining the information in the class. The researcher also made an effort to know the attention span of students during the classes.

Objectives

The Objectives Framed for the Research Paper are as Follows

- To know the appreciated teaching strategies for a theory paper.
- To know the attention span of students.

Research Methodology

The descriptive research method is used to know the opinions of the students.The sample of the study was 60 students doing Bachelor of Commerce from private college in Bhopal. The questionnaire was prepared to find out the opinions of students for the teaching strategies used for a theory paper. Thedata was collected through Google Form. The students were taught different topics with the different teaching strategies for three months for the theory paper- Business Organisation and Management.

Result & Discussion

The teaching strategies were practiced by the teacher as per the need of the topic. During the teaching learning process students were instructed to smile and remain relaxed. So, students remain curious in a congenial environment. Gaining knowledge becomes an interesting experience.Students were also self-encouraged to self-analyse and give an intrinsic reward like - 'give a star to yourself' and 'pat on your back' on either thinking or answering correctly.

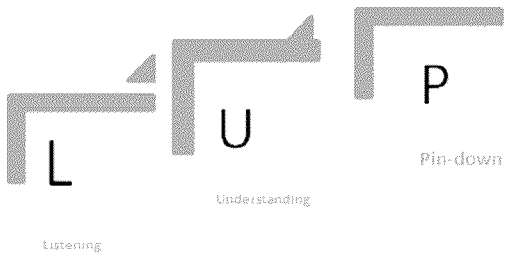

Fig 1: LUP-Teaching Strategy

This teaching strategy is used to understand a topic in the class.95% students agreed that they appreciate the teaching strategy of – Listening, Understanding and Pin down. Here listening implies use of sensory organ ears to gain the information. The first stage demands high level of concentration. At this point students are aware about the learning outcomes of topic. So, they are motivated to gain new information. The Understanding involves the cognition function where learner after receiving the information comprehend the information. Pin-down implies taking the required information pertaining to the topic. Students benefit by adding new information to the already existing ones in the brain. As students are already familiar with various topic like sole proprietorship, partnership, company, etc. They have some information about the familiar topics. At college level they get additional information. They were instructed to take the new information related to the topic. Firstly, they try to correlate the new information with the already

existing information and then they assimilate the information in the brain.Prince et al., 2007 also claimed that the essential motive of teachers is to develop new concepts and increase research proficiency for the advancement of knowledge.

87% agreed that they appreciate the teaching strategy of watching videos and then doing discussions based on the videos. The videos which were shown were based on the curriculum. The topic was not disclosed in the beginning. The students were posed with some questions to disclose the topic.Ahmod and Zhang (2021) suggested that the method of discussion enhances students' ability to think critically and also help in intellectual growth, expression and development of knowledge.

90% appreciated the teaching strategy of reading a case study and answering questions based on it. The reading of case study involves 20 minutes and the discussion on questions involves 20 minutes.Case study engages the students with the topic and its application in the real-life situation. It also develops problem solving ability among students. They can apply the learnt concept in the newer situations. The questions should be framed appropriately to encourage students to think, critically analyse and give responses (Marangell 2021).Case study also helped the students to understand complicated issues and describe interconnected procedures. Students engage in educational and engrossed classroom discussion. It was an effective way to enhance student learning (Kunselmanand Johnson2010).

82% appreciated the teaching strategy Explore and Express. It involves exploring content on the internet and presenting it in the classroom. The students are divided in the small groups. Each group can have 4 to 5 students. The exploring time is for 15 minutes, assimilation of information in the group is for 10 minutes and presentation for 5 minutes. They can choose a group leader for doing the presentation. This is basically inspiring the students to gather information by researching on the internet. For instance, the information about the different public companies is readily available on the internet. Students get the right direction to use the internet for the constructive purpose.They assimilate the information and express it in the class.

90% students appreciated that they like the teaching strategy of 10 minutes time to think yourself (ME TIME)10 minutes time to discuss with the partners(WE TIME) and then 5 minutes to share in the class (SHARE TIME). They enjoy the cooperative learning approach. As students are going to work in the various business organisations, they should know how important is to

work with others in harmony and keep views in the public. The cooperative learning approach help the students to outperform in the financial accounting(Inuwa et al 2017)

Fig2: ME, WE & SHARE -Teaching Strategy

Table 1. Preference of Teaching Strategies

Name of the Teaching Strategy	Order of Preference	%
LUP (Listen, Understand&Pin down)	First	95
Case Study based discussion	Second	90
ME, WE & SHARE	Second	90
Videos based discussion	Third	87
Explore and Express	Fourth	82

Students also shared that when teacher uses these interesting teaching strategies, they are able to participate in the class for longer duration of time.80% students agreed that their attention span is between 30minutes to 40 minutes in the class. 11% agreed that their attention span is 20minutes to 30 minutes in the class .9 % students have their attention span between 10 minutes to 20 minutes.

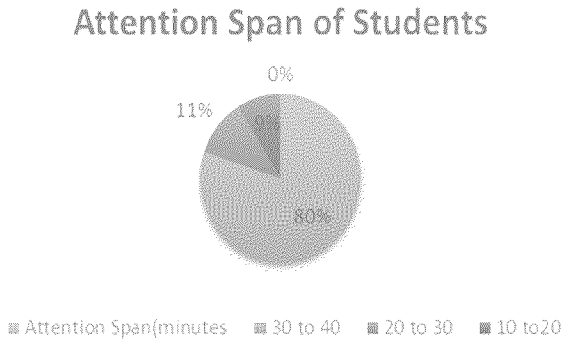

Fig3: Attention Span of Students

Implications of Research

The teachers in the higher education can use these strategies and increase the involvement of students in the teaching learning process. The conventional approaches can be modified for attaining the educational goals.

Conclusion

The John Dewey said, "Education is a social process, education is growth, education is not preparation for life, education is life itself."The right strategy is successful in creating an interest among the students and they can concentrate for a longer period of time. A theory paper can also be taught in an effective manner by using variety of teaching strategies. A perfect classroom gives space to students to participate, explore, discuss, expressand progress. It is essential to arouse the curiosity for the topics by utilizing appropriate teaching strategies. This research can be further carried on a large sample to see the effectiveness of teaching strategies.

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2. Inclusive and Equitable Education for Disadvantaged Groups: A Necessity

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Abstract

For progress of a nation, education plays a vital role and for that an advanced and visionary education policy is required. Due to the difference in culture, traditions and customs, different country adopts different education policy. After thirty four years, national education policy NEP (2020) came into existence by replacing national education policy NEP (1986).The policy is extensive from primary to higher education and also for vocational education. NEP (2020) attempts to settle down the problem of exclusion and inequity. NEP (2020) somehow admits the problem faced by disadvantaged groups which includes gendered categories, minorities and children with special needs. There is no doubt that the policy proposed many innovative ideas but still it is unable to address the issue of inclusion and equity. Modern India has had a strong focus on technology in education, realizing that it is a key element for development of the country.NEP-2020 lays particular emphasis on the development goals of sustainable development goals (SDGs) to make sure inclusive and equitable quality education. But still our country is lacking in providing accessibility of technology to all users. There are so many groups such as women, Divyang students, transgender community which are under represented by NEP, 2020. These groups should come in light so that propaganda of inclusive and equitable quality education can be achieved. The gap between what we have achieved and yet to be achieved in providing inclusive and equitable education must be bridged through development of various technological and pedagogical softwares in regional language and will be accessible to a wide range of users including disadvantaged groups.

Keywords: NEP (2020), inclusion, equity, women, transgender, divyang, technology.

Introduction

Inclusion and equity can potentially improve the quality of education for all young generation within a national education system. According to Venkateshwarlu (2021), the

classroom where all students irrespective of their gender, physical and mental abilities, socio-economic status, and culture are valued equally is called inclusive classroom. It is possible only through diversified strategies, methods and material according to the need. Equity means providing special support according to individual needs. The main aim of equitable teaching is to make sure that equitable learning opportunities are provided according to the need of individual. The classroom where each and every student feels valued and supported and has equal learning opportunities is an equitable and inclusive classroom. The policy is designed accordingly to the needs of the 21st-century society.

According to the Census 2011, literacy of women, scheduled caste and Muslims has risen to 65.5percent, 66 percent and 68.5 percent respectively. As it is a remarkable improvement but still our education system is fighting against the challenges of exclusion and inequity. Still there is a disadvantaged and neglected group of whom getting a qualitative education is still a dream. The NEP 2020 also recognizes high dropout rates among these groups.

Socio-Economically Disadvantaged Groups (SEDGs)

National Education Policy (2020) created a group called socio-economic disadvantaged group (SEDGs) which includes socio-economic conditions, geographical status, physical and mental disabilities, gender identities. The policy recognized that there are some groups which are not represented in our education system. It recognizes that these groups have higher dropouts due to various reasons like unviability of resources. India has had a strong focus on technology in education, realizing that it is a key element for development of the country.NEP-2020 lays particular emphasis on the development goals of sustainable development goals (SDGs) to make sure inclusive and equitable quality education. But still our country is lacking in providing accessibility of technology to all users. There are so many groups such as women, Divyang students, transgender community which are under represented by NEP (2020).

Recognition of Gendered Identities

As per latest CBSE press release from 1,889,878 candidates in class 10, only 19 were transgender 7, 88,195 were girls. In Class 12, from 1,206,893 candidates, 5, 22,819 were girls and only six are transgender. This wide gap between numbers clearly shows the situation of women and transgender community. The NEP 2020 recognized that transgender and female groups are the worst affected categories. NCERT had put a manual 'Inclusion of Transgender Children in School Education: Concerns and Roadmap' to aware teachers for strategies to

include transgender in mainstream education. But still the new education policy does not have any plan to increase the enrollment of these Disadvantaged groups. And also there is no plans of making others accept them in mainstream education once they enrolled. Until these disadvantaged groups are not included in mainstream education till then aim of inclusion and equity cannot be poosible and will become just a dream.

Recognition of Individuals with Special Needs

National Education policy NEP (2020) aims to include special need student in mainstream education system. To fulfill the requirement of these children and making teaching effective and inclusive, special educators will be recruited. The option of homeschool is also there for helping in providing qualitative education to children with benchmark disability. It will help them in learning and getting best educational facilities.

But new education policy fails in recognizing the poor availability of special educators. Majority of schools are unstaffed and teachers are untrained in both technology and pedagogy. There is no guideline in NEP 2020 of how these individuals will be made accessible to technogies due to lower infrastructure of our education system. There is no specification of proper curriculum regarding the individual with special needs so that they feel valued, supported and included in this competitive world.

As ICT growth in world is at peak but our India in internet access is still at 40%.According to the 'Mobile Internet Report' (2017) out of 566 million Internet users in India, only 200 million are from rural area. National Sample Survey on Education, (2017-18) also found out that between 5 and 24 years of age, only 8 percent of all Indian have access to both computer and internet. According to the Telecom Regulatory Authority of India ("TRAI"), in 2019,over 1.3 billion people of India are those who do not have Internet subscription.

According to S. Vijaya & M. Kirti (2020) to make India digitally literate, 3.5 million people must be made digitally educated, the availability of resources is not enough when people are not aware of the mastery and skills to access them. NEP 2020 does not have a proper roadmap to increase digitalization through digital literacy to use various technologies efficiently. These issues should come in light otherwise digitalization of education remains a dream for our nation.

One of the main issues of NEP 2020 is lack of teacher and institutional autonomy to make innovations in Higher Education to attract many students. The lack of research and innovations at most of the universities and colleges is another issue.

Conclusion

There is no doubt that NEP 2020 recognized the usage of advantage of technology for our future generation. But developing a digital infrastructure like digital laboratory, digital classroom is still a great challenge. Availability of accessibility of technology in each and every corner of nation is still a very long term procedure. Recognition of disadvantaged groups such as women, transgender, divyang students and providing inclusive and equitable education through digitalization is still a long term procedure.

NEP 2020 surly categorizes disadvantaged groups but still some groups are underrepresented such as transgender community, women which should come in light so that propaganda of inclusion and equity is possible. Moreover, in rural areas of India where the Internet connectivity is almost absent, digitalization is a very comprehensive. Hence, the government should work on improving the basic infrastructure that will support the digital infrastructure in all areas so that aim of inclusion and equity come into progress. In short the roadmap proposed to promote equiy and inclusion is still a long term procedure.

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3. An Overreaching Vision for Strengthening Multidisciplinary and Holistic Education in India: National Education Policy-2020

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Abstract

The National Education Policy (NEP) is a policy prepared by the government to foster education amongst the citizens of India. The policy envelopes elementary education to college in both urban and rural parts of India (Mehta, S. 2022). Well defined and futuristic education policy is essential for a country at school and college levels due to the reason that education leads to economic and social progress. Different countries adopt different education systems by considering the tradition and culture and adopt different stages during their life cycle at school and college education levels to make it effective (Aithal,S.2020). The recently released National Education Policy lays out an encouragingly hopeful vision for the future if successive governments can stay true to it. After long deliberation and two committees since 2014, the New Education Policy was released by the Ministry of Human Resource & Development (MHRD) on 31st July 2020. The primary focus of the new education policy is to bring forward major changes in the school and the higher education. This paper will discuss the various changes from school to college level by introduction of National Education Policy 2020. This paper will also focus upon benefits of NEP-2020 as a new model of teaching and learning.

Key words: NEP-2020, Multidisciplinary and Holistic Education, Quality Education

Introduction

The National Education Policy is a radical framework that assists the overall development of the education system of the country. The latest policy has replaced the 34-year-old NEP implemented in 1986. Recently, the Union Cabinet has approved the **new National Education Policy (NEP), 2020** with an aim to introduce several changes in the Indian education system - **from the school to college level.** This policy aims at making **"India a global**

knowledge superpower" and only the third major revamp of the framework of education in India since independence. The quality of human capital is the touchstone of education in any country. A well-educated generation with a high literacy rate is equipped to undertake social, economic, and political roles responsibly with an overarching awareness of the global issues. Such is the vision embedded in the NEP 2020, which, when fully implemented, promises to make education holistic and a lot more rewarding. Multidisciplinary Education in Ancient India has a long tradition of holistic and multidisciplinary learning, from universities such as Takshashila and Nalanda, to the extensive literatures of India combining subjects across fields. Holistic and multidisciplinary education would aim to develop all capacities of human beings - intellectual, aesthetic, social, physical, emotional, and moral in an integrated manner. Such an education will help develop well - rounded individuals that possess critical 21st century capacities in fields across the arts, humanities, languages, sciences, social sciences, and professional, technical, and vocational fields; an ethic of social engagement; soft skills, such as communication, discussion and debate; and rigorous specialization in a chosen field or fields. Such a holistic education shall be, in the long term, the approach of all undergraduate programmes, including those in professional, technical, and vocational disciplines (Gouda, P. & Sab, I. 2021).

As we emerge from the coronavirus pandemic, it is important to clearly understand the potential of evolution in Indian education as a result of these three forces: NEP and the accompanying new platforms and techniques of teaching and learning. As the key challenges in the education sector are *Accessibility, Affordability, and Quality,* it is also important to discuss basic changes take place from school to college level due to introduction of NEP-2020.

School Education

The government has replaced the 34-year-old National Policy on Education, framed in 1986, with the National Education Policy of 2020. The NEP 2020 has introduced several reforms in school education. Here are major reforms for students, teachers and schools.

- **Universalization of Education**: From **preschool to secondary level** with **100% Gross Enrolment Ratio (GER)** in school education by **2030.** Anganwadis and pre-schools will have teachers and Anganwadi workers trained in the ECCE pedagogy and curriculum. It will also have 12 years of schooling with three years of Anganwadi/ pre schooling.

- **Open Schooling System:** To bring 2 crore out of school children back into the mainstream through an **open schooling system.**
- **Curricular and teaching structure:** The current **10+2 system** to be **replaced** by a new **5+3+3+4** curricular structure corresponding to **ages 3-8, 8-11, 11-14, and 14-18 years respectively** keeping in mind a child's development and capabilities.
- **Schooling will Start at the Age of 3 years:** Earlier, schooling was mandatory for children between the age of 6 and 14 years. However, under the National Education Policy (NEP 2020), education will be compulsory for children between the age of 3 and 18 years**Easy Examination system:** Board exams for Grades 10 and 12 will be "redesigned" and a new National Assessment Centre, Parakh (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), will be set up as a standard-setting body**.** Assessment reforms with **360 degree Holistic Progress Card,** tracking Student Progress for achieving Learning Outcomes
- **Independent School Governance: School governance** is set to change, with a **new accreditation framework and an independent authority** to regulate both public and private schools.
- **Emphasis on Attaining Foundational Literacy and Numeracy:** A National Mission on Foundational Literacy and Numeracy will be set up by the education ministry. By 2025, states will prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools for all students by grade 3.Students can select subjects of their liking across streams.
- **Internships and Vocational Education from Class 6:** The NEP 2020 states that vocational education will start in schools from the 6th grade and will include internships.
- **Focus on Mother Tongue as Medium of Instruction**: The National Education Policy puts emphasis on a child's mother tongue as the medium of instruction. However, The NEP only recommends the mother tongue as a medium of instruction; it has not been made compulsory.
- **Revamping Teacher Education:** A new and comprehensive **National Curriculum Framework for Teacher Education (NCFTE) 2021,** will be formulated by the **National Council for Teacher Education (NCTE)** in consultation with **National**

Council of Educational Research and Training (NCERT). By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

Higher Education

NEP -2020 provides a new and forward-looking vision for India's higher education system. Followings are the major reforms in Higher Education System of India.

- **Raising Gross Enrolment Ratio and GDP**: The aim will be to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035. Also,**3.5 crore seats** to be added in higher education. The **current** Gross Enrolment Ratio (GER) in higher education is **26.3%.** It also aims to **increase** the public investment in the Education sector to reach **6% of GDP** at the earliest.
- **Flexible Curriculum:** Holistic Undergraduate education with a flexible curriculum can be of **3 or 4 years with multiple exit options** and appropriate certification within this period. **M.Phil** courses will be **discontinued** and all the courses at undergraduate, postgraduate and PhD level will now be interdisciplinary.
- **Facilitate Transfer of credits: Academic Bank of Credits** to be established to facilitate Transfer of Credits. An Academic Bank of Credit (ABC) shall be established which would digitally store the academic credits earned from various recognized HEIs so that the degrees from an HEI can be awarded taking into account credits earned
- **Focus on holistic and Multidisciplinary Education: Multidisciplinary Education and Research Universities (MERUs),** at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country. By 2040, all higher education institutions (HEIs) shall aim to become multidisciplinary institutions, each of which will aim to have 3,000 or more students. There shall, by 2030, be at least one large multidisciplinary HEI in or near every district.
- **Strengthening Research Culture:** The **National Research Foundation** will be created as an **apex body** for fostering a strong research culture and building research capacity across higher education. The university will now allow a spectrum of institutions that range from those that place equal emphasis on teaching and research.
- **Governance of Higher Education Commission of India (HECI): HECI** will be set up as a **single umbrella body** for the entire higher education**, excluding medical and**

legal education. Public and private higher education institutions will be governed by the **same set of norms** for regulation, accreditation and academic standards.

- **Providing Autonomy to colleges: Affiliation of colleges** is to be **phased out in 15 years** and a stage-wise mechanism for granting graded autonomy to colleges, through a transparent system of graded accreditation, will be established. HEIs will have the autonomy and freedom to move gradually from one category to another, based on their plans, actions, and effectiveness.

NEP 2020: The Beginning of Change

NEP 2020, with its provisions of revamping the curriculum structure, assessment criteria and regulations, promises a brand-new approach to teaching and learning. There are some benefits of NEP-2020 as a new model of Teaching and Learning.

- The new 5+3+3+4 formula provides a strong underpinning with the first five years dedicated to foundational learning, followed by a regularly assessed academic growth through the preparatory, middle and secondary stages.
- **Holistic development for students of all grades will take place as** teaching and learning will be more interactive, exploratory, collaborative, and experiential.
- Students will enjoy far greater flexibility in choice of subjects, with no hard separation between the streams of arts, humanities, commerce and sciences.
- The proposal of a yearlong course in grade 6-8 in carpentry, electric work, gardening, pottery, metal work etc. will help in skill development.
- **It will improve student assessment** as exams to test literacy, numeracy, and foundational skills will be very important.
- The policy emphasizes Mixed Pedagogical Approach through E-Learning and Blended learning. Teachers will have to equip themselves with the digital knowhow to create synchronous and asynchronous lessons.
- The NEP has quoted the need for computational thinking at the foundational level, but does not conceptualize the integration of digital skills into the core curriculum.
- From the perspective of the demands of the digital economy, this policy could well be an inspired move.
- The NEP's focus on promoting multilingualism and reviving proficiency in local languages could help create a workforce to do just that.

