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Changing the Educational Landscape through National Education Policy NEP 2020: A study of Qualitative Analysis towards achieving its Objectives

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ABSTRACT

Any nation's foundation is determined by education and it is critical to human development in order for them to reach their greatest potential. Sustainable Development Goals, goal number '4' emphasized on quality of education. So, Education is considered as a fundamental for achieving full human potential, developing an equitable for the civilization of society, and promoting national development. It is well known fact that a well-defined, visionary and futuristic education policy is a must for every country because education is the key driver of economic and social progress. Taking into account their respective traditions and culture, different countries have adopted varied education systems. Recently Government of India announced its New Education Policy 2020 (NEP 2020), which intended to transform our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all. It is a progressive step, which will bring about a paradigm shift India's education system and will transform it into a modern, progressive, and equitable. This conceptual research article is based on NEP 2020 focuses on Higher Education (HE). Researcher in this paper highlights on various policies announced in the higher education system and compare them with the currently adopted system. Various innovations and predicted implications of NEP 2020 on the Indian higher education system along with its merits are discussed. Finally, some suggestions are proposed for its effective implementation towards achieving its objectives.

INTRODUCTION

Education is the cornerstone of every nation for the holistic development of an individual. It plays a pivotal role in the development of human beings to reach their full potential. Education helps to align an individual to compete on a global platform. The ultimate aim of education is to awaken the mind and develop curiosity and logical thinking, leading to creativity and a research attitude among the students. Education is an effective tool for improving the quality of citizens of any nation (Hammond & Snyder, 2015). The emphasis on education most clearly symbolizes the belief that education is vital to development today through the "Sustainable Development Goals", goal number '4' which talks about the quality of education. Therefore, education quality is crucial as the primary resource of sustainable development and improved quality education.

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global platform in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation.

At present, the world is undergoing rapid changes in knowledge and employment landscapes. In this scenario, an education system must build and shape character; enable learners to be ethical, rational, compassionate and caring; while at the same time prepare them for gainful employment. It is to be noted that the gap between current state of learning outcomes and what is required, can be bridged through reforms in education system.

The reforms necessarily bring about quality, equity and integrity into the system, from Early Childhood Care and Education (ECCE) to Higher Education (HE). Therefore, it was necessary that India should have an education system with equitable access to the high quality education for all learners regardless of social or economic background.

In this context, India has adopted 2030 Agenda for Sustainable Development (SD), which seeks to ensure inclusive and equitable quality education; and promote lifelong learning opportunities for all. And such a dreamy goal will require the entire education system to be reconfigured to support and foster process of education, so that all of the critical targets and goals i.e. Sustainable Development Goals (SDGs 4.4) of the 2030 Agenda can be achieved. So as to bring about reformation in the existing education system the Government of India decided to revamp it by introducing a comprehensive National Education Policy 2020 (NEP 2020).

CHANGING THE EDUCATIONAL LANDSCAPE THROUGH POLICIES IN INDIAN'S EDUCATION SYSTEM

National Education Policy (NEP 2020) aims to transform education, keeping the learner at the centre. It builds on the recommendations of Education Commission (1964-66) and justice J. S. Verma Commission (2012) as well as the previous versions of the policy i.e. National Policy on Education 1986, modified in 1992, Right of Children to free and Compulsory Education Act, 2009 and Right of Persons with Disabilities Act, 2016. In fact, it is a huge stride in the right education. It mainly focuses on to the holistic development of students by ensuring access, relevance, equity, quality and strong foundational learning. The policy offers numerous benefits for education sector stakeholders. It envisages creating synergies in the curriculum across childhood care and education to school and the higher education segments. Major focus area of the policy is quality improvement in the learning outcomes. Another focus area is bringing assessment reforms, which remained much awaited change. Most importantly, NEP 2020 is expected to put India on the track to attain goals of 2030 agenda for sustainable development by promoting lifelong learning opportunity for all in the next decade to come.

It is rightly said that, "Higher Education (HE) is an important aspect of Education System (ES) in deciding the economy, social status, technology adoption, and healthy human behaviour in every country". The policy essentially aims at quality of Higher Education Institutions (HEIs) and positioning India as a global education hub. The focus is on providing flexible curriculum through an inter-disciplinary approach, creating multiple exit points in what would be a four year undergraduate programme catalyzing research, improving faculty support and increasing internationalization.