Conclusion

National Education Policy aims to facilitate an **inclusive, participatory and holistic approach,** which takes into consideration field experiences, empirical research, stakeholder feedback, as well as lessons learned from best practices. It is a progressive shift towards a more scientific approach to education. The prescribed structure will help to cater the ability of the child – stages of cognitive development as well as social and physical awareness. If **implemented in its true vision,** the new structure can bring India at par with the leading countries of the world. The absence of digital skills has the potential to greatly exacerbate increasing inequalities. The NEP recognises the need for inclusivity and makes provisions for policy design to address existing disparities. However, it will need explicit sustained effort to ensure that India's digital transformation does not leave some of us behind (Jain,S. 2020). The Union Budget 2021-22 has already set the ball rolling with the announcement to qualitatively strengthen 15,000 schools across India to implement NEP. These shall serve as model schools for the others to follow. Going forward, the education sector must harness the forces of technology and pedagogy to further bolster the benefits accruing from NEP. That shall set Indian education on a rising curve of evolution.

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4. Interactive Distance Learning through Internet

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Abstract

Distance learning, e-learning, or online learning occurs when teachers and students are physically separated during education. Distance education has always focused on nontraditional students like full-time jobs, military members, and rural residents. Despite this, distance learning has become a viable alternative in higher education, with a promising future. Distance learning's goals: Expanding students' educational and employment opportunities, especially in higher education. To provide a low-cost, high-quality education, as well as opportunities for academic advancement for educated people. The internet has become increasingly entwined with people's lives. Internet usage by students in higher education presents both benefits and concerns. It also allowed them to exchange ideas and knowledge with those from various areas. Sharing personal learning experiences with other students can help students gain new perspectives on a topic. As a result, online education has a substantial impact on student satisfaction. Distance learning is now one of the hottest educational trends. Educators can use the Internet to improve student learning and contribute to their countries' economic and social well-being. Increasing access to information and acquiring new digital skills can help accomplish Education for All and other SDGs. In spite of increased productivity and positive behaviour due to time and space savings, instructional flaws must be addressed as soon as possible.

Keywords: Distance learning, Internet, Online learning, Active interaction, Education.

Introduction

Distance learning, e-learning, or online learning occurs when teachers and students are physically separated during education. Distance education has always focused on nontraditional students like full-time jobs, military members, and rural residents. According to the National Center for Education Statistics, more than 5.6 million college students took at least one online course in 2009. Increasingly, educational organisations offer online courses. The Institution of Phoenix, founded in 1976 in Arizona, became the world's largest private university in the first

decade of the twenty-first century. Many of its students still attend classes at one of its many locations in the US, Canada, and Puerto Rico. The enrolment at two of the world's largest public universities that mainly use distance learning isn't published, but Indira Gandhi National Open University in New Delhi and China Central Radio and TV University in Beijing have around 1.5 million student's each[3]. On-line education is gaining popularity among students and institutions alike. Students benefit from working when and where they want, while institutions save money on building classrooms and dormitories. Public schools can offer small-group language and Advanced Placement classes without adding classroom space. Homeschoolers can also receive centralised instruction. Online classes, correspondence courses, and hybrid courses are all available nowadays.

Administration of Distance Education in India

Today, distance education is one of the fastest-growing educational trends. Technology advancements in the field of distance education have greatly expedited its development. In the absence of time and space limits, a wide range of people, ranging in character and attitude, have been able to follow a variety of various programmes to suit a wide range of requirements. The provision of education and training around the world has seen some significant changes during the last few years. Distance learning has emerged as a major tool for delivering education to large numbers of people in today's knowledge-driven world economy due to significant educational reforms, including privatisation of educational resources and a progressive globalisation of educational institutions, which has resulted in greater collaboration and networking in the field of education. A wide range of challenges and concerns must be addressed by the administration of a dynamic distant education system. Included in this list are the system's mission and purpose in the context in which it operates, the programmes and curricula it offers students, the methods of instruction and learning it employs to accomplish these goals and more, as well as the infrastructure it has in place to facilitate communication and interaction with students. In the following sections of this unit, we will explore some of these concerns.

Active Interaction in Distance Learning

Many people are involved in the learning and teaching process at the same time. Two persons or things engaging in a reciprocal action or influence are known as an interaction. It has been researched from a variety of perspectives and ideas in pedagogy, with the emergence of online learning bringing a new dimension to them. To better understand how students and

teachers communicate online, we've outlined six sorts of interactions that occur in both learning and teaching environments.

1. Learner-Teacher

Teachers can help students better understand the course's contents, identify problems, and foster critical thinking through the learner-teacher relationship. He will change his teaching methods if it is necessary. For online training to be successful, it's critical that both the trainer and students feel at ease with their technical surroundings and the means of communication they use to communicate with one another online.

2. Learner-Learner

The learner-learner connection is becoming increasingly important as the popularity of active pedagogy (or experience learning) grows. Research shows that social interaction has a good effect on motivation, the sense of belonging to a group of peers, and on one's ability to perform at work. The learner-learner contact is especially valuable in online learning, since everyone spends most of their time alone in front of a computer screen. To their benefit, online training now provides features that can enhance student connection, whether it's for exchanging ideas, cooperating, launching initiatives or offering assistance to one another. These collaborative tools must be chosen in accordance with the nature of the work allocated to learners and matched with the desired learning objectives, according to Vanessa McCance, Knowledge One's content strategist. It is ideal for collaborative work because learners can cooperate and share information that will aid in the development of their own material via wikis. Students can use media sharing capabilities to share their completed projects, as well as comment on and even vote on the work of other learners. It's true that Twitter is an excellent tool for sparking conversations among students, but only if it's used in conjunction with other methods of instruction and is clearly tied into what's being taught.

3. Teacher-Teacher

The evolution of the profession as a whole depends on the interaction between teachers. Teachers, students, and others in the education profession must work together more than ever before in the digital revolution that is reshaping education. As a result, we have entered an era in which collaboration has become a core virtue. The new ways of communication also offer the advantage of eliminating borders and allowing exchange with a significantly bigger group at low cost and without needing to travel. They also make it possible to construct interactive activities

that are both unique and successful in stimulating collaboration and the development of team projects.

4. Learner-Content

We can refer to a "learner-content interaction" if the learners are actively engaged in the content or learning material and are able to absorb it. According to Turoff, Hiltz, and Balasubramanian (1994), the goals of this interaction are: forming degrees of agreement or disagreement with the material; seeking or reaching an understanding of the material; relating it to what one already knows (or doesn't know); realising confusions and lack of understandings that require further pursuit.

5.Teacher-Content

Teachers and content interact in traditional higher education in two ways: when they prepare a course and when they do research. To keep up with the rapid advancement of knowledge, today's teacher must keep abreast of the most recent findings in the field on a daily basis. As a teacher, he or she must help students navigate this sea of knowledge that is now at their fingertips, and help them develop critical thinking skills in the process. Teachers' efforts can now be seen well beyond the four walls of the classroom, thanks to the social Web 2.0 revolution and advancements in information and communication technologies. Students and faculty alike can gain insight about their teaching methods and subject selections when courses are made available online to a wider audience. As a result of online learning, the relationship between teacher and content is modified. Teachers and content now have a new point of contact: instructional designers, who are tasked with making traditional course content compatible with the unique features of eLearning.

6. Content-Content

Initially, it may appear to be an odd connection. The content-content interaction in learning is not only very real, but it is also a path to the future of education. It's explained in the article Adaptive Learning: The Future of Education Thanks to developments in intelligent adaptive learning thanks to advances in artificial intelligence (AI), research on adaptable hypermedia, and the rise of big data, tailored training is going into second gear. Online learning is now able to construct a personalised learning route for each learner based on his or her goals in real time. Each learner's needs are not limited to just the course's content, but also how it is presented and how it is navigated.

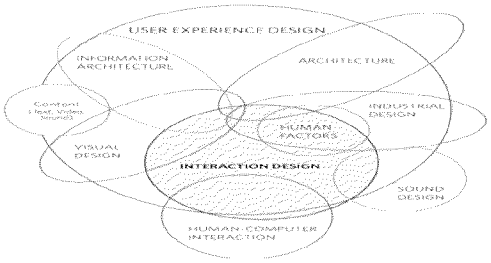

Fig 1: Interaction Design

Requirement of Internet in Face to Face Learning

The universality of life and face-to-face learning are the only ways to cultivate potential creativity. Face-to-face learning emphasises instructor and teacher education. The purpose of universities is to improve the quality of life for intellectually curious members of society by increasing the effect of study and research. The internet is continually redefining new concepts and theories that differ from other traditional training venues in terms of teaching material qualification. Ensuring management, employer, consultant, and student participation in annual social and cultural programmes can be easily documented. In a distance learning system, quality-oriented interaction is as follows:

- Improving academic quality in management and observation at the highest level.
- Providing students and external partners with feedback.
- New breakthroughs and academic integration in the sphere of distance learning.
- Creating an e-learning quality culture and integrating a quality distance education system.

Conclusion and Evaluation

Educators can use the Internet to improve student learning and contribute to their countries' economic and social well-being. Increasing access to information and acquiring new digital skills can help accomplish Education for All and other SDGs. In spite of increased productivity and positive behaviour due to time and space savings, instructional flaws must be addressed as soon as possible. Interconnected internet substructures and a visually appealing model structure are the underpinnings for student involvement in lessons. Cyber courses in the remote learning system can promote coeducation and the combination of face-to-face education options. Observing the system's interactions with users, their emotions, remarks, and difficulties can provide a sense of support from a continual system. Questions about participants' instructions, information, and technology must be answered swiftly. To define the system,

principles, standards, and multi-attendance certification must be developed. Despite being off-campus, a distance learning system may have similarities to traditional on-campus education. Face-to-face education integration, which will be delivered in distance learning systems at 50%, is also being studied. To enhance educational systems and web-based e-learning, the following proposals are essential in today's internet-based world.

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5. Reimagining Vocational Education in India: Challenges and Suggestions

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Abstract

Technical and vocational education is very essential in the economic and social context of a country. Skill development among the youth of India has been a major policy agenda of the Indian Government in the past decades. Vocational education is an integral part of skill development. In India, perception about vocational education must be changed and raised. The young citizen of the country should have right skills for the job market. It is urgent need to recognise new opportunities and prepare the young workforce according to the labour market needs.

Introduction

The New Education Policy 2020 proposes major and necessary improvements to our educational system. The policy has a learner-centred approach, with a focus on experiential and lifelong learning, vocational education, and higher education institution change. The policy focuses on the holistic development of youth, emphasising not just an increase in the Gross Enrolment Ratio, but also skill development as a decisive factor in achieving the goals of 'Atmanirbhar Bharat', the government of India's ambitious ambition to make the Indian young skilled, and employable, by emulating the skill-based model of education envisioned by the Indian government (self-reliant).

According to (Mehrotra, Raman, Kumra, & Röb, 2014), India has one of the lowest proportions of trained young in the world. Worse, since the mid-1980s, vocational education in secondary schools has received very little financing, remained non-aspirational, of poor quality, and with little industry involvement. (Chenoy, Ghosh, & Shukla, 2019) outlined India's current position on how the country is working to create a coherent environment for 'new-age' manufacturing and 'future ready' personnel.

The workforce is rapidly expanding. India's employment grew from 477.9 million in 2011 to 502.4 million in 2017. According to the 12th Plan, 85 per cent of the workforce has a

secondary education, 55 per cent has a primary education, and only 2% of the workforce has vocational training. According to 2014 data, 2.8 lakh apprentices were trained out of 4.9 lakh seats available for apprenticeship. However, by 2022, 109 million additional skilled workers would be needed in 24 essential industries for the growing economy.

Historical Background of Vocational Education in India

Following independence, India's initial focus was on developing a formal industry with specialised and vocational institutes to meet manufacturing demands, particularly in the engineering crafts. The Ministry of Labour and Employment established the first Industrial Training Institutes (ITI) in 1969. Following independence, India's Vocational Education and skill training programmes began. For vocational education and training, the Central Staff Training & Research Institute (CSTARI) was founded in Kolkata. The All India Council of Technical Education (AICTE) Act 1986 established the All India Council of Technical Education (AICTE) as an advisory body, regulator, and founder for technical institutes in 1987. The Pandit Sunderlal Sharma Central Institute of Vocational Education was founded in 1993 by the National Council of Educational Research and Training (NCERT) (PSSCIVE), a nodal body of CSTRAI for vocational education in the school sector.

The National Skill Development Corporation (NSDC) and the National Qualification Framework (NQF) were formed to develop a uniform competency-based training system. State Skill Development Missions (SSDM), the Skill Development Initiative Modular Employability (SDI MES), and other projects focused on short-term training and placement schemes. A new ministry for Skill Development and Entrepreneurship (MSDE) was established in 2014 to support the sector's growth and development. The National Skills Qualification Framework (NSQF) was then implemented by the National Skill Development Agency in all sectors, including schools, TVET, higher education, and short-term skill-based programmes (NSDA). The skill India programme, which includes the National Skill Development Mission, the National Policy for Skill Development and Entrepreneurship, and the Skill Loan Scheme, was established in 2015 with the goal of training over 400 million people in various skills by the year 2022.

Higher Education and Graduates

In the approaching decade of 2030, India is predicted to account for a third of the world's working-age population (aged 15 to 55). More than 54% of the population is under the age of 25,

and the average age of the population in India is expected to be 29 years, compared to 40 years in the United States, 46 years in Europe, and 47 years in Japan. (Agrawal, 2012) came to the conclusion that skill development has been a major policy priority for the Indian government in recent years.

(Kaushik, 2014)discussed the scope, problem areas, and government involvement in vocational education implementation, concluding that vocational education is centred on occupation and employment, and that having a robust vocational education system is a must for any country. It can be characterised as a type of education that focuses on a specific ability. Economic growth is aided by vocational education. (Magaji, 2015) concentrated on the significance of vocational and technical education in boosting the national economy and addressing curriculum challenges for long-term growth.

Problem Areas in Present Vocational Education and Training System

The primary problems as well as the prospects for continued development of the sector are underlined from several systemic viewpoints, according to (Pilz & Regel, 2021). The main pillars of the Indian VET system are discussed in this article, as well as policies and initiatives to restructure and upgrade formal VET in India. (Wulandari, Trisnawati, Suratman, & Narmaditya, 2020) stated that existing differences can be leveraged to improve education quality, particularly teacher abilities in executing effective learning processes.

(Maryanti, Bayu, & Nandiyanto, 2021) found that science education is covered in practically all vocational programmes at vocational schools. In India, approximately 220 million children go to school but there is a high dropout rate at secondary level of schooling. Out of 220 million students only 12% reach higher education. India perform deficit in secondary education.

- In higher education, enrolment in vocational education is very low with only 3%.
- In India, Private and industry participation is lacking. There is no incentive for private participation to enter in the field of vocational education.
- For vocational education, there is a lack of experienced and qualified teachers in schools.
- Vocationalisation in education is not in line with industry needs.
- There is a dearth of participation from the private sector and industry. Private players do not have any incentives to enter the market of vocational education.

- There is a scarcity of experienced and competent teachers to teach occupational skills to students. However, there are no official qualifications for Vocational Education teachers in India.

Challenges of Vocational Education in India

There are various economic, political and social factors which create challenges and difficulties in Vocational Education system in India.

- In India Vocational Education suffers from a negative social perception which leads to low enrolment in such courses.
- Vocational programmes in India are perceived as low- status manual work and low-paying jobs as a whole.
- In rural areas, vocational education institutes are considered as second class education for youth.
- Vocational Education is considered as an education system for poor and backward section of the society.
- Students prefer to continue higher education rather than entering a vocational education. In many cases, employer assumes that it is good to recruit from a non-vocational stream.
- Employers do not find suitable skills among professionals with vocational degrees.

Suggestions for Vocational Education

- Perception about Vocational Education should be changed for better outcomes.
- Positive perception towards Vocational Education can change the scenario of employability in urban and rural areas in the country.
- Providing career guidance to students of schools and higher education may help them to shape their education and surety of employability.
- To attract investment from private sector, there should be linking between CSR and Skill India movement
- Special support, recognition and intensives can be provided to educational institutes which are interested to start vocational courses and training programmes.
- In school education, as per NEP-2020, skill components should be included in the curriculum. New emerging areas of vocations can be included in the school curriculum.

- For each and every vocational course, training component should be integrated in school curriculum to provide students the opportunity to search job after schooling.
- While designing a vocational course, experts from academicians, research, industries and corporates should be involved.
- The government should provide funding and incentives to innovations in vocational areas.
- Skill based education should be part of school education and higher education.
- Analytical learning should be incorporated to these vocational courses.
- Provide financial incentives to participants, enterprises and training providers.
- Improving the quality of training by developing a stronger curriculum, hiring more highly qualified trainers, and implementing a "dual" approach to instruction throughout the apprenticeship.
- The University should place a strong emphasis on teacher education. In order to enhance teaching resources and a research component, the Vocational University should create a distinct department for Teachers Training and Development.
- Representatives from the industry will be involved in governance and curriculum development.
- Life coping skills and general educational abilities, such as liberal arts subjects, English proficiency, entrepreneur skills, problem solving, teamwork, leadership, and management courses, will be emphasised in the vocational university curriculum.
- A distinct teaching-learning pedagogy will be emphasised at Vocational University, with a strong emphasis on skill-based and hands-on learning and training.

Conclusion

The National Education Policy 2020 is a revolutionary document since it has the goal of making young self-sufficient through skill-based education. According to (Uemura & Comini, 2022), it is expected to assist school administrators and instructors in their pursuit for high-quality education, whether vocational or basic. To instil the strategy and spirit of the NEP, on-going skilling projects would need to be turned around and altered accordingly. This would assure the development of a robust human capital foundation capable of serving the nation's goal of self-sufficiency. (Uemura & Comini, 2022) stated that It is anticipated to assist school administrators and instructors in their pursuit for quality education, whether vocational or normal

basic education. (Bouwmans, Runhaar, Wesselink, & Mulder, 2019) stated that team leaders and teachers played a central role in establishing distributed leadership in teams in vocational education and training (VET) schools The NEP, 2020 policy has established a goal of teaching vocational skills to at least 50% of students by 2025, with the intention that the vocational skills obtained in school can be extended up to higher education level, depending on the needs of individual students.

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6. ICT and the Five Pillars of NEP 2020

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Abstract

NEP 2020 envisions an educational system that will usher an equitable and vibrant knowledge society, by providing high-quality education to all. The Policy rests on the five pillars of accessibility, equity, affordability, accountability and quality. Information and Communication Technology (ICT) plays a vital role in augmenting all efforts to strengthen these pillars. This paper examines the role of ICT in assuring education that will leverage India into a vibrant, knowledge society.

Key words: NEP 2020, ICT, disruptive technologies

Introduction

National Education Policy(NEP) 2020 provides guidelines to transform India's educational landscape. With an emphasis in making education skill centric, accessible and equitable, the Policy draws inspiration from India's rich educational tradition and also stresses on contemporary ideas like Artificial Intelligence, Data Science and Robotics. The five pillars of the Policy viz accessibility, equity, affordability, accountability and quality make the policy consistent to the needs of the Indian society and provide a vision to curriculum designers, educational administrators and teachers. The UN Sustainable Development Goal 4 of Quality Education reiterates that 'Achieving inclusive and quality education for all reaffirms the belief that education is one of the most powerful and proven vehicles for sustainable development'. This goal further hopes to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship by 2030. It stresses on the need to have inclusive and effective learning environments for all. The SDG Goal 4 focuses on sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development. It also emphasizes adequate teacher training. If one analyses the NEP 2020, one can find many parallels between UN SDG 4 and NEP 2020. The pertinent question is 'How can education be redesigned to transform India into a knowledge society and be an active

contributor to the UN Sustainable Development Goals?' Effective use of ICT is an important key to provide solutions to this question.

ICT and the Five Pillars of NEP 2020

As mentioned earlier, the NEP 2020 rests on the five pillars of accessibility, equity, affordability, accountability and quality. The role of ICT in reinforcing these pillars is discussed below

1. ICT and Access to Education

Repositories like DIKSHA (Digital Infrastructure for Knowledge Sharing) offers access to learning resources, lessons plans, evaluation tools and digital textbooks in more than 18 languages. QR codes in textbooks are also an effective way to offer enriched learning experiences. Teachers can create learning resources and embed the QR code in a digital classroom, on the institutional website or on printouts displayed in the library thus helping students to quickly access a resource. Massive Open Online Courses (MOOCs) on platforms like SWAYAM or MOOCs created by teachers and hosted by the institution on sites like canvas.instructure can help to provide 24 x7 access to learning material.

2. ICT and Equity in Education

Equity in an educational landscape is to provide right amount of scaffolding or assistance to learners who may be at a disadvantage due to some reasons. In India, we find lot of diversity in languages and cultural background. While this diversity is actually an asset, we also find that if the medium of instruction is different from one's home language it may be an impediment in learning. ICT tools like Presentation Translator allow the learner to view a presentation in his/her chosen language. ICT can provide multilingual resources and help bring equity in education. Captioning devices, Braille writers, E Readers, Speech to text conversion tools, interactive white boards and embedding formative assessment in presentations using platforms like Nearpod can help learners facing impediments.

3. ICT and Quality in Education

The hallmark of any educational endeavour is its quality. Quality education focuses on knowledge, skills and attitudes and helps learners to grow personally, socially and professionally. Quality education must focus on 21st century skills like communication, critical thinking, collaboration and creativity. ICT is a big boon in providing quality education. Teachers can incorporate multimodal learning and include cross disciplinary experiences that compel learners to think beyond rigid syllabi. By exposing students to enriched content as per their capacity, one can provide quality constructivist education making learners responsible for their own learning. Faculty can also use ICT for Continuous Professional Development. ICT provides

many opportunities to collaborate with fellow faculty and learn from exchange of best practices. The Draft of the National Professional Standards for Teachers has provided a roadmap to traverse from Beginner Teacher (Pragammi shikshak) to Proficient Teacher (Praveen shikshak) to Expert Teacher (Kushal Shikshak) to Lead Teacher (Pramukh shikshak). This journey will be made easy by use of ICT. Quality education will help to shift one's perspectives, analyse the situation and take effective decisions.

4. ICT and Affordability

Skilling, reskilling and up skilling are the watchwords for 21st century education. One needs to be equipped to adapt to a rapidly changing world. Education will help this endeavour but the question about the cost factor will always be present. ICT provides a solution by leading us to the world of Open Education Resources (OERs) which includes textbooks, learning resources, podcasts and courses. The five Rs of OERs viz Retain, Reuse, Revise, Remix and Redistribute. An open resource helps the user to gain knowledge and skills and if such a resource is further revised by another person it enriches the original creator as well. Many a time, we find educational institutions find it difficult to afford state-of-the-art laboratories. ICT brings the laboratory to our screen through virtual laboratories. Organising a tour to a place of historical interest may seem a costly affair. ICT makes it very affordable through virtual tours. Thus the world of simulation, Augmented Reality and Virtual Reality open new vistas in affordable education.

5. ICT and Accountability in Education

ICT holds great potential to ensure transparency in governance by providing seamless integration across different departments. E Kranti which is one of the nine pillars of Digital India aims at providing broadband connectivity to schools to help the sharing of resources. Initiatives such as the Academic Bank of Credits is another step in offering multiple options to students in the course of their learning journey. Tasks such as credit accumulation, credit verification, credit transfer/redemption of students will be handled through the Academic Bank of Credits.

Cross disciplinary learning is expected to increase due to this and students can chart their own learning journey and become skill oriented graduates.

ICT in Education: The Road Ahead

Today words like Blockchain, Artificial Intelligence (AI) and Robotics have become common parlance in our discussions. There is no doubt that these emerging disruptive technologies will slowly change the face of education. Tasks that can be automated will be taken over by devices thus leaving teachers more time to plan creative and effective learning

experiences. Blockchain technology will help to secure student data and employers will find it easy to ascertain the credibility of student records.

The NEP 2020 states that the National Educational Technology Forum (NETF) will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration both for school and higher education. Similarly the National Research Foundation is expected to follow a three pronged approach of advancing core AI research, developing and deploying application-based research, and advancing international research efforts to address global challenges in areas such as healthcare, agriculture, and climate change using AI. Similarly Universities are expected to offer Ph.D. and Masters programmes in core areas such as Machine Learning as well as multidisciplinary fields and professional areas like health care, agriculture, and law. As AI strongly relies on data, education at all stages must emphasize on awareness of IT laws and ethics related to data privacy, data handling and data security.

The aforementioned discussion will be futile if one does not address issues like India's digital divide. Where digital connectivity and accessibility to devices is concerned, there is a wide urban-rural gap. Regional divide and gender digital divide also exist. The way to address these issues is by promoting digital literacy, providing digital infrastructure in marginalized zones, promoting natural language processing (NLP) in Indian languages and evolving a robust cyber security framework for data security, safe digital transactions, and redressal of complaints.

ICT can truly help change the face of education. But this will not happen if it is just a fancy word and the privilege of a chosen few. We must accept that ICT is the pen and paper of today's world; it is the lens through which we experience the world.

ICT will undoubtedly play a vital role in transforming India to a vibrant knowledge society,

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7. New Education Policy 2020: A Road Map to India's Educational Transformation

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Abstract

In recent years, India notably ranked low in the list of good quality educational institutions and universities. An urgent need was sensed to ensure improvement in the entire education system taking concrete steps to revamp and revolutionize education in India. To achieve complete human potential, education serves as a fundamental prerequisite for creating an unbiased and equitable society. With this view, the Government of India formulated a new education policy to bring about a revolutionary change the education system after 34 years. The New Education Policy was announced in accordance with the insufficiencies of the former education policy and the needs of the current society, which can result in a significant alteration in school and higher education sectors. This paper seeks to inform about the reforms and objectives of the NEP 2020, the impact of New Education Policy on the system of higher education, the transformations and innovations in higher education and identify issues and challenges with the implementation of the new policy of education.

Key Words: New Education Policy, Higher Education, Educational reforms

Change is an endless reality and steadfast rule of life. With changes in nature and society come changes in politics, policies and education system at large. Development and advancement are reliant on these inevitable changes. The educational status and the state of resources and policies regarding education show the priority that a nation's government places on education. In recent years, India notably ranked low in the list of good quality educational institutions and universities. An urgent need was sensed to ensure improvement in the entire education system taking concrete steps to revamp and revolutionize education in India. To achieve complete human potential, education serves as a fundamental prerequisite for creating an unbiased and equitable society. With this view, the Government of India formulated a new education policy to bring about a revolutionary change the education system after 34 years. The New Education Policy was announced in accordance with the insufficiencies of the former education policy and the needs of the current society, which can result in a significant alteration in school and higher education sectors.

The National Education Policy 2020 was approved by the Central Government in July 2020. This policy was aimed at:

- Catering to the needs of an economic structure that is primarily knowledge-based to address the changing global needs and systems.
- Enhancing the quality of Education to promote research and innovation in diverse fields.
- Ensuring global acceptance and success of Indian educational structure.
- Ensuring education for all by reaching out to the needs of underprivileged and educationally recessive learners.

Higher education must aim at imparting high quality education, creating individuals who are all round personalities believing in creative and sustainable growth. It must enable learners acquire knowledge and specialization of their choice. Create avenues for ensuring success of individuals through development in areas of ethical and national values, trigger curiosity, enhance creativity, develop a spirit of service to nation and mankind, aim at sustainable development etc. The New education Policy has specific goals to bring about pioneering changes in the educational system to enrich learners with skills required for 21st century living.

Objectives of the Study

- To inform about the reforms and objectives of the NEP 2020
- To study the impact of New Education Policy on the system of higher education.
- To analyse transformations and innovations in higher education system as prescribed in New Education Policy.
- To identify Issues and Challenges with the implementation of the new policy of education.

Methodology of the Study

This research uses descriptive study based on secondary data collected from journals, policy documents, newspaper articles, websites and other publications. The collected data was analysed and reviewed to derive conclusions and appropriate inferences.

Highlights of NEP 2020

Curriculum of School Education

NEP 2020 seeks to reorganize the 10 + 2 school structure to 5+3+3+4 structure including ECCE as a part of the formal system of education. Thus the corresponding stages are, Foundation Stage (5 years), Preparatory Stage (3 years), Middle Stage (3 years) and Secondary stage (4 years). NEP 2020 also emphasizes reduction in curriculum to allow space for critical applications and activity oriented syllabus. This is with a view to create able individuals to face

the challenges and demands by developing skill-sets essential for the 21st century. This transformation of curriculum demands for a vast change in the designing of syllabus and textbooks.

Teacher Accessibility and Teacher Training

NEP 2020 envisions a restructuring of curriculum. This calls for specific revisions in teacher training and pedagogical practices so as to ensure smooth transition into the new system. To foster transaction of a student-centred curriculum, it calls for teachers to be trained in creative thinking, collaborative working, critical thinking, and problem solving skills. Since the youth need to be empowered to select their choice of study and vocation, teachers also need to develop in them abilities of decision making, vocational skills etc. NEP envisages education for all, thus it is estimated that over 250 million students will enrol in K-12 schools in India; hence this calls for millions of more teachers to handle this student population. In keeping with this challenge, the governing bodies would have to create striking remunerations to attract a greater teacher workforce in the education sector.

Technological Development

The New Education Policy 2020 emphasizes the use of technology and advantages for youth to be future-ready. For this goal to materialize into reality, a ground-breaking development of digital infrastructure in terms of supporting artificial intelligence, data handling, digital classrooms, digital tools to bridge the gaps between urban-rural divide and online-physical teaching etc. have to be made available in all educational institutions. Ensuring this digital infrastructure, internet connectivity, digital tools and a proper set-up especially in rural areas of the country is a humongous challenge to be handled in majority of the schools all over rural parts of India. Hence a grat responsibility has to be shouldered by the government to work on improving both basic and digital infrastructure to support the needs of implementing NEP 2020.

Examination Reforms

The New Education Policy primarily focusses on changing the system of assessment to continuously assess the progress and learning outcomes. The system of continuous assessment calls for innovative approaches of evaluation and assignments demanding technological intermediations and active participation of teachers and students.

Provisions related to Higher Education

The Gross Enrolment Ratio (GER) for the institutions of higher education has been targeted to surge from 26.3% to 50% under National Education Policy 2020. Thus a lot of student population will be added in higher educational institutions.

The policy document envisages autonomy by replacing UGC (University Grants Commission) and and AICTE (All India Council for Technical Education). The New body Higher Education Commission of India is founded on the notion of splitting up of functions and segregation of activities.

NEP 2020 seeks to prevent the commercialization of education, but also allows for foreign universities to establish their centres in India. The policy also provides for multiple entry and exit points in the curriculum. That is, students in the undergraduate program will be able to stop, leave and then continue their course at various levels. As per the number of years of course completed, the students will be awarded certificates or degree. For example, on completion of one year, students will be awarded a Graduate Certificate, on completion of two years, the student will be awarded an Advanced Diploma and after completion of three and four years, a Bachelor's Degree. For the smooth functioning of this system, the policy provides for the system of Academic Bank of Credits, wherein the credits obtained by the students on completing various levels of course, will be digitally stored in the Academic Bank.

Technology based Options and E-Resources

Adult and continuing education would be ensured by warranting tech-based options like learning apps, online courses, T.V and Radio channels, ICT enabled digital libraries and laboratories etc. E-Courses would be made available in all languages to facilitate learning and ensure education for all. E-Content has to be made available in all languages.

To changes. They are:

1. Credit-based courses are introduced in teaching, education and pedagogical interventions for PhD scholars. The NEP 2020 makes it mandatory to have teaching assistant and assistance strengthen quality research and refine higher education, the NEP 2020 has recently brought many for faculty.
2. All Universities have to include PhD degree in professional and multidisciplinary areas like healthcare and agriculture.
3. The M.Phill degree will stand cancelled and PhD scholars should possess either a master's or a four year bachelor's degree.

Issues Related to the Implementation of NEP 2020

- Students are enrolled into different disciplines at an early age.
- Socio-economically disadvantaged areas suffer a lack of access to higher education thus the current GER of only 25%
- Difficulty in attracting students in higher education due to current lack of teacher and institutional autonomy to innovate.
- Most of the Universities and Colleges do not have adequate thrust on research and innovation.
- Thriving of fake colleges and suffocating innovative institutions by laying constrains on their functioning due to corrupt systems.
- Lack of expert governance in higher education institutions.

Challenges in Implementation of NEP 2020

1. Opening of Universities per week to incorporate a large number of students to seek a 50% GER is a herculean task owing to lack of quick services.
2. The intention of NEP to newly enrol 2 crore children to school or bring back the drop outs requires opening of 50 schools every week which is a massive challenge.
3. Opening of new universities and setting up of new schools which are digitally empowered, appointing professionals, teachers and professors for these educational institutions, operational charges etc. calls for huge investments in the educational sector which looks like a daunting task owing to the current Covid-19 situations.
4. Creation of a large workforce of trained teachers to manage, handle and deliver the redesigned curriculum effectively, use pedagogical techniques suitable for creatively handling the learning experiences requires a great deal of effort and substantial shift in the mind-set of all stakeholders.
5. To implement a plethora of changes suggested in Higher Education calls for a great deal of support from existing higher education institutions. The creation of multidisciplinary Higher Education institutions, merging and phasing out of stand-alone institutions pose an additional challenge which has to be looked into by the existing HEIs

Thus NEP (2020) definitely brings an imminent and welcome change both structurally and functionally to the education system of India and paves a roadmap to educational transformation in the country. This system if properly implemented would result into creation

of a dynamic workforce capable, skilled and armed with abilities required to live and prosper in the 21st century.

The issues and challenges that are brought forth in this paper should be worked upon to create a better and sustainable future for India.

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8. Moving from Traditional to Digital Learning: Are Our Students Ready?

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Abstract

The NEP 2020 has a special focus on online education. Therefore, in the modern era, the role of online technology in providing the education is vital and with its flexible nature the online educational technology has gained popularity. The role of online learning is expected not only for delivering content to massive learners anywhere and anytime but also for promoting successful learning for the learners. The present study was conducted to compare the effectiveness of online learning and offline learning of Science. The data was collected from Grade 6 students of the SSC board school in Mumbai. The descriptive survey method was used for the present study. The findings of the study indicated that 98% of the students enjoyed learning science through the offline mode. 94.92% feel that their science teacher was efficient in teaching via offline mode 92% of the students feel that their interest in learning science increased in offline mode.

Keywords: Online learning, Offline learning, Science.

Introduction

The new National Education Policy (NEP) 2020 talks about being ready for digital and online education, although it adds a rider that the digital divide must be eliminated to fully benefit from such methods. The present age is driven by digital technology and whole globe come under the influence of internet and World Wide Web. The internet equipped both the education seeker as well as education provider and laid them together under the virtual roof. Due to which the concept of virtual classroom is already popularized across the globe. Therefore, in the modern era, the role of online technology in providing the education is vital and with its flexible nature the online educational technology has gained popularity. The online education is now more accessible to the less privileged groups in comparison to the centralized classroom education system.

The outbreak that took place two years ago, the COVID-19 pandemic has disrupted education systems globally, affecting the most vulnerable learners the hardest. It has increased inequalities and exacerbated a pre-existing education crisis. School closures have ranged from no closures in a handful of countries to up to more than a full school year. Lack of connectivity and devices excluded at least one third of students from pursuing learning remotely.

Today, schools are open in most of the countries, supported by health and safety protocols and vaccination programmes. But the costs stand to be tremendous in terms of learning losses, health and well-being and drop-out. The question which arises in every mind is- Can online learning replace offline learning? Which of the two modes is more effective? Are our teachers and students being ready for digital classrooms?

Statement of the Problem

A Study the Effectiveness of Online and Offline Teaching of Science.

Aim of the Study

To Study the Effectiveness of Online and Offline Teaching of Science.

Operational Definitions

Offline Learning: Traditional

way of teaching in the classroom where all students interact with their peers and with the teacher through which learning takes place is called as Offline Learning.

Online Learning

The educational instructions that are given to the students through internet and students learn from their homes is called as Online Learning. The teaching aids used are videos, presentations etc.

Objectives of the Study

- To study the effectiveness of online and offline teaching of science.
- To study the effectiveness of online and offline teaching of science on the basis of students' gender.
- To compare the effectiveness of online and offline teaching of science on the basis of students' gender.

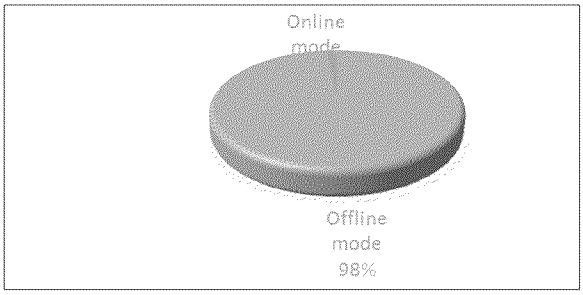
Methodology of the Study

For the present study, the researcher has used the 'Descriptive Survey' method to carry out the research.

- **Tool -** The researcher constructed a 2-point rating scale for the present study. The tool consisted of 16 items. Each item had the options as online classes and offline classes
- **Sample -** For the present study, the data was collected from 59 students of Grade 6 studying in Our Lady of Health, Sahar, Mumbai by Ms. Rohini Save.
- **Sampling Technique -** The researcher has used the purposive sampling technique.
- **Analysis of Data -** The researcher has used the 'Graphical Analysis' techniques and has made use of Pie Charts and Joint Bar Graphs to represent the collected data and to describe the finding.

Findings of the Study

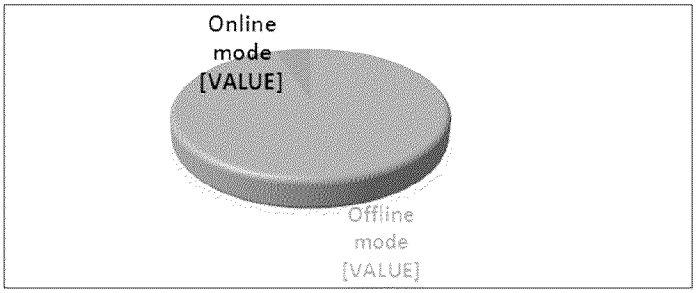
1. Effectiveness of learning Science



Interpretation

- **98%** of students from the total sample prefer offline mode, while only **2%** prefer online mode.
- **95.65%** of girls and all boys preferred offline mode while learning science and only **4.35%** of girls preferred online mode.
- The data suggests that majority of the students enjoy learning science through the offline mode. The reason for this maybe face-to-face interaction and better understanding of the subject in offline mode.

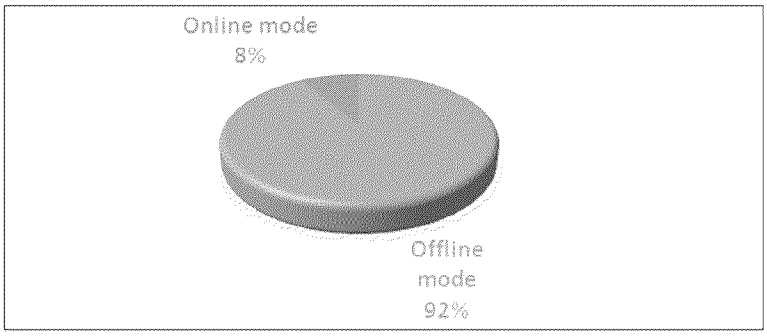
2. Effectiveness of the Teacher



Interpretation

- **94.92%** students from the total sample felt science teaching was more efficient in offline mode and **5.1%** students felt online mode was better.
- **97.22%** of boys and **91.3%** of girlsfelt that science teacher was efficient in teaching during the offline mode.
- This indicates that majority feel that their science teacher was efficient in teaching via offline mode because students feel more involved in the topic and can themselves participate in the experiments as and when asked to do so.

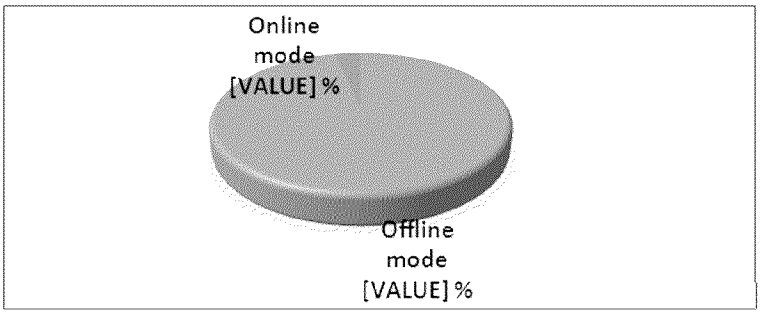
3. Interest in Science Learning



Interpretation

- **92%** of the students feel that their interest in learning science increased in offline mode while it was **8%** in online mode.
- **91.3%** of girls and **91.67%** of boys feel that their interest in learning science increased in offline mode.
- The reason could be that students's understanding and involvement was more during offline classes as opposed to online mode.