Emergence of NEP 2020: The new policy envisions an India centred education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all. It is the first education policy of the 21st century, which aims to address many growing developmental imperatives of our country. This Policy proposes revising and revamping of all aspects of the education system, including its regulation and governance in order to create a new system that is aligned with the aspirational goals of 21st century education, while building upon India's traditions and value systems. NEP 2020 lays particular emphasis on development of the creative potential of each individual and higher order cognitive capacities, such as critical thinking and problem solving; and also social, ethical, and emotional capacities and dispositions. Most importantly, the rich heritage of ancient and eternal Indian knowledge and thoughts has guided to frame this Policy.

The policy envisions an India-centred education system that contributes directly to transforming the nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all. The policy provides a comprehensive framework for elementary education to higher education as well as vocational training in both rural

and urban India. The policy aims to transform India's education system by 2021. The policy unequivocally endorses and envisions a substantial increase in public investment in education by both the Central government and all State Governments.

OBJECTIVES OF THE STUDY

The National Education policy 2020 has many initiatives to improve the quality and the broadness of the education system in India. The objectives of this study on National Education Policy 2020 are:

I.   Suggestions for further improvements for the effective implementation of NEP 2020 to realize its goal.

II. To discuss the merits of Higher Education Policies of NEP 2020.

III. To discuss the demerits of Higher Education Policies of NEP 2020.

IV. To compare National Education Policy 2020 with the currently adopted policy in India.

AIMS AND VISION OF NATIONAL EDUCATION POLICY 2020

National Education Policy 2020 (NEP 2020) will bring in ambitious and dramatic change that could transform education system in the country. It will bring about revolutionary changes in the education system of India.

4.1 Vision: NEP 2020 aims at building a global best education system rooted in Indian ethos, and aligned with the principles enunciated in the discussion below, thereby transforming India into a global knowledge superpower.

4.2 Thrust Areas: NEP 2020 is necessarily addressing the crippling challenges that have affected the Indian Education System for over last few decades. Certain thrust areas of the policy are:

- *In Primary Education*, poor literacy and numeracy outcomes: Several reports show that 50% children lack basic numeracy i.e. the ability to understand and work with numbers and literacy despites spending five years in school. NEP 2020 basically looks at this foundational learning as a core area and aims at developing multiple skills and abilities among the students.

- *In Middle and Secondary Education*, high dropout levels, curriculum inconsistency: Dropout rates at the secondary level in several states have increased over the past three years according to the ministry's data. There are multiple reasons behind drop out such as poverty, poor health and distance from school. Moreover, large variations in dropout rates exist across states, gender, ethnicity and class. Even the Gross Enrolment Ratio (GER) is also decreasing considerably as the data indicates that a significant proportion of enrolled students are dropping out after Grade 5 and especially after Grade 8. Therefore, minimising dropout rate and increasing GER, particularly at middle and secondary education level is also a thrust area of the policy.

- *In Higher Education*, a lack of multi-disciplinary approach and flexibility with regards to subject choice, assessment as well as a skill-gap: Dropout rate is also increasing in higher education institutions. At the same time Gross Enrolment Ratio (GER) is decreasing and remained about less than half of that is in middle and secondary education. It means many students are not enrolling in higher education. Hence, the policy mainly focuses on to minimizing dropout rate and increasing GER in higher education institutions.

- Moreover, overall thrust areas for NEP 2020 include childhood care, curriculum design, language/medium of instruction, teacher training, teacher appraisal, assessment pattern and evaluation and exam format. A new assessment centre called, PARAKH i.e. Performance, Assessment, Review and Analysis of Knowledge of Holistic Development is proposed to determine the standards for education.

STRUCTURAL HIGHLIGHT OF NEW EDUCATION POLICY 2020

1- **Foundation Stage- Five years Foundational Stage** provides basic education which is flexible, multilevel, play-based, activity-based, and discovery-based learning. Using time tested Indian traditions and cultures; this stage is continuously improved by research and innovation for the cognitive and emotional stimulation of children.

2- **Preparatory Stage-** Three years Preparatory stage consists of building on the play-, discovery-, and activity-based learning. In addition to it, this stage gradually introduces formal classroom learning with textbooks. The focus is to expose different subjects to the students and prepare them to delve deeper into insights. 3-Middle school education Stage- Three years of Middle school education focus on more abstract concepts in each subject like sciences, mathematics, arts, social sciences, and humanities. Experiential learning is the method to be adopted in specialised subjects with subject teachers.

3- **Students are exposed** to the semester system and yearly two class level examinations will be conducted.