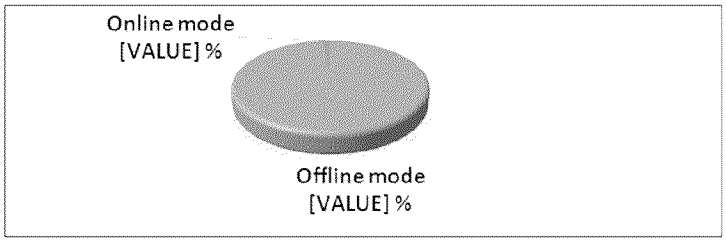
4. Understanding Science Concepts



Interpretation

- **96.61%** students were able to understand science effectively in offline mode and **3.39%** students were able to do so in online mode.
- **95.65%** of girls and **97.22%** boys had better understanding of science concepts in offline classes
- This could be due to different demonstrations and blackboard work which can be shown in classroom for clear understanding of concepts in science.

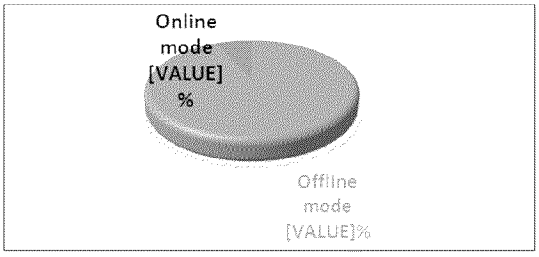
5 . Doubt Clarification



Interpretation

- **98.31%** students felt that doubt solving was better in offline mode while **1.69 %** students it was better in online mode.
- **100%** girls and **97.22%** boys felt that doubt solving was better in offline classes.
- This could be due to more attention in offline lectures with on the spot solving of doubts with various diagrams and illustrations given by the teacher.

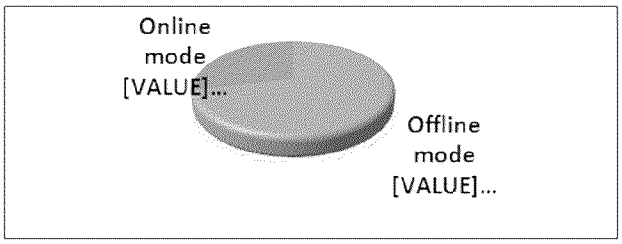
6. Attention Span



Interpretation

- **93.22%** students feel attention span was more in offline mode while **6.78%** students feel so about the online mode.
- **91.3%** of girls and **94.44%** boys felt attention span was more in offline lectures.
- The reason for this maybe that there was more distraction in online mode while in offline lectures students have to be both mentally and physically present.

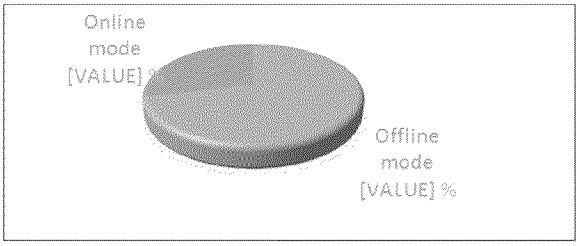
7. Giving Exams was More Convenient in



Interpretation

- **71.19%** students giving exams in offline mode was convenient whereas for **28.81%** students giving exams in online mode was convenient.
- **60.87%** of girls and **77.78%** boys felt giving exams in offline mode was convenient whereas for **39.13%** of girls and **22.22%** boys felt that it was more convenient in online mode.
- The cause for this is that there were objective type and short answer questions in online mode. There were some drabacks of online exams such inability to decribe the answers in detail with diagrams and sum solving which they found more scoring.

8. Completion of Homework on time



Interpretation

- **71.19%** students were able to complete homework on time during offline mode and **28.81%** students were able to do so in offline mode.
- **91.3%** girls and **83.33%** boys felt homework completion were better in offline mode.
- This could be due the type of homework given in the offline mode and motivation given by the teacher.

Conclusion

Online education is purely theoretical and takes place entirely online. This scarcely allows students to take part in the practical aspects of learning which is an equally important part of education. Offline classes provide a stimulating environment that combines both theoretical

and practical aspects of learning, unlike online classes. This contributes to the overall cognitive and skill development of the students. Practical learning allows you to learn and quickly adapt to the daily challenges and scenarios and allows you to get a better understanding of lessons. Thus each mode of education has its pros and cons. So a combination of thte two systems would be ideal to help students prosper in various fields of education.

Online education has its benefits, but it cannot fully replace the offline education system. For the holistic success of the education system, both online and offline education must coexist. The two need to complement each other rather than compete against each other. The co-existence of online and offline education will generate synergies and take the education sector to a level never imagined before.

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9. Vocational Education and its Relation with National Policy on Education 2020

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Abstract

Vocational education, also known as Career and Technical Education (CTE) is preparing the students for professions centered on physical or practical tasks. The individual acquires knowledge in a certain set of skills or technology under the direction of a dynamic well-experienced instructor. This article highlights the importance of vocational education in relation to the new education policy of 2020, NEP 2020 promotes vocational education. This article also explores the importance of vocation education in the present era, vocational education is needed in the present technological world. Vocational education increases employability in the country. This article is based on secondary sources of data.

Key Word: Education, Vocational Education, Skill Development, National Education Policy-2020.

Introduction

Education is an important social institution that can decide the overall development of the nation education empower the citizen's lifestyle, and create harmony in the nation. Proper education can improve the individual understanding, and critical thinking of the world around him, and enhance the capability to understand his/her role and right in the society, learning is the best path toward success, and happy life an educated person can find the solution of his problem in a very different way so that we can say that education can provide the solution of every problem in the life. In addition, education polishes our mind and strengthen our thinking and behavior toward others. furthermore, the status of an educated person in the society is different in the society as compared to the uneducated person in our society an educated person is considered a source of knowledge for society in Indian society educated person is considered a role model for others in the society, teacher who imparts knowledge to students is treated as God in Indian society, it is believed that education teaches us necessary morals, goods manners and wish ethics.

Education is perceived as a place where the children can develop according to their potential and will, it is also one of the major means to achieve equality in society. Some intellectuals argues that the main purpose of education should be to develop every individual to develop their potential and achieve a better lifestyle. A country's economic, and social development is not possible without education. In India, education is a constitutional right of a child up to the age of 14. RTE act 2009 of the Indian constitution provides children with free and compulsory education. The government of India take many initiatives for better education in the country and launch many schemes to promote quality education in the country. Every individual has an ambition that he/she will become successful in the future with the help of better education, and goal-driven education or skillful education.

Education paves us for a good carrier there are many opportunities to work in the desired workplace. it improves better and easier employment opportunities the more educated we are the more likely we get better employment chances (Al- Shuaibi, Abdulghani 2014). In the present era of the 21st century, skill-based education for children is a need of the time India's new education policy stress vocational education or we can say that the choice-based education skilled based education. Vocational education is one of the important steps toward a better future, it prepares the students for skill-based work, or in simple we can say it is a technical education through which children gain basic skills for a job.

Vocational Education

Vocational education, also known as Career and Technical Education (CTE) is preparing the students for professions centered on physical or practical tasks. The individual acquires knowledge in a certain set of skills or technology under the direction of a dynamic well-experienced instructor. The word vocational education is broad and encompasses any type of learning that attempts to equip students with the required training, skills, and technical awareness to enable them to earn degrees related to a certain profession, art, or occupation. UNESCO (1974) defined Vocational Education as a "Technical education that encompasses all forms and levels of education that include, in terms of general education, the study of associated with sciences, as well as practical experience, and knowledge, and perceptions regarding the profession in diverse segments of the economy and society". Vocational education acts as a liaison between general education and industry demand. This program is aimed at students who are about to quit college and will subsequently be able to continue that occupational stream as higher education for additional skill enhancement or to work for a job. It's considered a "smart investment option" for the investor and the country. Vocational education is crucial because it offers learners job skills in a short period. The duration of some vocational courses is very short

and learners can complete them easily within a few months. It is more interesting that students are not only studying from their programs but also doing a real job under the supervision of a qualified mentor. This encourages them to make valuable business networks and obtain work far more promptly than a regular university student. Vocational education is also crucial because trade skills are extremely valuable, and individuals will mostly want the experience of a tradesperson.

Importance of Vocational Education

In the 21st era of science and technology vocational education is very important for future job prospectus, most the students in rural areas are unable to continue their studies due to the financial constraint, so they want to drop out of school and support their families by working as daily wages worker in unorganized sectors if school provide them skilled based education it will help them for those who aspire for a job in early age due to some circumstances, in the present era vocational education is very important in many ways firstly the changing pattern of hiring new employer in the companies, now today organizations demand the skilled-based worked for their company. If you know exactly what you want in your future and it requires practical knowledge, skill and professional learning are important in management, software development, or interior design (Kaushik, 2014).

Vocational Education toward Education Policies

India has the world's biggest trained workforce, although it is inadequate compared to its enormous population, and much progress is required in this area. Indian people are more concerned with general education than with technical courses. As an outcome, a substantial number of qualified people are unable to find a job. This reality has been recognized by policymakers, resulting in a stronger emphasis on vocational courses. Some major policies recommended vocational education at every stage of education such as; The Kothari Commission (1964-66) stated that the Indian educational system did not adequately empower the students to make a choice job career. It emphasized the importance of education in preparing people for work so that they might have a stable career. As a result, it highlighted the relevance of vocational secondary education and expanded the scope of vocational courses. The National Sample Survey Office (NSSO) divided vocational education into two broad categories:

- Formal vocational education and training.
- Informal vocational education and training.

In the modern educational system, Wood's Dispatch states that vocational education is essential at the secondary level. After that, the Indian Education Commission (1980) underlined

the need for practical subjects to be introduced at the secondary level. The Secondary Education Commission (1952-53) advocated that to create diversity in secondary education by establishing multi-purpose institutions to allow learners to pursue a multitude of professions. The National Education Commission (1964-66) placed a greater focus on vocational education, and also recommended that to establish the vocational education at the lower and upper secondary school levels should represent 20% and 50% of total enrolment in the next two decades. National Policy on Education (1968) the primary objective of this policy is to establish the technical courses and vocational training programs in general education institutions and to develop the 10+2+3 educational system. The National Policy on Education (1986) highlighted the need for well and organized vocational educational programs that are strictly implemented. Ramamurthy Committee (1990) to provide well effective education in the higher secondary stage with generic vocational courses that cover a wide range of professions rather than specific occupations. The International Labor Organization (1999) stated that investing in vocational education and skills is particularly important in the context of globalization and trade liberalization. According to UNESCO (2002), there is a great need to improve people's work abilities in this dynamic world, if a country wishes to thrive and succeed, it must enhance human resources with the requisite skills. Despite these, the Indian government constituted a National Vocational Education Qualification Framework in 2012 whose primary aim is to promote and stimulate skill development changes. A well-defined and forward-thinking educational policy is very crucial for a country's school and college level because education leads to the socio-economic development of society. The Indian government has launched a new education strategy based on advice from an expert committee led by Dr. Kasturirangan, the former chairman of the Indian Space Research Organization (ISRO). The goal is to give a liberal and multilingual education. It is suggested that a common educational structure of 5+3+3+4+4+1 be used.

New education policy 2020 stresses vocational education. According to the policy, the 12^{th} five years plan indicate that workforce at the age of 19-24 is 5 percent which is not satisfactory because if we see the workforce between the year 2012-17 of other developed countries like the US, Germany, and South Korea as high as compared to India. The primary reason for the less workforce at the age of 19-24 is the failure of past national educational policies is responsible for less percentage in terms of workforce. The motive of the new education policy is to improve and strengthen skill education it will help the student to pursue their carrier at an early age. (New Education Policy, 2020)

Conclusion

Vocational education prepared the student for a job that is skilled base, it will help the student those who drop out of the school due to some circumstances or financial constraints with the help of vocational education students pursue their carrier in different technical fields. New education policy strengthens vocational education which is a good step toward skilled education. This encourages them to make valuable business networks and obtain work far more promptly than a regular university student. Vocational education is also crucial because trade skills are extremely valuable, and individuals will mostly want the experience of a tradesperson.

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10. Education for all through a Toll-Free Call: Designing Resilient Pedagogies

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Abstract

Revisiting the 'hits and misses' of the NEP 2020, reveals that one of the highlights of this proposed educational reform is reaching education to the underprivileged sections of society. While there is an impending need to take this mission from the status of a distant dream to reality, it has often taken a backseat on the educational sojourn. The New Education Policy aims to deliver quality education to all students, regardless of their situatedness, with emphasis on less fortunate groups. It suggests that education will help to break even economic and social disparities and contribute significantly to make inclusion and equality a viable actuality. This would be possible only if students from such disadvantaged groups were given an opportunity to avail of education despite their innate impediments. Project PhoneShaala conceptualized by eArth Samvarta Foundation and KDC Tek Pvt.Ltd, was one such step in the direction of this noble goal. It aimed at reaching education to the masses during the COVID-19 Pandemic so that learning could continue unperturbed even for those learners who did not have access to high-end digital resources. This research paper explores the feasibility of such resilient pedagogies not only during times of unprecedented calamity but even beyond.

Key words: Resilient Pedagogy, PhoneShaala, EduCreators, EduModerators, Audio Lesson

Introduction

With the advent of the centrally sponsored flagship education programme, Sarva Shiksha Abhiyan launched in 2001 and the subsequent introduction of the Right to Education Act (RTE) in 2009 which led to 'near universal enrolment at the lower-primary level through massive infrastructural development, teacher training and community mobilization' (Kelly et al. 2016), all children aged between 6-14 years were entitled to free and compulsory education, and had to be enrolled in age appropriate schools recognized by the state, be it government or private

schools. Section 12(1)(c) of the RTE Act requires all private schools to reserve 25% of their places for local children from 'economically weaker sections' and 'disadvantaged groups' between 6 and 14 years (Classes 1-8) in return for per-child subsidy (Ministry of Law and Justice, Government of India 2009).

Though the introduction of these educational initiatives has aided in accomplishing higher enrolment in elementary education on one hand, there still exists a significant proportion of enrolled students dropping out after Grade 5 and especially after Grade 8 on the other, which is a cause for concern. If the goal of 100% Gross Enrolment Ratio in preschool to secondary level has to become a reality by 2030, then it is imperative that rigorous national effort will have to be deployed to ensure that all children of the country are given equal access to educational opportunities.

'Save the Children's Global Policy Position' – a review of three models providing for the education of disadvantaged learners in India was an endeavor undertaken by the University of Birmingham in 2016 and proposed that the success of any such programme in the country would depend on 3 criteria namely, Access and completion, Quality and learning and Impact on education systems. In addition to these three criteria the programme would also need to be 'effective, efficient, transparent and accountable' (Save the Children, 2016).

Research has revealed that in order to expedite learning for students from the Socio-Economically Disadvantaged Groups (SEDGs), in particular, the scope of school education will have to be widened to facilitate different modes of education -both formal and non-formal. The NEP, 2020 has also proposed that young children learn and grasp concepts easily and more quickly in their home language/mother tongue, thereby suggesting that this should be their medium of instruction at least until the age of Grade 5 if not Grade 8. A study carried out by Muralidharan and Sundararaman (2015) suggested that children learn better in the local language spoken at home, especially when they are first-generation learners, thereby asserting the beneficial role of the medium of instruction in effective learning

Among a myriad different enterprises introduced for the benefit of underprivileged learners in the past, the e-PATHSHALA portal/app created by the CIET, NCERT certainly deserves a mention wherein as it served as a single point repository of e-resources in 2015 (India Today, 2019).

With the onset of the COVID-19 pandemic, the learning of disadvantaged learners was not only slowed down but moreover almost came to a standstill in India. The 'Mo Chatashali' model was one such endeavor which offered remedial education through face-to-face learning for underprivileged children who could not afford online means of instruction. This trial yielded promising results in terms of ensuring that these underprivileged learners did not get disconnected from their education during the pandemic. The venture made education available to learners who had no access to the state's digital learning alternatives (Pujari, 2022).

However, research in the area of Corporate Social Responsibility in reaching education to the masses is conspicuous by its absence, although some studies have been carried out in this field (Srivastava 2016; Sundar and Godal 2017). Data revealed that most attempts have been small-scale and geographically restricted to few states and cities. There exists a dire need to expand efforts to other States in a bid to help education for the disadvantaged gain momentum in the country.

It was with this view in focus that the Resilient Pedagogy PhoneShaala was conceptualized by eArth Samvarta foundation and KDC Tek Private limited and carried out in collaboration with a Teacher Training Institution in Mumbai, as part of a Community Work project by the teacher trainees. The mission and motto of this endeavor was 'Education for all through a Toll-free Call'.

Objectives

The objectives of the study were as follows

1. To evolve a resilient pedagogy for disadvantaged learners to support meaningful learning during times of uncertainty and disruption.
2. To obtain stakeholders' experiences and suggestions for improvement of the resilient pedagogy.
3. To consider the sustainability of the resilient pedagogy based on the educational implications.

Operational Definitions

1. **Resilient Pedagogy**: An approach to teaching or an instructional strategy which makes learning as resistant to disruption as possible during times of uncertainty.
2. **EduCreators**: Team Members who created the audio lesson repository for the PhoneShaala portal.

3. **EduModerators:** Team members deemed to have a strong understanding of the quality requirements of the lessons, who on the basis of their knowledge and expertise were appointed to review the scripts and audio lessons as a measure of quality check.
4. **Subject Managers**: Team members who would coordinate with EduCreators and EduModerators to resolve any bottlenecks in the process so that the lessons could be uploaded on the Toll Free Number in a timely manner.
5. **Audio Lesson**: A 3-10 minute lesson covering a wide range of school subjects and standards in English and Vernacular languages accessible through a toll-free call.
6. **Underprivileged Learners:** Students who have no access to computers, smartphones and online learning portals such as Zoom, Google Meet, Cisco Webex etc. due to poor economic affordability.

Research Design and Methodology

Project PhoneShaala was an integral part of the Community Outreach Programme of St. Teresa's Institute of Education, Santacruz - a Teacher Education College affiliated to the prestigious University of Mumbai. It extended from 1st August 2020 to 31st January 2021. As part of the endeavor every teacher trainee developed a lesson script weekly on any topic of her choice nominated from an existing list comprising of themes pertaining to varied standards and subjects of the school curriculum in either English or the Vernacular languages Once modified and approved these scripts were transformed into audio lessons of 3-10 minutes duration each and uploaded on the PhoneShaala portal. This bank of audio lessons was then made accessible to 573 disadvantaged learners across 3 states - Uttar Pradesh, Bihar and Maharashtra through toll free calls.

The PhoneShaala ecosystem included 48 EduCreators (teacher trainees) from an English medium, private-aided Teacher Education College affiliated to the University of Mumbai and 28 members from the eArth Samvarta Foundation and KDC Tek Pvt.Ltd. consisting of an ensemble of Core-team members, Subject Managers, EduModerators and EduCreators selected by the purposive sampling technique.

The qualitative analysis comprised of an open ended questionnaire seeking opinions of the mentioned stakeholders in terms of the practical experiences encountered by them during the creation of lessons and use of the PhoneShaala portal. The responses obtained were analysed and explained.

Analysis and Findings

As depicted in Figures 1 and 2, a total of 768 lesson scripts and 526 audios were created in varied subjects of the school curriculum across different standards, and were made available not only in English, but also translated into vernacular media to cater to the target audience.

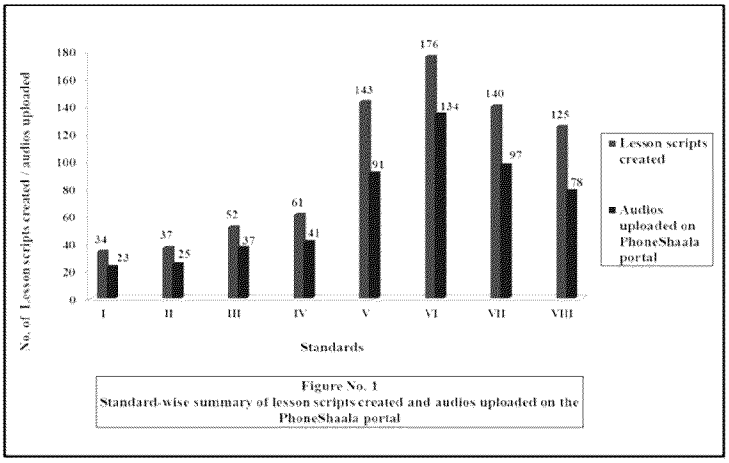

Figure No. 1
Standard-wise summary of lesson scripts created and audios uploaded on the PhoneShaala portal

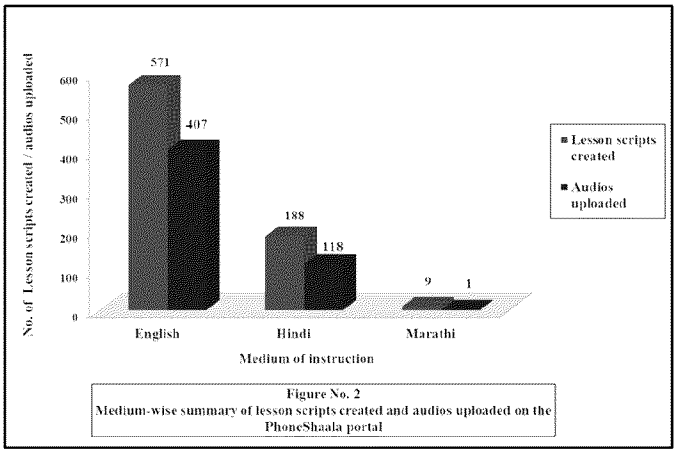

Figure No. 2
Medium-wise summary of lesson scripts created and audios uploaded on the PhoneShaala portal

Qualitative Data Analysis

The survey aimed to understand the experience of the 3 key stakeholders of the PhoneShaala Project: EduCreators, EduModerators and Subject Managers. Their feedback helped understand changes in Pedagogy and technology adoption required to continue teaching-learning during disasters like the COVID-19 pandemic. The ensuing paragraphs highlight their experiences.

The top initial concern of EduCreators was "Keeping the student attentive and engaged" (since they only had the audio medium at their disposal). The second highest concern was how they would teach concepts like Mathematics that usually rely on visual aids. However, after the PhoneShaala experience, EduCreators felt more confident and convinced about being able to teach using any media. Their second top learning was to keep in mind their students' background.

EduModerators were initially most concerned about how they could give constructive criticism to the work of EduCreators, while also ensuring that the latter felt motivated with their feedback. After their experience, they felt more equipped to give constructive feedback and were more confident than before in communicating with new team members. All of them felt like the overall quality of lessons on an average met the objectives of teaching concepts and inculcating values.

In the case of Subject Managers, most of them expressed that they had learned not only how to manage teams, but also how to ensure a smooth functioning of a large process, guide others, share information more constructively, while gaining proficiency in Microsoft Excel alongside.

Educational Implications

The findings of this study not only provided valuable lessons on how Education in India can be made more resilient against disaster, but also had relevant takeaways for Educators in their teaching jobs in normal times. The study revealed that creativity, ideation, and empathy played an important role in overcoming the barriers of the limited medium of instruction i.e. audio only. This highlighted the benefits of exchange programs and community service for aspiring teachers of students with disabilities to learn teaching techniques that are more inclusive and can cope with limitations of media. PhoneShaala's ecosystem highlighted the benefits of team-work in lesson planning and delivery. One of the poignant training instructions for PhoneShaala EduCreators was to ensure that examples, stories etc. were relatable for the underprivileged children, which proved to be an exercise in empathy - a quality of supreme importance in the teaching profession. As a key takeaway, the platform helped EduCreators to inculcate values and help underprivileged learners fight stereotypes. Since PhoneShaala did not follow any formal syllabus but rather, emphasized core essentials and experiential learning, the study also highlighted how EduCreators thrived better without the pressures of syllabus

completion – something that even the National Education Policy advocates (Indian Express, 2020). To summarize, the roadmap for the journey ahead, in terms of the sustainability of this project and the scope of its reach indicates that it could well be integrated as part of Corporate Social Responsibility.

Conclusion

The Resilient Pedagogy PhoneShaala provided important lessons to all its stakeholders as to how education could become disaster-resilient along with deep insights into improving day-to-day pedagogy. This endeavor was an exemplar of teamwork in the face of challenges not just in the times of disaster but beyond. In a nutshell, this mission could hold immense worth in striking a balance between the 'haves and have-nots' in a developing country like India. The outcomes of the present study suggest promising dividends for the future, wherein, the resourcefulness of the student teacher fraternity across the country can be fruitfully channelized to take education to the masses. The PhoneShaala ecosystem projects a telescopic view of an amalgamation of a galaxy of professionals from academia, constructively harnessing their expertise in the true service of disadvantaged learners. All-in-all it is analogous to a tiny spark which if kindled with the right blend of thought, passion and dedication of committed professionals could yield a powerful flame that would take the vision of NEP 2020 for disadvantaged learners of the Nation from the status of a dream to reality.

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11. Online Quizzes: Expanding the Reach of Classroom Learning

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'Education is an Essential Right for Children, Young and Adults in Emergencies and must be a Priority from the Very Beginning of Any and all Emergency Responses.'

COVID-19 pandemic has created chaos, wreaked havoc and caused destruction all across the world, and like any other sector, education took a very big hit. Colleges, schools, students and universities have been deeply affected. According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), more than 800 million pupils from around the world have been impacted, where 1 out of 5 learners cannot attend school, 1 in 4 cannot sit for their higher education classes and over 102 countries have put in an order for a nationwide closure to schools while 11 have implemented localised school closure.

The pandemic has brought about a drastic change – moving from chalk-talk teaching model to a technology centred learning. The policy-makers have brought about a lot of changes during the pandemic as the teaching-learning methods had to change drastically. Online learning is not a new phenomenon but online learning for schools all over the world had never been done before. According to Eastwood, boredom is a feeling of low arousal and negative emotions connected with a negative attitude towards an action. The pandemic saw a rise in reduced attention spans during classes, hence technology became an essential part of the day-to-day studying. Now, with the technological advancements, it was necessary to bring in new forms and methods of recapitulation, recognition and understanding the content. And so, teachers had to learn and equip themselves for the months to come. With this, it was necessary to make sure that the pupils still engaged in classroom conversations and participated in activities that were conducted. The pandemic saw an influx of applications being formed to make learning interesting and active. One of them being online quizzing applications, that can be used during E-Learning. The main focus of this study was on the effectiveness of quizzing applications during learning.

At the time of the research being conducted, schools have been functioning offline for 15 days. Some days, we were given the opportunity to teach in a hybrid mode – students in school as well as studying from home. Prior to this, students right up from kindergarten to 10th grade have been spending majority of their time in front of the screens, trying to study this new medium of education. In a traditional format, recapitulation was done either orally or in written format, hence, the addition of quizzing applications was done to make the entire idea of learning more interactive and different. In a regular school set-up, it was not normal to use technology as frequently as possible due to factors such as finances, administration, reception, zero liability etc. The pandemic has forced people to move out of the conventional methods of learning.

Online quizzes have been administered for summative assignments, formative assessments and instructional design methods in diverse disciplines such as Mathematics, Social Sciences, Pure Sciences, English and more. According to the recent studies by Cohen & Sassoon (2016), there have been highlights made to the benefits of online quizzes and students' positive attitude towards them. Such benefits include improving student motivation, enhancing understanding and active learning, and deterring cheating, as long as the quiz questions are not too easy (Cook & Babon, 2017). Carefully designed online quizzes can be one of many solutions to pre-empt student plagiarism by randomising questions, shuffling responses, providing timestamps and logs of multiple quiz attempts with systematic evaluation processes (Sullivan, 2016).Nevertheless, the effectiveness of e-learning varies amongst age groups. The general consensus on children, especially younger ones, is that a structured environment is required, because kids are more easily distracted. To get the full benefit of e-learning through quizzing applications, there needs to be a concerted effort to provide this structure and go beyond replicating a physical class/lecture through video capabilities, instead, using a range of collaboration tools and engagement methods that promote "inclusion, personalization and intelligence".

Statement of Problem

To study the effectiveness of Online quizzes of E-Learning for Secondary School students

Variables of Study

1. E-Learning
2. Students of Class VII

Operational Definition

Effectiveness: the degree to which something is successful in producing a desired result; success. E-Learning: learning conducted via electronic media, typically on the internet.
Online Learning: "Online education is electronically supported learning that relies on the Internet for teacher/student interaction and the distribution of class materials."
Pandemic: (of a disease) prevalent over a whole country or the world.

Need of the Study

Prior to the outbreak, the recapitulation took place by oral reasoning or pop quizzes on worksheets. Now, the pandemic has forced us to move applications that will aid learning even in an online mode. This research is important as the teachers will get to know about the effectiveness of the different types of quizzing applications in regards to the understanding of the pupils. As teachers, evaluation of learning is of utmost importance as it will help them understand whether their teaching methods and tactics are working or not. This study will give us an insight on whether the students are motivated enough to learn through online quizzing applications and whether they feel competitive when it comes to their peers. Does competition act as a motivator or a demotivator for the pupils will be looked at.

Aim of the study

To understand the effectiveness of online quizzing applications among the students of standard 7 in the era of E-Learning during Covid-19.

Objectives of the Study

1. To determine the effectiveness of online quizzing applications among the students of
2. standard 7 during and after the Covid-19 pandemic.
3. To examine the difficulties faced in in retaining concepts of school subjects

Significance of the Study

This study focuses on the effectiveness of quizzing applications during E-learning. It will benefit the following stakeholders:

- The study will help the Principal of St. Louis High School, Dahisar where the research was conducted. They will gain an understanding of the current scenario of e-learning and the effectiveness of their methods.
- The study will help teachers gain perspective about the difficulties their students face while attempting to recall their learnings. They will understand if their methods of

teaching are effective on the students and where they will need to find more options for their communication. The teachers can also look for other online techniques of teaching that may help the students gain better understanding.

- The study will help parents of the students. They will be able to understand the learning needs of their children and the learning gap (if any) that they need to fill in. As this is a new avenue that nobody has delved in before, the parents would appreciate any insights about their children's learning.
- The study will help curriculum framers for 2022. Taking into consideration the pandemic and the adjustment to physical and hybrid schooling starting even in the newschooling year, curriculum framers can get an understanding if there needs to be any changed in the curriculum that would be beneficial for e-learning
- Through this study, principals, teachers, parents and curriculum framers will understand the Effectiveness of e-learning.

Research Design

For the purpose of the present study, researchers followed the descriptive research design where the researcher used a questionnaire to gather data.

Sampling

For this study, there were a total of 40 students of std. VII who filled up the questionnaire out of which 13 were girls, and 27 boys between the ages 12-13 of studying at a school in the suburbs of Mumbai. In the present study, convenience sampling is used.

Tools of Research

In the present study the researcher has used, questionnaire in order to collect data.

Data Collection

In order to carry out the present research, the researcher collected the data in following manner

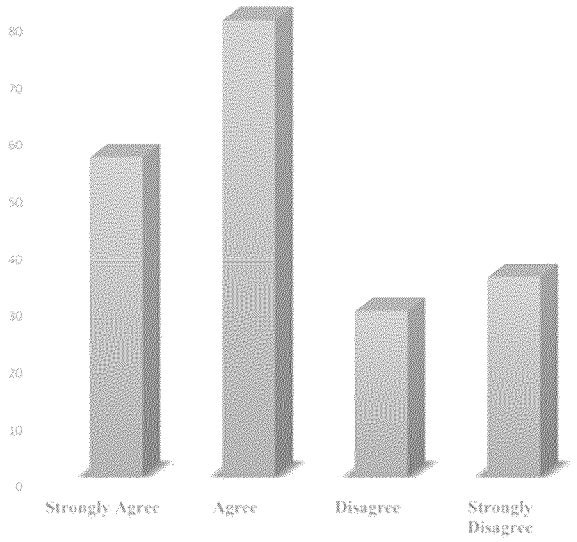
1. The researcher with the help of the teacher in charge prepared a questionnaire which consisted of the questions related to e-learning during the Covid -19 pandemic and after it.
2. The questionnaire had a rating scale i.e., Strongly Agree, Agree, Disagree and Strongly Disagree.

3. The questionnaire was distributed to the students of standard VII of a school in suburbs of Mumbai.
4. Students were given instructions about filling the questionnaire
5. Their doubts were clarified
6. 40 students answered the questionnaire

Quantification of Data

The data of the present study was quantified by assigning scores, tabulating and drawing graphs for analysis of data.

Effectiveness of ICT Tools in E-Learning for Secondary School Children



Objectives of the Study

- To determine the effectiveness of online quizzing applications among the students of standard 7 during and after the Covid-19 pandemic.
- To examine the difficulties faced in in retaining concepts of school subjects.

Objective 1 – Findings

With respect to the first objective, it was found that e-learning is effective amongst the students of Grade 7. Online quizzing applications have been found as a good way of transmitting content from the teacher during Covid-19. The students were eagerly waiting to play the quizzes in offline mode also, due to the appeal and interactive dialogue they set. Through the research

conducted, the students did not face any issues in terms of accessing the quizzing applications due to their vast knowledge in this area.

Objective 2 – Findings

With respect to the second objective, it was found that majority of the students enjoy the different ICT tools that have been implemented in E-Learning. The students found it easier to remember content that was shown in class, and were able to recall it better.

Educational Implications

The stakeholders of education viz, Educational Boards, School Teachers, Students and Parents. They can use these findings to understand the importance of ICT in Secondary Education and how it is going to benefit the students. The educational board can implement training programs for teachers on using effective online quizzing applications. Teachers can try to blend these tools in their day-to-day teaching as it will ensure maximum class participation and will be able to arrest the attention of the students. The students can use this tool before their examinations so recall all the content they have studied and quiz themselves so that they know the position of their learning, for assessment and can use it in future.

Suggestions for Further Studies

- A study to examine the effectiveness of ICT tools in different educational boards such as ICSE, IGCSE, IB and CBSE
- A study to examine the effectiveness of ICT tools in offline learning in a Girls School
- A study for effectiveness of ICT tools and Quizzing applications in Special Education.
- A study for enhancing the learning experience in an inclusive classroom using ICT tools.
- A study of the evaluation of different online quizzing applications available in the education world.

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12. Learning Disabilities and E-Learning Challenges in Inclusive Settings: Child's Perspective

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Abstract

The study has been conducted to investigate the levels and kind of difficulty the child/ student is facing in learning things inside and outside classroom and the student's perspective towards the challenges of online education on their own learning particularly those who are suffering from learning disabilities in inclusive setting. Study reveals the fact that the child is suffering from multiple learning disabilities like dysgraphia, dyslexia, dysparaxia. The study focusses on E-learning problems face by student with disabilities. In this study, subject taken a real situation of a child of Katara hills, Bhopal from class 6th studying in St. Joseph Co-ed school with learning disability, where the student is not able to understand concept despite online teaching and teacher's effort research is been conducted to understand the reason behind that find a reliable, applicable and effective solution of the problem of the child/ student.

Key words: Online education, learning disability, dyslexia, dysgraphia, dysparaxia, Inclusive setting.

Introduction

Students perception, attitude and prior experiences with online learning have significant relationship with online learning outcome. Students struggled to learn when the pandemic moved class online- in part because of limited access to technology and resources. When the covid-19 pandemic prompted a sudden swift to online learning in the middle of 2019-2020 school year. Majority of students faced academic challenges. The study focused on learning challenges for students with disabilities: lack of access to technology and the internet, a gap in learning resources (such as instructor feedback, structured course, materials and opportunities for collaboration) and limited prior experience with online learning.

"Learning disabilities is a general term that refers to heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities". These disorders are intrinsic to individuals presumed to be due to central nervous system dysfunction. This may occur across the life span. There are multiple learning disorder (few are)-

- **"Dyslexia"** means difficulty in learning to read or interpreting words, letters and other symbols.
- **"Dysgraphia"** is a learning disability interferes with practical all aspects of writing process including spelling, legibility, word spacing and sizing.
- **"Dyspraxia"** makes it hard to organized physical movements and coordination. For example, a child might want to walk across the living room carrying their schoolbooks, but they can't manage to do it without tripping, bumping into something, or dropping the books.

Methodology

The case study was conducted by Keen observation of child with learning disability by involving and getting information directly from different reliable sources like parents, child itself and from the home environment. The tools used in the study were interview (schedule), direct observation.

Case Study: Subject Information

NAME- Ayush Sharma

SEX- Male

AGE- 1O years

CLASS- 6th

SCHOOL-St. Joseph co-ed school

Procedure of Case Study

In this case study data collection was done via. A face-to face interview based on a structured questionnaire and direct observation to know the behaviour of the child and then to provide appropriate counselling and support to them. ln this study we have to know the child(subjects)well and take information about its past and present, the environment to which the subject belongs. This type of study is therefore very Intensive and serious. This also helps a lot in

studying the behavioural aspects of the subject. The methodology of study using this type of format can be described here

Family Information

S.NO	RELATION	AGE	SEX	EDUCATION	OCCUPTION
01	MOTHER	38	FEMALE	GRADUATION	HOUSEWIFE
02	FATHER	40	MALE	B.SC(MATHS)	INCOME TAX OFFICER

Development Milestones

1. WALKING- 11 to 12 months (He started walking)
2. SPOKEN WORDS- aa, not clear (cooing), Late in 17 Month
3. DROOLlNG-10 Month
4. VlSlON- Normal
5. HEARlNG-NormaI
6. TOlLET TRAINING -continues till 3 years (Late)
7. READlNG ABILITY-Generally hesitate, reading difficulty and incorrect pronunciation.
8. WRITING SKILL-Recognizes alphabet but improper gripping, light words and untidy handwriting.

Note: Data Collected from Parents and Teachers

Information about Child

1. Like to play cricket and outdoor games.
2. Equally enjoys watching TV cartoon specially (funny cartoons).
3. Drawing, video games.
4. Likes listening stories, interested in studying history, want to be an archaeologist.

Direct Observation

1. Child is shy and quiet
2. Poor hand-eye coordination.
3. Communicating less, engaged in other activities while talking (not replying).
4. Maximum depends on parents for understanding anything.

Psychological Test Report

Data taken here are only informal ways of assessing the child. These are not meant for labelling the child. The purpose of assessment is to find out the deficit in various areas and help

the child in those areas. Motivate the child before starting the assessment. Building good relationship or rapport with the child is important. Give proper instruction before the test and see that child has understood your instruction. After assessment we find that child having difficulty in reading, poor coordination, trouble in learning new skill, in ability to write coherently (Dyslexia, Dysgraphia, Dysparaxia).

Problem in Family

1. Little Marital tensions between mother and father.
2. Family is not social (More reserve)
3. mother seems anxious and over concerned about the child

Schedule- (Questionnaire)

QUESTIONNARIE	SUBJECT REPLIED
Q.1 WHICH LEARNING DO YOU PREFER AND WHY? (ONLINE AND OFFLINE CLASS)	HE LIKE OFFLINE AS HE UNDERSTOOD WELL WITH TEACHING AIDS AND OUT OF CLASS OBSERVATION. ONLINE IS JUST PASSING TIME FOR HIM.
Q.2 WHAT PERSONAL OBSTACLES MIGHT STAND IN THE WAY OF E-LEARNING?	HE FACED NETWORK ISSUE, FEW CLASSES NOT AUDIBLE PROPERLY, TEACHERS WERE TOO FAST, PROBLEM WITH ACCESSIBILITY OF WEBSITIES, INFLEXIBLE TIME LIMITS FOR ONLINE EXAM, OTHER TECHNICAL DIFFICUILITES SOMETIMES.
Q.3 IN FUTURE YOU ARE COMFORTABLE WITH ONLINE OR OFFLINE CLASSES?	NO, HE DOESN'T WANT TO STUDY ONLINE BECAUSE OF TECHNICAL DIFFCUILIUTIES AND POOR USE OF E-LEARNING BY TEACHERS.
Q.4 WHICH SUBJECT DO YOU LIKE MOST AND WHICH SUBJECT YOU DON'T LIKE AND WHY?	HE HAD INTEREST IN KNOWING ABOUT PAST, STORIES OF KINGS ETC. SO, SOCIAL SCIENCE IS FAVOURITE SUBJECT. TEACHER TOO IS VERY POLITE AND SOFT SPOKEN. SCIENCE IS VERY COMPLICATED FOR HIM TO UNDERSTAND, TEACHER TOO SCOLDS HIM EVERY TIME.

Data Analysis and Conclusion

The information / data collected from parents and childs own experience on challenges faced by him during online learning like problems with accessibilities of websites, inflexible time limit for online exam, technical difficulties using E-learning and connecting to websites, problem of downloading and opening files, video clip taking too long to download, poor use of E-learning. We also came to know that child is having multiple learning disabilities (specially dysgraphia, dyslexia and diaparxia) according to data collected delay in language development as compared to normal child and the environment being provided to him at home. Child unable to get reinforcement either from his parents. So, he gives up his early efforts to acquire necessary development skills. He felt defeated and become motionless and in different to his surroundings. Unless intervention begins, the gap between the child abilities and his chronological age widens as each month passes. It shows that there is a need of teachers and parents to give the child a psychological treatment, know the child properly as the concept of learning disability at school or home is more varying nature. The actual and natural behaviour and level of his interest in different things like playing games, drawings, watching cartoons etc it shows that if teachers know the child psychology with the cooperation of parents, they can help the child really to overcome his disabilities, and making teaching learning process comfortable for him.