4- **Secondary education Stage**- Four years of Secondary school education is designed to provide multidisciplinary subjects including Liberal Arts education. This stage will be built on the subject-oriented pedagogical and curricular style with greater depth, greater flexibility, greater critical thinking, and attention to life aspirations, Students are exposed to the semester system and will study 5 to 6 subjects in each semester. There will be Board exams at the end of 10th and 12th standards.

5- **Under-graduation Education Stage-** The Undergraduate degrees in every subject will be of either three- or four-year duration with multiple exit options including a certificate after passing first year, a diploma after passing second year, or a Bachelor 's degree after passing third year. The four years undergraduate degree programme is preferred with major, minors and research projects.

6- **Post-graduation Education Stage** The Master's degree – a one-year for four years bachelor degree students, a two-year degree for three years bachelor degree students, and an integrated five-year degree with a focus on high quality research in the final year. The Masters' degree will consist of a strong research component to strengthen competence in the professional area and to prepare students for a research degree.

7- **Research Stage Research- stage** consists of pursuing high quality research leading to a Ph.D. in any core subject, multidisciplinary subject, or interdisciplinary subject for a minimum period of three to four years for full-time and part-time study respectively. During Ph.D. they should undergo 8-credit coursework in teaching/ education/ pedagogy related to their chosen Ph.D. subject. The earlier one-year MPhil programme is discontinued.

8- **Lifelong learning-** The NEP 2020 proposes lifelong learning and research to avoid human beings becoming obsolete in society in terms of knowledge, skills, and experience to lead a comfortable life. It is believed that education and research at any stage of life will give further maturity for satisfaction in life.

THE IMPORTANT POINTS IN THE NATIONAL EDUCATION POLICY 2020

1- *The mother tongue or local or regional language is to be the medium of instruction* in all schools up to Class 5 (preferably till Class 8 and beyond), according to the policy. Under the NEP 2020, Sanskrit will be offered at all levels and foreign languages from the secondary school level.

2- *The 10+2 structure has been replaced with 5+3+3+4,* consisting of 12 years of school and three of Anganwadi or pre-school. This will be split as follows: a foundational stage (ages three and eight), three years of pre-primary (ages eight to 11), a preparatory stage (ages 11 to 14), and a secondary stage (ages 14 to 18). According to the government, the revised structure will "bring hitherto uncovered age group of three to six years, recognized globally as a crucial stage for the development of mental faculties, under school curriculum".

3- *Instead of exams being held every year, school students will sit only for three –* at Classes 3, 5, and 8. Assessment in other years will shift to a "regular and formative" style that is more "competency-based, promotes learning and development, and tests higher-order skills, such as analysis, critical thinking and conceptual clarity".

4- *Board exams will continue to be held for Classes 10 and 12* but even these will be re-designed with "holistic development" as the aim. Standards for this will be established by a new national assessment center – PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development).

5- *The policy, the government has said, aims at reducing the curriculum load* of students and allowing them to become more "multi-disciplinary" and "multi-lingual". There

will be no rigid separation between arts and sciences, between curricular and extra-curricular activities and between vocational and academic stream, the government said.

6- *To that end, the policy also proposes that higher education institutions* like the IITs (Indian Institute of Technology) move towards "holistic education" by 2040 with greater inclusion of arts and humanities subjects for students studying science subjects, and vice versa.

7- *The NEP 2020 proposes a four-year undergraduate program* with multiple exit options to give students flexibility. A multi-disciplinary bachelor's degree will be awarded after completing four years of study. Students exiting after two years will get a diploma and those leaving after 12 months will have studied a vocational/professional course. MPhil (Master of Philosophy) courses are to be discontinued.

8- *A Higher Education Council of India (HECI)* will be set up to regulate higher education; the focus will be on institutions that have 3,000 or more students. Among the council's goals is to increase the gross enrolment ratio from 26.3 percent (2018) to 50 percent by 2035. The HECI will not, however, have jurisdiction over legal and medical colleges.

PRINCIPLE GUIDELINES OF NEP 2020

The foundational pillars of this policy are *access, equity, quality, affordability and accountability.* The policy strongly believes in the thought that the purpose of education is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. Thus, it aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive and plural society as envisaged by our Constitution. The principle guidelines on which this policy is based are:

i. **Flexibility,** for learners to choose their subjects and programmes, and thereby choose their paths in life according to their own talents interests.

ii. **No hard separations between arts and sciences,** between curricular and extra-curricular activities, between vocational and academic etc. to ensure the integrity and unity of knowledge and eliminate harmful hierarchies among and silos between different areas of learning.

iii. **Multi-disciplinary and holistic education** across the sciences, social sciences, arts, humanities and sports for a multidisciplinary world.

iv. **Emphasis on conceptual understanding** rather than rote learning and learning for exams only, on creativity and critical thinking to encourage logical decision-making and innovation, on ethics as well as human and Constitutional values e.g. empathy, respect for others, cleanliness, etiquette, courtesy, democratic spirit, spirit of service, scientific temper, liberty, responsibility, pluralism, equality and justice and on life skills e.g. cooperation, teamwork, communication and resilience.

v.   **Regular formative assessment** for learning rather than the summative assessment that encourages today's coaching culture.

vi. **A respect for diversity and respect** for the local context in all curriculum, pedagogy, and policy by always keeping in mind that education is a concurrent subject.

vii. **Total equity and inclusion** is the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system.

viii. **Resource efficiency** without any compromise on equity and quality along with optimum utilisation of resources. Being teachers and faculty as the heart of a learning process, their rigorous recruitment and preparation, continuous professional development, positive working environments and service conditions are require to be assured.

ix. **A light but tight oversight and regulatory system** to ensure integrity and transparency of the educational system through audit and public disclosure while simultaneously encouraging innovation and creative ideas through autonomy, good governance and empowerment.

x.   **Outstanding research** as a prerequisite for outstanding education and continuous development.

xi. **Continuous policy-making** based on regular assessment of realities on the ground by educational experts.

xii. **A rootedness and pride in India** and its rich, diverse, ancient and modern culture, knowledge systems and traditions, and its forward looking aspirations to be incorporated in an accurate manner, and form an anchor and source of inspiration for all education.

xiii. **Education is a public service** and not a commercial activity or source of profit, and access to quality education must need to be considered a fundamental right of every citizen.

However, these guiding principles need to be followed in the process of implementation of the National Education Policy i.e. NEP 2020. They will certainly help to keep aside the hurdles in its smooth implementation and to overcome the challenges as well.

CONCLUSION

We know that a well-defined, well-designed and comprehensive education policy is essential for a country at school, college, and university levels due to the reason that education leads to economic and social progress. Even today, adoption of appropriate education system is necessary in consideration of the prevailing conditions. Thus, to be precise, it is well accepted fact that a good education policy always leads to good and quality education in a country.

National Education Policy 2020 (NEP 2020) is a welcome and ambitious re-imagination of India's education system into a modern, progressive and equitable one. Built on the

foundational pillars of Access, Equity, Quality, Affordability and Accountability, NEP 2020 is aligned to the 2030 Agenda for Sustainable Development (SD). It aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more olistic, flexible, multi-disciplinary, suited to 21st century needs. The policy calls for a large-scale implementation of a magnitude never before attempted anywhere in the world. The actual transformations will start from the academic year 2021-22 and will continue until the year 2030, where the first level of transformation is expected to visible. The mission is aspirational but the successful implementation depends upon how would implementers understand the challenges and try to overcome it. It requires great deal of acceptance, commitment, optimism, change in attitude, and mind-set. No doubt, the Government of India took a giant leap forward by announcing its new education policy i.e. the National Education Policy 2020 (NEP 2020), almost three decades after the last major revision was made to the policy in 1986. Even, the drafting committee of NEP 2020 has made a great attempt to design the policy that considers diverse viewpoints, global best practices in education, field experiences and stakeholders' feedback. The mission is aspirational but the implementation roadmap will decide if this will truly foster an all-inclusive education that makes learners industry and future ready

Lastly, to say, ***"National Education Policy (NEP 2020) brings in ambitious changes that could transform the education system. But the key here is good implementation and execution"***.

REFERENCES

❖ Bajwa S.B. (2003). ICT Policy in India in the era of liberalisation: Its impact and consequences. *Global Business and Economic Review GBER, 3* (2), 49 – 61.

❖ Biswas, A. (2021). Recommendations of commissions and committees on LIS education in India: An analytical study. Project: *A Critical Study on the Recommendations of Commissions and committees.* DOI: 10.13140/RG.2.2.24807.16800.

❖ Chhabra, A. (2014). Information and Communication Technology (ICT): A paradigm shift in teacher education. *Scholarly Research Journal for Humanity Science & English Language*, *1*(3), 308-317.