We Suggest Few Solutions

Child is very sensitive and needs a loving and caring teachers treatment instead of autocratic or rude behaviour of teachers.

- The child facing few learning difficulties so free, stressless and natural environment for efficient learning.
- The child should be taught in natural environment, using teaching aids either audio or visual, natural and real things to teach the child. Proper infrastructure and internet facilities should be available at home.
- Encourage students to use the writing lab and to get tutoring.
- Give all instructions both written and verbally.
- Encourage students to become an active rather than passive reader.
- Proper help students in decoding and unfamiliar words, understanding what is read, knowing the meaning of words read.
- Help students find a seat in your class that is near the blackboard and as far

- as away as possible from auditory disturbances like (doorway, pencil sharpening) etc.
- Make the child communicate with peers, relatives (more social). We think this will help the child to come out of his disability and learning issues. He will enjoy learning in classroom out of book cramming methods.

In traditional classroom teachers are expected to adjust to the needs of students with learning disabilities but teachers having a harder time providing original help in an online environment. Online classes are not very interactive so, it can be harder for teachers to check in on students. Some students with learning disability feel as though their physical Side Effects have worsened due to virtual learning. Subject battles with dyslexia, dysgraphia, dysparaxia and believes his symptoms are more pronounced now. The pace of an online class is faster. The teacher doesn't stop to take break as much as they would in regular classroom. while online learning may be difficult but was need of that time. To empower students with disability to overcome the challenges of online learning, they need resources. Teachers and parents often need to put additional effort into advocating the tools their students need to thrive. The past year has been difficult for many students, student specially for those living with disability, teachers and parents can best help them overcome these by communicating about their ongoing needs and working to obtain appropriate accommodations. They need to focus on maintaining students wellness and not initiating more stress than they are already experiencing.

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13. Emergence of Distance Education and National Policy on Education 2020

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Abstract

Education is the only key that goes upstairs to the life that is fundamental to human life. It is a convenient preposition to declare and grasp that if education is a born right of an individual, it is a necessity for all men, regardless of caste. Because the same life force works in everyone and manifests itself in different ways, there are variances in race and gender. The cultural and spiritual aspects of human existence are not dissimilar in any manner. Education is concerned with the development of the human personality in all its forms. The cultural and spiritual aspects of the human existence are not dissimilar in any manner. Distance education is a systematic learning in distance education students and teachers are separated from time, date and place. Distance education is increasing day by day and is fastest, systematic, domestic and international education. Presently, In India, there are 16 state open universities If each state open university starts its own cultural center, it will demonstrate to be a massive contribution in the successful implementation of National Education Policy–2020 with regards to the Promotion of Indian Languages, Arts and Culture. Printing materials was one of the prime methods of teaching learning process in distance education, but is now taking a backseat to modern interactive technologies. As a result of the study, when the NEP 2020 allows these schools to run ODL programmes, quality will be an issue. Distance education programmes may be helpful to attain 50% GER by 2035, but the sustainability of the promised "high quality higher education" may be undefined.

Key Points: Emergence of distance education, National Education Policy 2020,

Introduction

In 1991 the distance education council was setup under the section 17 (7) read with section 5(2) of the IGNOU act in 1985. The distance education council established by the government of India. As per clause (2) (a) of the law 28, the council was responsible for the advancement and supervision of open and distance education in the country. The council has been taking many creatives to maintain the standard of distance education system in India. Government of India has decided that all the educations awarded through Distance Education by the Universities on the recommendation of Assessment for Educational Qualifications in 1995. The universities established under the act of parliament, under state government deemed to be university under section 3 of university grant commission act in 1956.

Distance Education

Distance education is also known as online learning e-learning. Distance education is a systematic learning in distance education students and teachers are separated from time, date and place. Distance education is increasing day by day and is fastest, systematic, domestic and international education. Distance education was formerly thought to be a unique sort of education delivered through unconventional means is now becoming a popular concept. Such programs are especially valuable to the many people who are unable to get traditional/formal education because to financial, physical, or geographic restrictions. Since the early 1980s, distance education has grown rapidly both nationally and internationally. It has progressed from early correspondence education, which relied exclusively on print-based materials, to a global movement that employs a variety of technologies.

Garrison and Shale (*1990*) conducted a study on challenges and issues of distance education in 21st century toward structural and transitional issues. In this study the researcher found that the theoretical a challenge facing in the areas of distance education. In this study the researcher found that the earlier Preoccupation with organizational and structural restrictions and also reveals that the theoretical development of the field increasing from organizational to transitional challenges and expectations. This study further reveals that distance education increasing day by day with innovation in technology and practices. But theoretical background/foundation take it into the 21 centuries. Distance education play an important role at national and international level. Due to the increasing of new innovations and technologies has enhanced the evolution of distance education, both in terms of the number of learners registered

and the number of higher institutions adding distance education to their curricula. Whereas, the use of modern technology and application in distance education may idealize distance education and the modern technology increase the capability and potentials both the instructor and students. The discipline of distance education is undergoing rapid increasing and change. In the department of higher education under the minister of human resource development government of India explain distance education is the sequence of education where the physically presence of teachers and students in the same place and same time is not mandatory. In distance education you can acquire knowledge at any time and any place without any restrictions. In this agency of education teaching and learning have become more accommodating with regards to the time restrictions. Distance education give great opportunity to acquire knowledge from anywhere at any time without time constraints. The objectives of distance education are increasing the flexibilities in the teaching learning process, whereas observing to a board structure of quality education and student learn flexible and easily. In conventional mode of teaching and learning process there are so many restrictions such as physically presence, proper time table a suitable place. As compared to traditional mode of teaching and learning the distance mode of education is more flexible and students centric. Distance mode of education make the learners to desirable and motivate to thousands of peoples who have many restrictions in formal mode of teaching learning process. Distance education give a great opportunity to the economically weak students who cannot complete their education in formal teaching learning mode.

As a part of open availabilities, some major advantages of distance education are more helpful and attractive because of a number of reasons. Van den Boom and Schlusmans characterized the following viewpoints.

1. Making education more affordable.
2. Enabling more individuals to participate in cultural activities.
3. Relieving traditional universities of their overcrowding.
4. Making it possible for more people to learn while working
5. Fostering a culture of lifelong learning.
6. Encouraging people to obtain more qualifications in order to compete in today's job market.
7. Allowing students without proper entrance qualifications to attend universities.

There is no doubt that the features of open and distance education learning as given by Van den Boom and Schlusmans are very relevant and it is a major factor for more students getting enrolled in this system of learning. 21 centuries in India open and distance education has a special position in the heart of the education system. It is evident that the world largest universities by the student's population is in such as India Indra Gandhi National Open University (IGNOU) some methods are distance education are as under;

- Video conferencing
- Hybrid learning
- Open schedules online course
- Fixed time online course
- Blended learning

Emerging technology in distance education day by day for making the learning effectively and build capability, capacity and potentials among teachers and students. Technology plays a vital role in distance education. Technology in distance education change the mindset, advancement, economic and organizational pressure.

National Education Policy 2020

From pre-primary to university education, the NEP 2020 aims to promote access, equity, and quality. There are numerous pillars of education to bring quality higher education in the country The major focus on enhancing in Access, Equity and Inclusion over a scale of measures, involving a greater chance for the advancement of community education. online education and Open Distance Learning Specify that distance education after few major changes, can play an utmost role in improvement of the total Gross Enrolment Ratio (GER) in higher education.

National Educational Policy 2020 has not measured the approvals of the previous policies regarding formation of open universities, nor has it taken lessons to plug the holes in the system. In 1962 the Part-time and correspondence courses were started and the first National Policy on Education, 1968, emphasized on the requirement to develop it on a large scale at the university stage. according it the same grade as full-time education.

While many universities began offering correspondence courses through different departments/schools, the Andhra Pradesh Open University Now Dr B R Ambedkar Open University, Hyderabad, becomes first single mode open university in 1982. In 1985, the IGNOU was established. The open learning system has been established to increase the opportunities and

possibilities for higher education, as an instrument of democratizing education, and to make it a lifelong process, declared the second National Policy on Education (NPE) on Open and Distance education, which was modified in 1992. According to the policies of (1992) namely Programme of Action, each state should establish an open university for which the Indira Gandhi National Open University would give technical and consulting assistance. In 1991, IGNOU established a Distance Education Council to promote, coordinate, and supervise the educational standards delivered through the distance education system. One of the prime functions of the Distance Education Council was to advise state governments to create open universities. In 2012, the UGC removed the Distance Education Council and framed an exclusive Distance Education Bureau. The issue is whether the NPE and DEC suggestions for the establishment of open universities were followed by the states in their entirety, because affiliating universities have been strongly urged to offer Open and distance learning programmes.in All-India Survey on Higher Education (2018-19), there are 16 open universities including 1 national, 14 state and one private open university, in contrast there are 110 dual mode universities/institutions offering distance education programmes. This could put an end to the existence of existing open universities, which are already struggling economically. As a result, when the NEP 2020 allows these schools to run ODL programmes, quality will be an issue. Distance education programmes may be helpful to attain 50% GER by 2035, but the sustainability of the promised "high quality higher education" may be undefined.

Conclusion

Distance education plans will continue increase day by day both in India and globally. Distance education will progress the greater status in India, because it is so cost effectual and it enable for independent learning by working grownup personality. If community is to manage with this rising need for an educated workforce, distance education must continue to make its place in the educational community. Presently, In India, there are 16 state open universities If each state open university starts its own cultural center, it will demonstrate to be a massive contribution in the successful implementation of National Education Policy–2020 with regards to the Promotion of Indian Languages, Arts and Culture, If state open universities offer their Cultural Studies courses and programmes in both online and offline modes across all study centers it will achieve the purpose of Choice Based Credit System and Academic Bank of Credit, such that a learner from any state can learn the culture of other states of the nation. Establishment open universities shall confidently increase Gross Enrolment Ratio, promote Open and Distance

Online Learning, and at the same time it will enhance teaching-learning-research in the areas of Language, Art and Cultural Studies. Now a day the developments of technology are removing the border between the traditional and distance mode of learning as many students have a great chance to work with multimedia designed for individual and collaborative learning. Printing materials was one of the primary methods of instructional delivery but is now taking a backseat to modern interactive technologies. In distance mode of education, the interaction of teachers and students is more effective and interesting during the teaching learning process. Distance education can also suggest the opportunity and opening for an analytical research-based, practical work, and projects oriented which lay importance on different development aspects in nationally as well as internationally.

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14. Education for Disadvantage Group and National Education Policy 2020

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Abstract

The purpose of present study is to explore the disadvantage group of students in relation to NEP 2020. In this study disadvantaged groups include Schedule Cast, Schedule Tribes, and Others Backward Classes. In present study so many issues and challenges are found in the education sectors in regard to socially disadvantages group of peoples especially in schedule tribe and schedule cast such as lack of qualified teachers, lack of well infrastructure, low enrolment ratio, mid-day meal and others financial assistance. Seasonal migration is one of the most important issues for tribal peoples they have not acquire the proper facilities those are given by government of India. In some places the well-educated peoples are not available there must be given special attention for the creation of teachers from tribal community. The researcher further found that NEP 1986 and NCF 2005 was implemented to preserved the education and excellence in education and for special attention to disadvantaged group. According to NEP 2020, the main aims of education are to produce new system of education that is connected with the motivational goal of 21 century education and it includes Socio-Economically Disadvantaged Groups, whereas construction upon India's traditions and value systems. To enable education for all students, with special importance on Socio-Economically Disadvantaged Groups the opportunity of school education will be broader, to enable multiple good strategies of learning involving both formal and informal mode of educational. the result of the study reveals that the NEP emphasis on quality education, well qualified teachers, good infrastructure, increasing enrolment ratio and establishing more schools for disadvantages groups of students and also given special attentions to financially assistance for disadvantages group of people.

Key points: Education, disadvantage group, NEP 2020,

Introduction

Education is the basic key for attaining overall human potentials, rising equitable society, and encouraging national development. Education is a powerful weapon which we can use to change the world (Nelson Mandela). Education is the overall development of the individuals. Giving common opportunity in admission for good education. Excellence education is the basic key to the country rises and leadership on the universal level in relation to economic development and growth, social justice and equivalence, systematic and logical improvements, national integration and cultural conservations. High excellence in education can raise the level of country talents, good resources for the learners, making good society and the world. the young population of our country increases day by day and our ability to provide quality education it depends upon the future of the country. The whole universe is feeling rapid variations in the information site. With several systematic and technological developments, such as increases of big information through data base, computer learning, and non-natural intelligence, various untrained or without skilled jobs worldwide may be engaged over by the machineries, it's all over by the quality education.

Education for Disadvantage Groups

Disadvantaged groups include Schedule Cast, Schedule Tribes, and Others Backward Classes, on a social basis and academically disadvantaged group and other groups having weakness due to social, cultural, economic, geographical, linguistic gender and or other factors as may be definite by the suitable government. The educational performance of the socially disadvantaged groups of children are seriously unacceptable. The education gap between the advantaged and disadvantaged groups of children due to prevailing socio-economic and cultural differences are increasing.

Riesmann (1962), the terms culturally disadvantaged, educationally disadvantaged, under, disadvantaged, lower class and lower socio-economical group could all be used interchangeably. The Educational disadvantaged is the major programme of compensation and national integration. Many students studied in different institutions and having different socio-economic background and personal background also. It is problematic for a teacher to classify the problems of students without knowing their socio-personal background. Needs of the child, motivations and interests have properly been taken care of will be originate happier and more successful as a learner and will develop qualities of a good person. The culturally deprived are to

be made aware of their rights and responsibilities, their behaviors to themselves, to their community and to the society at large. In some parts of the country socio-cultural aspects and a history of negligence have also unfavorably affected the educational outcomes of children belonging to the Muslim minority. Therefore, Schedule Cast and Schedule Tribe children, and children belonging to the religious, dialectal and cultural minorities who have protected behind in education and have special needs and strategies as well as suitable resources.

Students Belonging to Disadvantaged Groups

Students those are under the disadvantage group shown that some indicator as an educational viewpoint in SES and DISE report such indicator are retention rate among students, enrolment ratio and transition rates specifically in SC/ST students and others backward classes students also. Those students are socially disadvantage they have no financial assistance and they did not complete their education and also their education is disturbed. The categories of student's involvement in the deprived sections e.g., poor students belonging to rural and urban areas, migrants' peoples seasonal as well as non-seasonal child worker and disadvantage urban students.

Although poverty play a vital role in the disadvantages group such as schedule tribe, schedule cast and other backward classes. Most of the disadvantage groups of peoples face the economic crises and they are not able to send the children to school for best education. So, poverty is the major constrains in the field of education for schedule tribe and schedule cast students. Some social discrimination, exclusion, isolation and lack of access to resource and opportunity. These social discrimination effects on the social disadvantage groups of people. The government of India has established many schools for disadvantages group and take initiative for the increasing of enrolment ratio for deprived sections. It is very difficult to the establishment of the secondary school in small remote areas of population. There are two major options required for such areas, school in small habitations need to be planned and suitable residential school need to be provided in small occupations need to be planned. Needed for hostel facility for disadvantages group of peoples especially schedule cast and schedule cast students. These accommodations need to be expanded. Some mandatory facilities are required for the students of schedule tribes and schedule cast students such as hostel facilities, school building and infrastructure and individual village library. For the seasonal migration girls' hostel and library reading room is necessary required for block and village level. Need for the special attention,

supervision and monitoring for proper attendance of teachers and students, proper working in school administration. Most of the institutions in tribal areas have only inadequate number of teachers. It will be required for skilled and good qualified teachers for the betterment of education. This would also necessary to modified the teaching-learning materials as well as workbooks and others relevant materials.

National Education Policy 2020

NEP 2020 is the first foremost educational policy of 21st century and it aims is to address and several developmental requirements of our country. The main purposes of this policy is the modification in education sectors and improving all the aspects of educational setup with a proper rules and regulations and its governance. The NEP 2020 refer a particular emphasis on the development of the creativity, potential, capability and positive attitude among each and every student. It is created on the belief of education that must develop not only mental or intellectual capabilities. The foundation capacity of knowledge and skill complex order intellectual capacity such as, creative thinking, logical thing and problem solving. but also, in social, moral, and emotional capacities and temperaments. confirming quality in instruction will be the important in preservation of students, so that they are belonging to disadvantage groups specifically girl's students schedule tribe schedule cast and other disadvantaged groups do not drop interest in appearing the school. This will need a system of encouragements for organizing well qualified and knowledgeable teachers for the local language to areas with high dropout rates, as well as fixing the curriculum to make it more attractive and useful. To allow education for all students, with special importance on SED Groups the opportunity of school education will be broader to enable several good strategies of learning involving both planned and unplanned mode of education.

Conclusion

In schedule cast many factors that effects on enrolment ratio and retentions of the students such factors as, lack of admission to quality schools, poverty, social mores & customs, and language. Connecting these discontinuities in access, low participation, enrolment ratio and learning results of children belonging to disadvantage group will regularly to be one of the major goals. Also, the Other Backward Classes which have been predictable on the basis of historically being socially and educationally backward also need special attentions. The children belonging to the schedule tribe and schedule cast also face many discriminations at various level of

education. Socially disadvantages peoples have lack of guidance at many stages of life and in educational sectors. The government of India should give special attention to the disadvantage groups and conduct more and more workshop, seminar, symposium and some special talk and lecture for the betterment of education in deprived society. The government of India take a better initiative for the socially disadvantage group they already give benefit at the shape of some school from central government such as; Jawahar Navodaya Vidyalaya's for the betterment of far-flung and remote areas students. Some others school JNV and KVS established all over the country for improving and increasing better educational opportunity among the socially disadvantages, rural and remote areas students.

Under defense ministry of India, State Governments may inspire and opening National Cadet Corp wings in their lower secondary and senior secondary schools, as well as those school located in tribal dominated areas. This will allow the students for ordinary aptitude, capability and interest for aspiring as to successful opportunity in the defense force. Availing several types of scholarships and other opportunities for socio-economically disadvantaged groups. Scholarship plays a vital role in socio-economically disadvantage groups.

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15. Effectiveness of Online Resources in Blended Learning Mode

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The whole world is currently battling COVID-19. Worldwide there are currently more than 1.2 billion children in 186 countries which were affected by school closures due to the pandemic. With this sudden shift away from the classroom in many parts of the globe, the education system had been shifted onto the online mode. Adjusting to online learning process had been tough for most of the students. Online learning was perceived as lack interactivity compared to face-to-face learning. The students felt that learning in a physical classroom was more effective than in the virtual mode. The Students preferred teacher's explanation, lesson delivery in addition to the audio-visuals for an effective online class. The students also wished for a more interactive approach as they lacked interactions with their peers and teachers. Thus, the abrupt shift to virtual learning mode, made students a bit apprehensive as everyone is not open to a change. In response to this situation, the educational institutions had been instrumental in finding new ways to ensure learning continues for children by developing online and offline learning resources. Various Online tools were developed for educators to use during their online teaching learning process. Virtual school might be relatively a new concept in India, but we experienced a new trend of the blended learning model gaining popularity. Various studies showed that online learning materials available are visually stimulating, concise, and more interactive combined with features like surveys or polls, quizzes, etc. As a result, online tools increase student engagement. The classes with multimedia content are easily accessible on any device and give control to students over how they take in the material and it also provides a platform for students to interact with their teachers and peers. Thus, the researcher felt the need to conduct a study the effectiveness of online tools in online teaching learning process among the Secondary School students.

Statement of the Problem

Effectiveness of online resources in online learning for the students of standard 8th of a South Mumbai State Board schools

Aim of the Study

1. To know student's perspective about online teaching learning and to know their awareness
2. To understand the effectiveness of online resources in online learning for the students of standard 8th of a South Mumbai State Board schools.