❖ Darling-Hammond, L., & Snyder, J. (2015). Meaningful learning in a new paradigm for educational accountability: An introduction. *Education Policy Analysis Archives*, *23*, 7. https://doi.org/10.14507/epaa.v23.1982

❖ Global Education Monitoring Report Team (2020). Global education monitoring report, 2020: Inclusion and education: all means all. CC BY-SA 3.0 IGO [10809], 860. https://unesdoc.unesco.org/search/N-EXPLORE-604187ff-60e3-46dd-8e09-12771c85bc12

❖ Government of India. (2016). *Digital India Newsletter*. Retrieved from digital india.gov.in/newsletter/newsletter_june/index.php

❖ Government of India, Directorate of education. NCT Delhi. (2006). CALTooz. Retrieved from http://edudel.nic.in/Caltoonz/content.html

❖ Government of India, MHRD, India. (2012). National policy on school education. http:/
  /m h r d . g o v . i n / s i t e s / u p l o a d _ f i l e s / m h r d / f i l e s / u p l o a d _ d o c u m e n t /
  revised_policy%20document%20ofICT.pdf.

❖ Government of India, MHRD. (2012). Vision of Teacher Education in India Quality
  and Regulatory Perspective. Department of School Education and Literacy, Vol 1.
  Retrieved form https://www.education.gov.in/sites/upload_files/mhrd/files/document-
  reports/JVC%20Vol%201.pdf

❖ Government of India, MHRD.(2020). National Policy Education. https://
  www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

❖ Government of India. MHRD. (1986). National Policy on Education. Retrieved form
  https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/npe.pdf

❖ Government of India. MHRD. (2010). Information and Communication Technology
  @Schools. Retrieved from http://ictschools.gov.in /sites/default/files/pdf/ ICTscheme.pdf

❖ Government of India. Planning Commission. Twelfth Five Year Plan 2012-17. Retrieved
  online: http://planningcommission.gov.in/ plans/planrel/ 12thplan/pdf/12fyp_vol3.pdf

❖ Gupta, B, L., & Choubey, A, K. (2021). Higher education institutions; Some Guidelines
  for Obtaining and Sustaining Autonomy in the Context of NEP 2020. *International
  Journal of All Research Education and Scientific Methods* 9 (1), January, 2021,

❖ Lauwers, G. (2019). Reshaping teacher training to get the right education system for a
  knowledge society. *Rethinking teacher education for the 21st century: Trends, challenges and
  new directions*, 43-53.

❖ Mathew, A. (2016). Reforms in Higher Education in India: A Review of Recommendations
  of Commission and Committees on Education. Centre for Policy Research in Higher
  Education. NUEPA, New Delhi

❖ National Council for Teacher Education (NCTE). (2010). National Curriculum
  Framework for Teacher Education. Retrieved from http://ncteindia.org/ncte_new/pdf/
  NCFTE_2010.pdf

❖ National Council of Educational Research and Training. (2005). National Curriculum
  Framework. Retrieved form https://ncert.nic.in/pdf/nc-framework/nf2005-english.pdf

❖ Viswanathan, K. (2020). A reality check on NEP 2020: 6 Major challenges in
  Implementation. India today, Available on: https://www.indiatoday.in/education-today/
  featurephilia/story/a-reality-check-on-nep-2020-major-challenges-inimplementation-
  1711197-2020-08-14

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Muslim Women as First-Generation Learners in Higher Education

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ABSTRACT

Higher education plays an important role in uplifting the status of first-generation learners economically and socially and when it comes to women as first-generation learners, the benefits are endless since when a girl becomes educated she is responsible for the development of upcoming and present generation in numerous ways. Higher education is responsible for enrich individuals to make them equip with the skills and open opportunities to make them self-reliant and a contributing member to the society. Muslim women first-generation learners aspiration level has also increased over the years but their to ensure their success at higher education institutions it is important to understand their experiences as first-generation learners at higher education institutions so that they be helped in a better way. Psycho-social experiences of muslim women as first-generation learners were discussed in this paper using qualitative approach.

Keywords: First-generation Learners, Muslim Women, Higher Education, Psycho-social Experiences.

INTRODUCTION

When it comes to women as first-generation learners, the advantages are endless because when a girl is educated, she is responsible for the development of the present and future generations in many different ways. Higher education is a big part of how first-generation learners can improve their economic and social standing. So, helping women who are the first in their families to go to college can have a positive effect on their families, communities,

and society as a whole. By giving them access to higher education, we can give them the tools they need to break out of the cycle of poverty and help their countries grow and improve. Also, women with more education are more likely to have better health and be involved in making decisions, which can make society more fair and equal. We know that higher education provides people, including first-generation students, with opportunities to grow and succeed in life. However, it may be routine for people whose earlier generations have accessed higher education. But, the first generation learners often find it very tough to achieve higher education because of the sense of isolation. There can be many reasons why they feel isolated. Because higher education leads to occupational success and social status, it is extremely valuable and appealing to first-generation students. In addition to confronting all the anxieties, dislocations, and difficulties that most college students face, first generation students also experience unique cultural, social, and academic transitions (Ishitani, 2006; Pascarella, Pierson, Wolniak, and Terenzini, 2004).

WHO ARE FIRST-GENERATION LEARNERS?

First-generation learners have been defined in different ways. The most restrictive definition is that used by the National Centre for Educational Statistics (NCES): the student is the first in the family to pursue education beyond high school. In indian context first-generation learners are defined as students whose parents has no access to formal education at all (khanna, 2010; Jayeeta, 2013; Ghosh, 2014). First-generation learners (FGL) here, are the first in their family, relatives, and generation to attend college or university. Their parents had only primary or secondary education.

NATURE OF CHALLENGES OF FIRST-GENERATION LEARNERS

Being the first member of your family to attend college may improve your work opportunities and financial security. That involves peril. First-generation college students endure substantial challenges. There may be challenges with culture shock, academic preparation, and finances. First-generation students are disadvantaged economically and academically. They are backwards linguistically, academically, socially, and economically. The majority of these students are the offspring of illiterate farm workers, bonded labourers, and municipal sanitation workers (Awasthi, 2018). Due to their low socioeconomic background, first-generation learners are often labelled "stupid" or "retarded," which may encourage them to embrace these labels. According to (Gosh, 2014) first-generation learners are "at the intersection of two cultures" and must frequently renegotiate school and family ties to manage the conflict (2014).

As first-time college students, they experience academic, psychological, economic, and cultural obstacles. These brilliant college students struggle to manage the complexities of higher education. The experiences of Muslim women as first-generation students forging new routes are essential because educational standards have increased dramatically over the past few decades. Instructors do not view first-generation learners (FGLs) as problematic, and universities do not assist them with academics, adaptation, or stress. No one at the

university views FGL as disadvantaged due to their disability. Some teachers counsel them individually, but this is insufficient. FGL issues require an impartial body. Teachers expect them to achieve as well as non-FGL students because they lack academic support. Many students are inhibited by expectations.

NEED FOR THE STUDY

This study analyses the problems and achievements of Muslim women who are first-generation college students. Muslim women have a low rate of literacy, but despite the obstacles, some achieve success in higher education. According to the Sachar Committee Report (2006), the education level of Muslim women is low, the literacy rate of female Muslims is 50.1%, which is significantly lower than that of their male counterparts (67.6%) and the national average of 53.2%. Northern and eastern states had literary rates below the national norm, while many southern states had literary rates above the national average. Causes cannot be predicted. 64.3% of Muslims live in rural areas, whereas 59.1% are literate. Muslims in rural areas have an illiteracy rate of only 52.7%, and female illiteracy is considerably lower.

Muslim Women suffer more than other women, which negatively impacts their academic performance and mental health. Education is difficult for rural Muslim women due to poverty, a lack of transportation, cultural obstacles, and early marriage. To improve the literacy and well-being of this population, it is necessary to address these difficulties. Few Muslims attend college as a result of these restrictions, and women are less educated than men. Many drop out or lose interest in school. According to the 1990 National Sample Survey of India, 2.3% of male Muslims and 0.8% of female Muslims held a bachelor's degree. In 1999-2000, Muslim participation in higher education in urban and rural regions was 3.9% and 0.8%, respectively, compared to 11.5% and 1.8% for Hindus. These numbers demonstrate the need for targeted steps to decrease the education gap among Muslims in India, particularly women. Increase educational access, financial support, and cultural and societal obstacles that hamper the academic growth of Muslim students.

Some high school graduates have difficulty gaining admission to colleges and universities. There are obstacles for those who enrol in college to remain enrolled and graduate (Horn and Nuez, 2000; Nuez and Cuccaro-Alamin, 1998; Warburton, Bugarin, and Nuez, 2001). First-generation college students require guidance, assistance, and motivation. Parents who wish to assist their daughters are unable to do so. Females who defy their families by pursuing an education are continually discouraged. These girls need a specific structure of support to overcome their academic deficiencies and guide them towards a brighter future. They require assistance with home and college changes.