Objectives of the Study

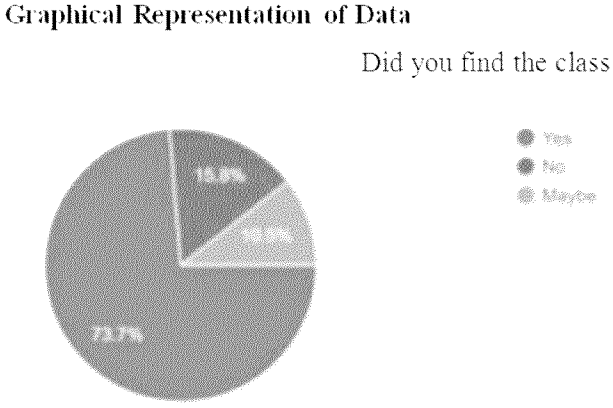
1. To check students' adaptation to online mode of learning
2. To check the awareness of the online resources in online learning
3. To examine the difficulties faced in online learning of school subjects
4. To make them aware and train them to use the online resources.
5. To evaluate the effectiveness of module prepared by the researcher in students aware of online resources.

Review of Related Literature

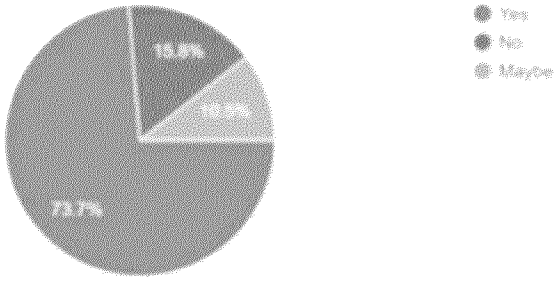
As part of the literature review, the researcher referred to the earlier studies which included, 1. T. Muthuprasad, S. Aiswarya, K.S. Aditya, Girish K. Jha (2021), Students' perception and preference for online education in India during COVID -19 pandemic. 2. Ritanjali Panigrahi, Praveen Ranjan Srivastava, Dheeraj (2018), Online learning: Adoption, continuance, and learning outcome—A review of literature. 3. Afzalur Rahman (2021), Using Students' Experience to Derive Effectiveness of COVID-19-Lockdown Induced Emergency Online Learning at Undergraduate Level: Evidence from Assam, India. 4. Jared Keengwe, Watsatree Diteeyont and Assion Lawson-Body (2021), Student and Instructor Satisfaction with E-learning Tools in Online Learning Environments. 5. David Armstrong (2011), Students' Perceptions of Online Learning and Instructional Tools: A Qualitative Study of Undergraduate Students Use of Online Tools. 6. Markus Deli Girik Allo (2020), Is the online learning good in the midst of Covid-19 Pandemic? The case of EFL learners. These studies were done on effects or difficulties of online learning during the Pandemic and also generally. These studies indicated that students faced many external disturbances that halted the effective learning online. The connectivity and monetary problems too were highlighted. However, studies also found that using various online forums to an extent filled in the gaps that were left after learning was made online. The student's attention and motivation suffered but the overall students have adapted to online learning by now.

Methodology of the study: For the present study- the researcher has used descriptive research design to study the effectiveness of online resources in online learning for the students of standard 8th of a South Mumbai State Board schools. Data was collected from students of grade 8A of the State Board School in South Mumbai. Phase-1 and Phase 2 questionnaires were developed, which included a variety of multiple-choice questions. A16 set Phase 1 Questionnaire was designed to examine the various problems the subjects were facing in their Online learning process. The survey was administered using the Google Forms platform, which requires subjects to be logged in to an e-mail account to participate in the survey, it restricted multiple entries from an individual account. The distribution of the questionnaire was conducted through the outreach of social media platforms, e-mail, and standard messaging services. Clear instructions with the google form were provided to ensure the respondent must be a student. A survey was administered on 43 respondents selected using non-probability convenient sampling technique to collect information on the students" level of satisfaction, perception and other differentiating characteristics. Based on the findings from the Phase 1 questionnaire, researcher prepared the module. The students preferred the teacher's explanation; thus, the teacher included an explanation of the grammar the topic. Various online tools were used to explain different concepts in the chosen topic. In the later stage, the researcher prepared a 16 set Phase 2 questionnaire to find out the effectiveness of the module and the difference that was registered by the subjects. The collected data was then analysed using graphical representation. For studying the effectiveness of the module, the data was analysed under four dimensions: Interest, Effectiveness, Learning Outcome and Awareness.

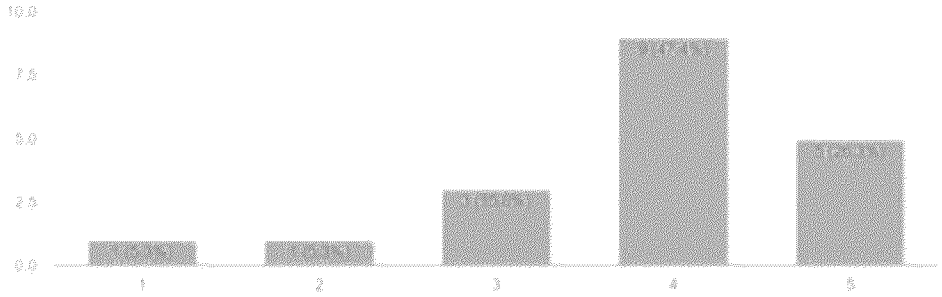
Graphical Representation of Data



Did you find the class interactive?

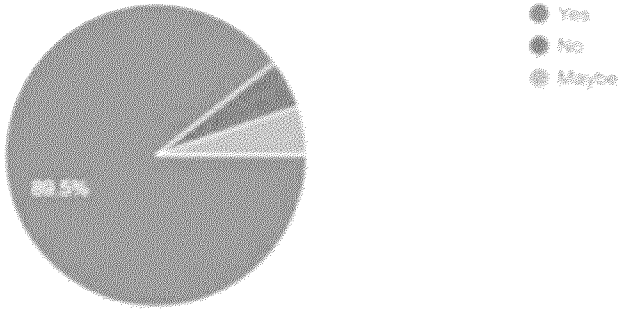


Rate your overall experience of using these online tools

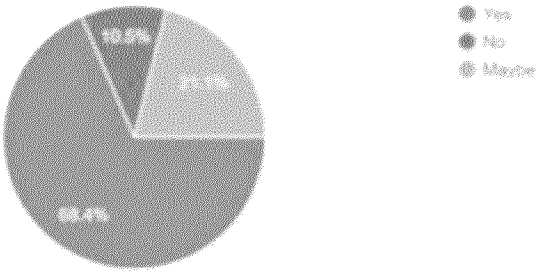


What aspect of the video made the class interactive?

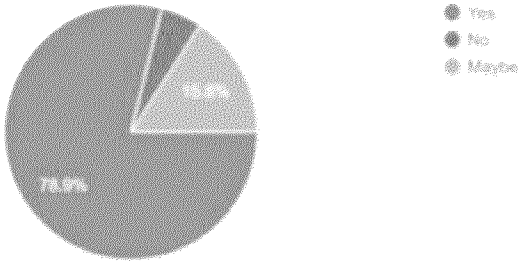
Did you like the online quiz used in the video?



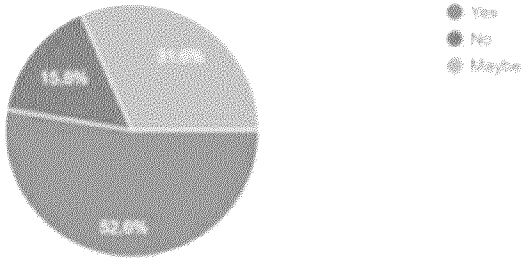
Did the activities taken during the class made you eager to participate actively in the class?



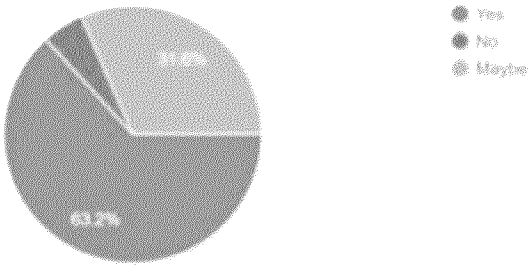
Were you happy with the software used by the teacher?



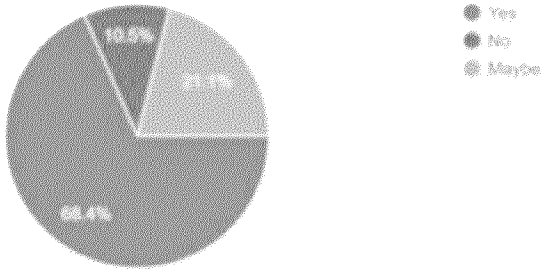
Do you think that difficulty created due to online learning was reduced because of the use of online tools used?



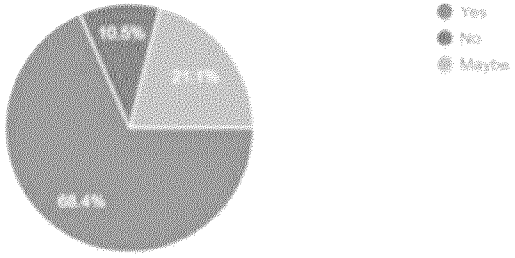
Would you use these sites for learning in future?



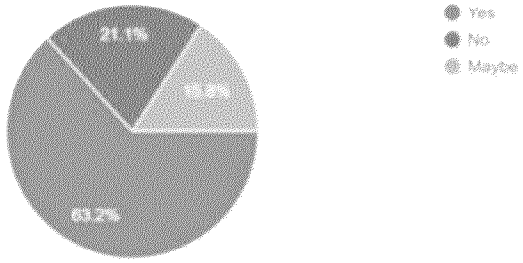
Did the inclusion of the online tools enhance the learning experience?



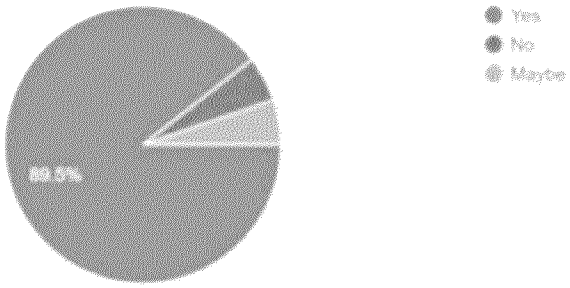
Did you learn something new?



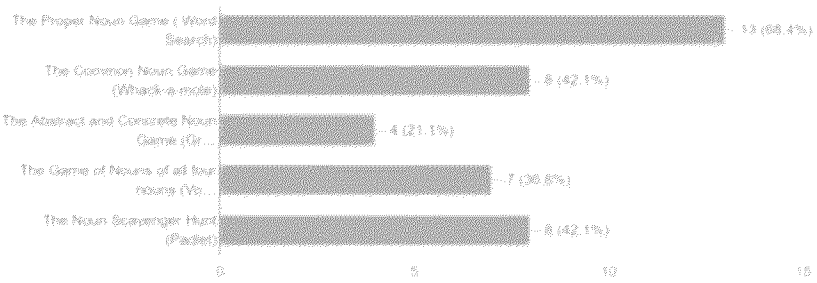
Do you wish to continue using these sites in the offline mode as well?



Did the inclusion of various online tools make the concept easy to understand?



Which activity did you like the most?



Findings of the Study

Finding 1

The majority of the students were pretty aware of different online resources that are available. Majority of them used the videos available on their syllabus. Majority of the students also were aware of the various software used by the teachers to make the class interactive, which was the deciding factor for them to pay attention in the class. Almost all the students were eager to explore the online resources to aid their learning.

Finding 2

Majority of the students found it difficult to focus in the online learning mode, because of the persistent mobile network issues. Some students also faced difficulties as the physically they were distracted which made it difficult for them to pay attention in the class. Some students also faced certain hardware issues with respect to their cameras and audio issue being too loud or too soft. The students who didn't possess a headset felt that the audio created a disturbance at home as well. Some of the students found it difficult to learn online as they preferred direct approach to learning that of the classroom and board.

Finding 3

More than half of the respondents found it difficult to adapt to the online mode for the teaching learning process. The network and hardware issues posed obstacles and also were factors that discouraged the respondents to participate whole heartedly in the learning process. The respondents were seen partial towards the traditional method applied in the online classes of teacher explaining using the PowerPoint presentation. Majority of the students were comfortable to spend 2- 4 hours in online learning. The respondents also found the classes engaging when the teacher interacted with the students and conducted the quiz. Majority of students found it difficult to study Math, Science and language online.

Finding 4

The researcher prepared a module in which the researcher included various online resources which would enable the students to use certain online resources for Independent learning and they could also use it to assess their learning. After administrating the module, the researcher found that the students have to be trained more to use the modules. There is a room for spreading awareness about those tools and enabling the students to use those tools for their independent learning.

Finding 5

The questionnaire was divided into 4 dimensions to check the effectiveness of online resources used in the module.

- **Interest:** Majority of the students in the class found the module interesting, however the nature of interest varies from student to student. After analyzing the data procured the researcher found that 52 % of the respondents found the module interesting. Significant change in the interest was seen in phase- II wherein various online resources were used.
- **Effectiveness:** The students liked the various questioning and evaluating tools. The quiz prepared was child centric, hence it could be one of the reasons why the students found it interesting. From the data collected the researcher found that majority of the students felt that using various online tools made the understanding of the concept taught and the challenges posed by online learning less difficult. It can be deduced that the students crave for more interactive classes wherein the learning is child centric. The researcher found that significant change in the students in learning and the module was effective to engage them actively in the class.
- **Learning Outcome:** Majority of the students liked the blended approach of teaching and online resources. The resources used catered to their interest of fun plus learning. From the data it can be interpreted as majority of the students wishes to use to the sites in the offline mode as well. It can be deduced that the quizzes and various other option provide plethora of content and source for assessment as well. The students can test themselves and be confident about the topic taught in the offline mode class.

- **Awareness:** Majority of the students liked the blended approach of teaching and online resources; it was something innovative for them and made the learning easier for them. The statistics showed that the students now were aware of the availability of online resources for learning.

Implementation of the Findings: The stakeholders of education viz, Educational Board, School, Teachers, Students and Parents can use the findings to make the online teaching learning process effective for the students. The educational board can implement training programs for the teachers on using the online tools. The teachers can try to use the blended approach of explanation and the tools to make the class interactive and to ensure that the teacher is successful in arresting the attention of the students. The students can use the tools to enhance their individual learning and they can assess themselves and the students can then try various such sites for future use.

Conclusion

Before beginning with the study, the researcher had the perception that students would prefer online learning resources over the traditional modes of teachings. The results of the study gave the researcher a picture that was quite contradictive to my opinion. Initially students had difficulty to adapt to this new mode of teaching learning. As the entire students' teachers and the entire education field was not so aware of online resources, how to use online tools in online education. Because of this the research was carried out and it was found out that; The students had problems while adapting to the new mode of education. The researcher tried to spread awareness and train students using the module. Some of the tools which the researcher has used were from the site Classtools, Padlet, Wordwall, Jam Board, these sites provided necessary assistance to the researcher required to make the module interactive with inclusion of the online tools. It was interesting to see the outcomes after the module. The students were trained to use those sites for their independent learning assessment also in process making them aware of the tools the module also increased the students interest level increases because of using varied online tools to teach a particular topic. So according to research the online resources are very effective in online education as it increases interest and curiosity level of students providing better learning outcomes.

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16. Creating ICT- Enriching Learner Centric Environment its Challenges and Goals of NEP 2020

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Abstract

Technology has transferred every aspect of life and teaching-learning is not behind. The drive of creating new paths to quality education has grown stronger doubtfully the future of learning is Technology. ICT enriched learning environment needs a holistic that pay the way for changes in three dimensions, Teacher, Teaching environment, and learning activities. Fundamentally it is the Guide (Teacher) who with the support of Parents, Administration, and policymakers, can optimizes the benefits of an ICT-enriching environment to make learning-centric learning a reality. The basic aim of NEP 2020 is to make education learning-centric, even with focusing on regional languages as well to achieve the goals of education in India. This paper highlights salient issues confronted by the teacher in creating ICT enriching learner-centric environment. The role of the Teacher is of the utmost importance to encourage students to become an active participant and also assist them to understand their weakness with this positive approach teacher become a role model in this whole process of learning only if he/ she has sound knowledge of ICT based tool in teaching-learning and teacher having an individual sense of who they can succeed.

Key Points: ICT, Learner Centric Environments, Challenges of Learner Centric Environment, Goal of NEP 2020.

Introduction

Mostly in E-learning or online learning, new advanced technology is used to facilitate quality learning. Recently research works are undertaken to combine the use of online learning tools which are free as open sources and are cost-effective. It is considered a more flexible learning method because students can access information from a website. They can download the relevant learning information and use the mail system and many social networks where teachers and students meet together and learn by sharing their views. Similarly, programmed learning or Individual courses are formed and students learn by themselves. The presence of a teacher is to assist learning in face-to-face mediums lacking. In conventional methods of teaching use of

technology and active engagement in learning is not possible and in E-learning the presence of the teacher in the face-to-face medium is lacking. Therefore both the methods have some limitations; to overcome these constraints one should follow a new method of teaching which can integrate both technology and the conventional method of teaching. So Blended Learning method is considered an innovative teaching program that can beautifully integrate convention method and E-learning.

National Education Policy is based on the fulfilment of educational goals across the country. The main emphasis of the policy is an inclusive, participatory, and holistic approach the SDG4 of 2030 agenda for sustainable development was accepted by India in 2015 with a focus on promoting lifelong learning by 2030. The NEP 2020 aims at making India a Global Knowledge Superpower, NEP2020 is the third education policy after 1968 and 1986 and is divided into 4 phases i.e. school education, higher education, adult education promoting Indian languages, online education, and making it happen that talks about policy implementation (madaan, 2022) Schools use a diverse set of (ICT) Tool to communicate, generate, store, disseminate to manage information's, in some context ICT, has also become integral to teaching-learning interactions, through such approaches as replacing chalkboards with an interactive whiteboard, using students own smartphones for learning during classes and flipped classroom model where learner watch lectures at home on the computer and use classroom time for more interactive exercises. When our teachers are digitally literate and proficient to use ICT, these approaches can lead toward higher-order thinking skills, provide creative and individualized options for students to express their understanding, and leave students better prepared to deal with-going technological changes in the environment and the workplace.

In numerous states, digital literacy is being built through the incorporation of information and communication technology into schools assured a common educational application embraces.

- **One laptop per child:** Fewer expensive laptops have been designed for use in school on a 1:1 basis with features like a low-cost operating system, low power consumption, etc.
- **Tablets**: The small individual computers with a touch screen, agreeing on input without a keyboard. Inexpensive learning software can be downloaded into tablets, making them a multipurpose tool for learning. The utmost operative applications cultivate higher-order thinking skills and offer inspired and individualized choices for learners to express their understandings.

- **Interactive White Boards** Interactive whiteboards allow projected computer images to be demonstrated, operated, hauled, clicked, or copied. At the same time, handwritten notes can be taken on the board and set aside for later use. These boards are associated with whole-class tutoring rather than student-centered action. Active participation is higher when ICT is available in the classroom for learner usage.
- **E-readers**: E-readers are electronic devices that can hold hundreds of books in digital form, and they are gradually used in the distribution of reading material. Students-both skilled booklovers and unwilling readers—have had optimistic replies to the use of e-readers for free reading.
- **Flipped Classrooms**: The usage of computer-guided instructions involving lecture and practice at home and interactive learning activities in class can allow for an expanded curriculum There is a slight inquiry on the student learning upshots of flipped classrooms. Learner views about flipped teaching space are assorted, but commonly constructive, as students favour the supportive learning actions in tutorials over lectures.

So for all this role of ICT and professional development of a teacher is equally important to fulfil ICT based learner-centric learning environment So The professional development of teacher plays a massive in student-centric teaching-learning, the knowledge of ICT is key important, a teacher must know about computer smartphone and other ICT innovative teaching-learning tools, and different ICT based applications to use for teaching which helps in creating a learner-centric environment.

We have an example of Covid19 where ICT plays a great role in all the sectors while taking into account that particular example we can say that ICT creation enables the learning environment to play a significant role in learner-centric education, as NEP 2020 is also an emphasis on online education that required a sound environment and learning material in regional languages.

Applications like Zoom, Google meet cisco WebEx meetings team app and many more classes and examinations conducted online assignments submitted online by the mean of Watsap and other platforms, these require smartphones, laptops, and good internet connectivity.

India should develop a good Infrastructure for online education, our prestigious institutions like IITs and IIMs and IITs can globalize online education and other universities are nationalize online education, there are numerous websites Upgrade Great learning Sawayam which collaborates with the top education institutions to provide online courses to the learners like digital marketing machine learning as nep many emphases on vocational courses.

All this is possible only through the strength that lies in the teachers and institute to nurture. The facility needs to change its mind-set, teaching methods (Agarwal, 2020)

So as NEP 2020 also focuses on online education it's noticeably to develop a curriculum in regional languages. But it's only possible through policy formulation and implementation based on prospects. (Singhal, 2021) In this concern Universities and Institutions like NIT and IGNOU will be conducted pilot Study for maximizing the benefit of digital learning in India.
Policy related to Information Communication Technology ICT-based education, administration, and Governance took into account while taking into interpretation creating ICT-Enrich Learner Centric Environment.