RESEARCH QUESTIONS

Q.1   What are the challenges Muslim women face while acquiring higher education?

Q.2   What coping mechanism they adopt to overcome these challenges?

Q.3   How does education help them to overcome their challenges?

OBJECTIVES

◆ To identify the challenges Muslim women face while acquiring higher education.

◆ To study the cope-up mechanism they adopt to overcome these challenges.

◆ To understand their perspective of education

RESEARCH METHODOLOGY

The qualitative research design using case study method was found to be most suitable to study the experiences of Muslim women as first-generation learners in higher education.

Population

Muslim women who are first-generation learners and accessed higher education

Sampling Method

The study involved 6 Muslim women who are first-generation learners and accessed higher education, residing in Delhi at present. Participants were selected using purposive sampling. These women either enrolled at higher education institutions at present or passed out from different universities.

Data collection

Data has been collected using semi-structured interview schedule constructed by researcher to study the experiences of muslim women as first-generation learners in higher education. All the participants were informed about the purpose of the study and their consent was obtained regarding recording of their responses during interview. The duration of interview ranges between 20 to 60 minutes and were recorded using mobile phones.

ANALYSIS OF DATA

Data was analysed qualitatively using thematic analysis to address the research questions. Interviews was transcribed and read line by line to to identify emerging codes and themes.

Results

Themes identified by researcher after analysing the data

Academic challenges

First-generation learners has to navigate the higher education system on their own, lack of guidance is the main concern even after enrolling at higher education institution, they found themselves in the need of mentors. Things becomes harder for them in the absence of guidance.

Stress

They have difficulty balancing college, home, and chores. They may prepare meals, clean, and care for their family at home. They must excel in the classroom and on tests. This can

cause anxiety for FGL college students. They are anxious because the teacher expects them to perform as well as other students. They are stressed by the demands of their teachers. Long-term aspirations caused them concern. Because they are new to college, they occasionally choose subpar courses, which makes matters worse. Children frequently regret financially burdening their parents.

Low self-esteem

When FGL enters in college they feel inferior. Their language skills, dressing habits and different environment make them feel inferior at college. Their home environment is very different from other students that?s make them feel lesser than others.

Language barrier

Since first-generation learners are from disadvantaged background, they are continuously feeling that their language skills are not good enough to succeed in higher education.

Social barriers

Muslim Women as first-generation learners continuously facing society since she is breaking the norms of their homes by getting into higher education. They often have to face the criticism from the society.

Hard work

First-generation learners tried to overcome all the challenges by continuously doing hard work in their studies so that they can gain the confidence of their parents. They are self-motivated hard working women who aspire to do better in life.

Self-motivation

First-generation learners are self motivated learners who became inspiration in their families too and they feel motivated about this. They want to contribute for the betterment of their families and coming generations.

Identity formation

When FGL goes for higher studies then they find a place to explore their innate qualities. They realise the realities of life, meet different type of people and have a chance to take different experiences.They overcome stereotypes as their thinking becomes wider and rational. They can decide for themselves and start challenging wrong things in the society and that?s how they undergo transformation.

Technology

Although technology contributed in education field generally, but particularly It proven to be a big support in the lives of first-generation learners. Role of technology helped those hesitant students who didn't ask for help from teachers although they were suffering in their studies. A lot of information and learning is possible only because of online platforms of learning.

DISCUSSION

Despite various obstacles, first-generation Muslim women excel in places where their family have never been. This appears both thrilling and disturbing. These women negotiated education with their families and society. They would be benefit from more inclusive practises. The problems faced by these women illustrate the need for an egalitarian and accessible education system that serves the diverse needs of learners. By aiding marginalised people, we can develop a more egalitarian society. Higher education institutions should track first-generation students for practical support. Colleges and institutions should mandate the presence of counsellors in order for first-generation female students to get guidance and maximise their potential. To help students become self-sufficient, productive, and economically successful, the curriculum should include scholarships, remedial classes, and self-assurance-building lifestyle activities. Despite its importance, India is technologically lagging. As we move towards a knowledge-based society, these obstacles must be addressed. The government should invest in internet infrastructure and rural technology to bridge the technological divide. This will provide all students with equal opportunities to succeed in a rapidly changing world.