Challenges

Key Person

It's a big challenge in the way of ICT-based enrich learning environment a key person has knowledge of ICT tool and handle easily while performing work. The lack of a key person in the field of education especially in rural areas of the country has been seen as a challenge in creating ICT based learning environment.

Policy Issues

Failure of Policy formulation and its proper implementation at the grass-root level is also the utmost challenge in the way of an ICT-based learning environment, sound policies are the pillar of any system, so while taking into consideration it's necessary to have a look at policy-related issues before going further.

Administration

Effective administration is the need of the hour in all the systems, the willingness of the administration to do work within a system is the success of organizations, so in this regard, the failure of administration on taking initiatives on ICT based learning is also a hindrance in the way of ICT based learner-centric environment.

Aims and objectives

Every policy has some aims and objectives to achieve its also seems that whenever we are not able to achieve our goals and objectives in the right direction it's also become a challenge for the system as well as sub-systems. So the Aims and objectives are formulated in a way so we can achieve them within a time framework and the purpose can be full fill.

Internet

When we talk about ICT-based teaching-learning it seems that there is no proper internet facility epically in rural India the Issue of WIFI and other internet sources is absent, it's not possible to create ICT based learning enriching Environment. Not having a proper Internet

facility is also a key challenge while we talking about ICT-based teaching-learning. Beside these points, some other areas also come under the challenges of ICT based learning environment.

Objectives of NEP 2020

Following are the key areas that are being discussed under NEP 2020.

- Learner Centric Teaching
- Discussion-based teaching
- Developing Value Based Education
- Developing Multidisciplinary Thinking
- Developing Creativity
- Discovery Oriented Teaching
- Developing Critical Thinking
- Developing Decision Making. (Malhotra)

The aims of transformational reform in school and higher education systems have a target to achieve GER of 50% by 2035 and focus on the following fundamentals principles which are as under;

- Access,
- Equality
- Quality
- Affordability and Accountability.

Besides this, NEP also talks about the use of ICT in Teaching Learning and removing learning language barriers it seems that NEP focuses on the use of Information Communication Technology in teaching learning which creates a way for bringing a learner-centric environment.

Conclusion

While conclusion it seems that NEP 2020 also an emphasis on online learning and the use of Information Communication Technology in Teaching Learning. Bring ICT tools in education to provide a platform to the learner that they can access material online and everywhere whatever they need such Platform like, YouTube, Digital Libraries, Grad up, Un-Academy, and others provide ICT based learning environment to the learners not only this platform but some others application also perform a great role in this sector such as; Google classroom, Zoom, WebEx, Edmodo and some applications related to games. ICT learning not plays its role in student academic growth but recognizes the child's cognitive, social and emotional development. (techplus media.com, 2017) E-Learning has become a recognized method for teaching across the globe. It helps the teacher to give first-hand experience use of technology, increasing their

confidence and meeting the needs of the learner. Development of ICT base enriching learning environment is key important for the success of ICT based teaching-learning approaches across the country and ICT based learning opens a path for rural areas also, teaching learning is not confined to only a few but for all and the development of the motherland is depend upon sound education policy and education for all slogan were free and compulsory education and ICT based learning are prime areas for administration, the ICT based learning based on infrastructure and healthy environment for teaching-learning .

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17. Each One Teach One-Library Outreach for NDLI Orientation: NEP 2020 Implication

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Abstract

The present paper throws light on the suggestions made for libraries in India's New Education Policy 2020. It also talks about how National Digital Library of India supports five pillars of NEP 2020 by making the quality knowledge equally accessible freely to each accountable user. It also talks about St. Teresa's Institute of Education Library is progressively following NEP guidelines with the help of ICT. This paper talks about the success of the innovative activity Each One Teach One, organised by STIE NDLI Club to reach out to society.

Abbreviations used

STIE -St. Teresa's Institute of Education, NEP- New Education Policy NDLI: National Digital Library of India.

Introduction

The New Education Policy 2020 (NEP 2020) has replaced the earlier 34 years longstanding National Policy on Education (NPE), 1986. The NEP 2020 is grounded on 5 foremost attributes or fundamental pillars i.e. Access, Affordability, Equity, Quality, and Accountability.

Library through NEP 2020 Lens

NEP 2020 has suggested the following repercussions precisely for Indian libraries so that they can upkeep the five foundational pillars of NEP 2020 thereby supporting the intellectual development of the country.

1. Framing of a National Book Promotion Policy

This anticipates intensifying accessibility and availability of learning materials across geographies and languages through extensive initiatives. Great advancement in digital libraries and school/public libraries for promotion of the readership habit, maximum utilization of libraries will be ensured by increasing availability and accessibility of books to the users disabling the barriers of language, technology, and geographies.

2. Developing Enjoyable and Inspirational Books

Enjoyable and inspirational reading material will be developed for the students at all educational levels in all regional and Indian languages. Steps will be taken to ensure the accessibility of books to disable, differently-abled persons, and underprivileged part of society. The government, with the help of both public and private sector institutions, will formulate policies to enhance the quality and attractiveness of books.

3. Ensuring the Availability and Accessibility of Books in School/Public Libraries

The government will accentuate the extensive availability of books in schools as well as public libraries. The availability and accessibility of reading resources to all, including persons having disabilities and differently-abled persons using modern ICT tools, will be ensured across the country, prominently in the socioeconomically disadvantaged areas and rural/ remote areas.

4. Building Reading Culture

Public and school libraries will be expansively improved to upsurge the readership and readers across the country. Public libraries will be made more resourceful and ICT equipped. An adequate supply of books that cater to the needs and interests of communities will be ensured. Launching more children's libraries, mobile libraries and social book clubs across the country to boost extensive reading and community development.

5. ICT Equipped School/Public Libraries in Rural Areas

To attend the community and basically village students during non-school hours, the ICT-equipped school/public libraries will be set up. Services like book club will be developed to encourage extensive reading on larger scale.

6. Strengthening of Libraries in the Higher Education Systems

As academic libraries are the hearts of institutions, government will fortify and increase the procurement of reading materials like books, journals, and other learning and teaching materials. Further enhancement of digital libraries and online accessibility of library books will be done. E-content will be provided in local or regional languages also.

7. Using Public Library Resources and Premises for Adult or Lifelong Learning

The government provides the suitable infrastructure to ensure adult education and lifelong learning to interested adults. The public library spaces will be used for ICT-equipped adult education programs and other courses for community engagement and enrichment.

8. Developing Suitable CPD for Library Personal

For creating, developing, and strengthening existing libraries and catering to the needs of all types of readers across the country, suitable career pathways development for the library personnel will be done by Government and guarantee sufficient staff for effective functioning.

NDLI: A Foundation for NEP 2020 Library Implications

A glance at National Digital Library of India (NDLI)

- NDLI is a rich, gigantic virtual repository of learning resources initiated in May 2016 and made accessible to the nation or society at large in June 2018. It is a project under Ministry of Education, Government of India , through its National Mission on Education through Information and Communication Technology (NMEICT). It is developed, operated, and maintained from Indian Institute of Technology Kharagpur.
- NDLI collects and organise metadata and provides full-text from several national and international digital libraries, as well as other relevant sources.
- It provides free of cost access to authentic and scholarly 60+ types of learning resources available in 100+ languages and in several formats, related to all possible subject domains.
- Content is useful for various educational levels and for different user groups from primary to research students and from lifelong learners to differently-abled users. NDLI interface support for 10 most widely used Indian languages.
- Its customized federated search platform provides 24x7 service to this ever-growing knowledge repository to registered users through https://ndl.iitkgp.ac.in/
- A dedicated android mobile app of NDLI (https:// play. google. com/ store/ apps/ details?id=com.mhrd.ndl&hl=en/) ensures the easy any anytime accessibility to

NDLI Hence NDLI is India's digital public library in a true sense which can be termed as a foundation NEP 2020 library implications.

St. Teresa's Institute of Education (STIE), a Christian Minority Educational Institution and is one of the pioneering B.Ed. colleges in Mumbai affiliated to University of Mumbai. The Institution works consistently towards its motto of 'Excellence in Education.

About STIE Library

- With all the necessary physical facilities STIE has a resourceful and spacious library that supports the teaching-learning and research programs conducted in the institute with its rich and varied collection. Library Automation, CCTV Surveillance, Barcode and QR code technologies are implemented in the library.
- Apart from print collection, library has subscribed NLIST databases through which users will have access to e-resources comprising of 6,000+ e-journals and 1,99,500+ e-books. All the staff members and students are provided with individual User IDs and Passwords ensuring 24*7 access to NLIST Resources. STIE Library is instrumental in conducting NLIST Awareness Programs, NDL Workshops, Effective Internet Search Sessions etc. periodically for the library users.
- Library also attains outreach by extending its facilities, resources and space to external users, ex-students, staff and students and parents of St. Teresa's High School and St. Teresa's D. Ed. College.
- STIE library has an immensely functional NDLI Club which organises several activities to inculcate and boost reading habits in its students and society. STIE NDLI Club is one of the best performing NDLI Club across country.

Thus STIE Library is instrumental in following NEP 2020 guidelines for libraries.

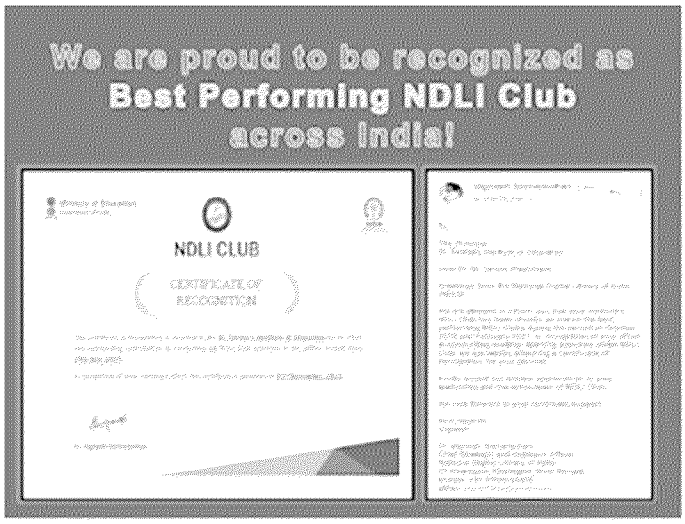


Image 1: Best Performing NDLI Club Certification and E-Mail Correspondence to STIE from NDLI (Source: https://www.sti-edu.in/pdf/best_NDLI_club.pdf)

Outreach through Each One Teach One: NDLI Club Activity

A comprehensive NDLI orientation Program was conducted for FYBEd students (47) of STIE on 4th March 2022 which consisted of

- Introduction to NDLI, its need, importance scope and rich and varied resources.
- Introduction to NDLI Club
- Membership to NDLI and STIE NDLI Club
- Hands-on Training for searching NDLI resources effectively
- Step by step demonstration about participation and Certificate generation for STIE NDLI Club Activity
- Detailed guidance about Each One Teach One Outreach Program.

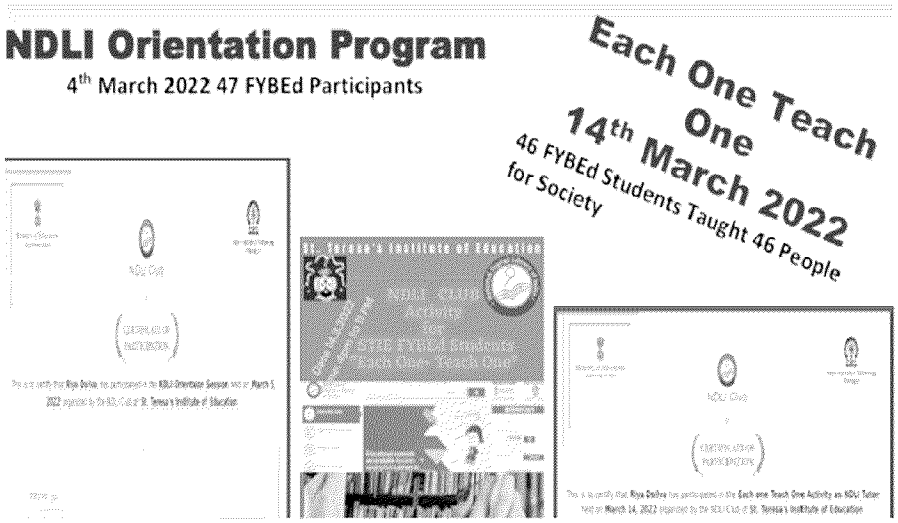


Image 2: NDLI Orientation Session Participation Certificate of Student, Invite of Each One Teach One, Achievement Certificate to same student as NDLI Tutor for Each One Teach One Program. (Source: https://club.ndl.iitkgp.ac.in/)

About Each One Teach One

Through this innovative outreach program each FYBEd student accepted a role of personalised NDLI tutor and oriented one person/lerner from the society about NDLI. Program consisted of following steps

- Introduction to NDLI and its resources to learner
- Helping the learner to register on NDLI

- Teaching the learner the search techniques to find and access the resources in their area of interest.
- Feedback from learner

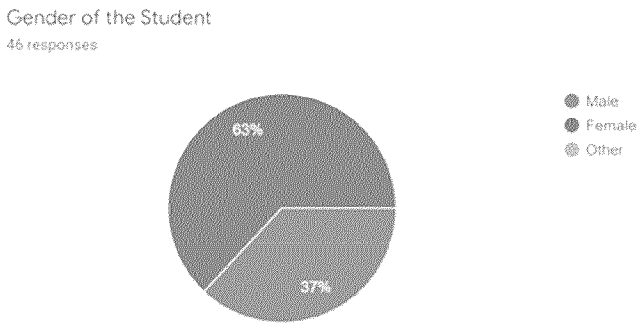
Authenticity Check

To make this program more authentic the tutor had to upload learner's photo with NDLI home screen logged in with learner's user ID.

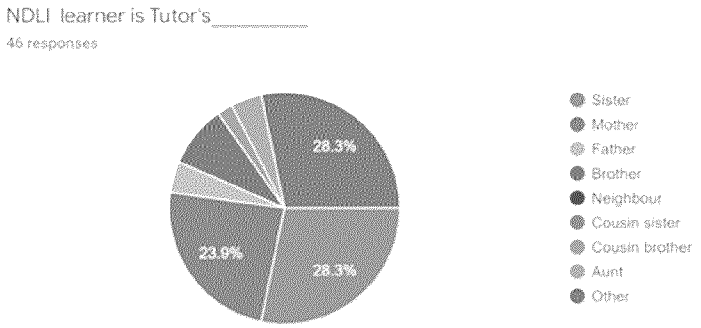
Reward to Tutors

This program was registered as STIE NDLI Club Event. 46 FYBEd Students received the certificate from NDLI Portal for participating in NDLI Each One Teach One Activity as NDLI Tutor.

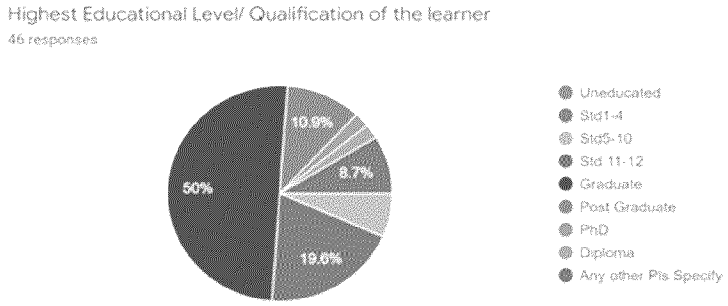
Analysis and Findings from the Feedback



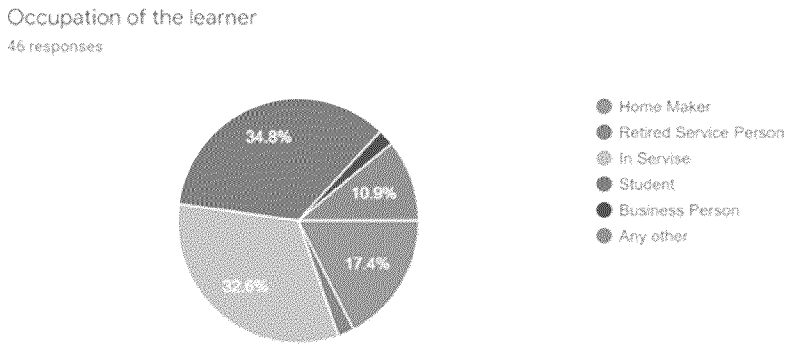
1. Its observed that 63% of the learners were female while 27 % were male. This shows that more women are keen to become lifelong learners and acquire new knowledge in the area of their interest.
2. In all 46 learners of various age groups between13 years to 68 years were benefitted with this program. Most of the learners were of the group 20-35 (58%) years followed by 45-50 (24%). This group consists of learners who are either taking higher education or people working for their professional growth.



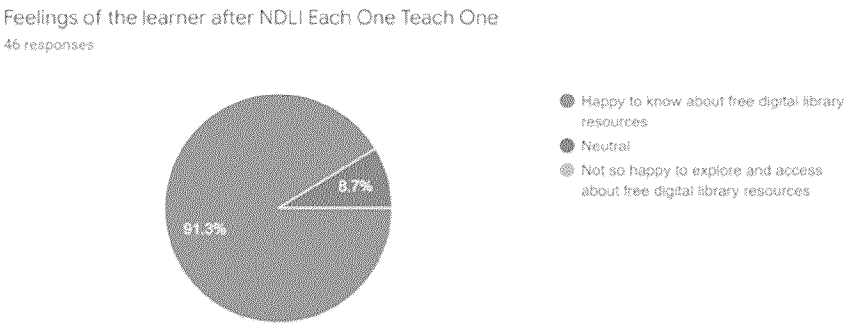
3. It is found that though tutor's parents, siblings, neighbours, friends, and cousins, extended family members or family friends chosen to become learners for Each One Teach One, Sisters, Mothers and Aunts (in all 67.9%) were more enthusiastic to learn about NDLI.



4. Though learners with different highest academic qualifications from 4th grade till Ph D and MBA Most of the learners were Graduate (50%), Post Graduates (10.9%) studie datleast till Higher Secondary level (19.6%).
5. Learners were with different occupations like Homemakers, Retired Persons, Teachers teaching and Students studying at secondary, higher secondary, graduate, postgraduate and research level in science, engineering, arts faculties, including primary and pre-primary Teachers, Laws, Businesses persons like Photographers, Singers, Chefs, people in Banking, Paramedical, Pharma, Hospitality industry had participated actively in the program.
6. People working in various public and private sector services (32.6%) and students studying at different academic levels (34.8%), and homemakers (17.4%) were keen to explore NDLI.



7. All 46 learners could successfully register on NDLI portal. They could search and access information resources in 9 languages including English, Hindi, Marathi, Sanskrit, Bengoli, Gujarathi, Urdu etc.
8. Most of the learners (91.3%) were very happy to learn about NDLI and they found it a very useful resource.



Some Representative Feedbacks from Learners Depicts that comprehensive resources in NDLI can cater to various information needs of various user groups which underlines its importance to society.

- The concept that not only written matter but also can get video lectures and audio for
- the topic I am searching. Having so many useful resources at the same platform was the main highlight, really impressed and willing to share this information with all my students and professional friends. (Sakshi Patil, 47Y, Biology Professor)
- Really good to know that the government is taking the initiative to educate and provide
- legitimate knowledge to those in need. Surprisingly I could find great Videos and recipes of Cake Making. (Firoz Pinto, 57 Y, Chef)
- It's a very helpful tool to look up content on the go. It is very useful in terms of getting
- extra information apart from the contemporary curriculum. It caters to the needs of curious minds and works as an excellent resource to widen the horizons and scopes of personal and professional research. I'd surely recommend it to my peers. (Sheha Gadre, 24 Y, PhD Student of Drugs and Dyes)
- I am overwhelmed to have such rich and scholarly resources available at their figure tips. I am happy to get wonderful video lectures and resources on Classical Music (Yamini Rana, 60Y, Singer)

Conclusion

Though all 46 learners were of different age group, soci-economic, professional and academic background and belonging to various languages they could find out the resources from their subjects and languages in various forms. Thus through Each one, Teach One: Outreach for NDLI Orientation, STIE library could move out of its wall and reach out to lifelong learners or adults in the society to inculcate and boost reading habits in them, to quench their knowledge thrust or to fulfil their information needs. Thus through Each one was a small attempt by STIE library step ahead on the guidelines laid down by NEP 2020 and to reach out to society.

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