REFERENCES

❖ Ahmad, Fozia, 2006. Identities and experiences of Muslim women in higher education retrieved from https:/www.researchgat.net/publication/45667132_ Muslim_women _and_higher_education_identities_experiences_and_prospectus

❖ Awasthy,G.,& Khimani,V.(2015).Academic challenges faced byFirst-generation learners Academic challenges faced by first generation learners in an NGO-run school vis-a-vis government school in the Nainital district (Uttarakhand) of northern India.

❖ Choy, S. (2001). Students whose parents did not go to college: Post-Secondary access, persistence and attainment (NCES statistical Report 2001-126). Washington, DC

❖ Ghosh, S.,(2014.)The Silent Exclusion of First Generation Learners From Educational Scenario-A Profile From Puncha Block of Purulia District, West Bengal. International Journal of Development Research Vol. 4, Issue, 3, pp. 804-811.

❖ Hassan Zoya and Ritu Menon (July 1, 2005), Educating muslim girls

❖ Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. The Journal of Higher Education,

❖ Khosrojerdi, Farzaneh,(2015, June). Experiences of female students in Higher Education in Canada retrived from https://ir.lib.uwo.ca/etd/2896

❖ Rajindar, (November 17, 2006) Sacher committee report on muslim women

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3

A Study of Physical Resources and Environment Dealt By Student-teachers of D. El. Ed. Programme during Virtual Teaching-Learning

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ABSTRACT

Covid-19 has affected the life of every student in multifarious ways. It has disturbed every walk of their life as they faced changed role of their parents, friends' teachers, school etc. Within days they found that face-to-face learning changed into on-line learning. This abrupt change might not have been easy for them. It brought many challenges for the students in teaching learning process in general and specifically for student-teachers who are undergoing a professional course like D.El.Ed. A situation of digital divide has also arisen due to non-availability and no usability of technical resources by student-teachers as part of society. These situations have given birth to too many challenges in the way of their learning. So, there is a need to study these challenges and find the ways to overcome them in order to provide students better learning in real sense.

Keywords: : Physical Resources, Virtual Teaching Learning and Environment

INTRODUCTION

Diploma in Elementary Education (D El. Ed.) is a professional course of two years duration for students who propose to become teachers at elementary level. It is provided by District Institute of Education and Training (DIET) working under State Council of Education and Training, Delhi (SCERT). Students-teachers of D. El. Ed. Course study and practice teaching of various subjects in real classrooms, called School Experience Programme (SEP). Every year forty to forty-five working days are devoted for SEP in which student-teachers delivered

at least forty lessons including all subject at primary level and forty lessons of any two subjects at upper-primary level along with the lessons of Health and Physical Education, Art Education and Work Education.

Student-teachers are well oriented with various skills of teaching through ten days training on Micro- teaching. During the training student-teachers are given opportunities to observe the demonstration of different teaching-skills first, and then they practice teaching and re-teaching using the skills of introduction and explanation of the lesson, narrating a story or rhyming a poem with gestures and voice modulation, doing black-board writing while explaining concepts, using teaching-learning material etc. All these skills were observed and practiced by student-teachers in face to face mode before the spread of covid 19. Student-teachers of D. El. Ed. Course in Delhi were being taught through virtual interaction mode for one and a half to two years approximately starting from March 2020. The normal practice of being involved in face to face interaction was changed into virtual mode due to Covid-19 in a few days without any physical and mental preparation on the part of teacher-educators and student-teachers both. There are individual differences as far as flexibility and fortitude to work and learning are concerned. Thus, there is a need to study the challenges faced by student-teachers for better teaching-learning in virtual mode. In the present study an attempt has been made, "A study of Physical Resources and Environment dealt by student-teachers of D. El. Ed. programme during virtual teaching-learning."

OPERATIONAL DEFINITION OF THE TERM USED IN THE STUDY

Virtual Teaching-learning: Virtual teaching-learning is one in which teaching-learning is done through a device like a mobile or a laptop. It is not a face to face interaction but an on-line interaction.

OBJECTIVES OF THE STUDY

1. To study the socioeconomic status of student-teachers of D. El. Ed. Course.
2. To study the various challenges related to availability of physical resources faced during virtual teaching-learning.
3. To study the various challenges related to availability of physical environment at home, during virtual teaching-learning.

DELIMITATIONS OF THE STUDY

1. The study was confined to the student-teachers of D. El. Ed. II year only as they were studying through virtual teaching-learning for the last one and a half year.
2. The study was conducted on Student-teachers of DIET Pitampura only.
3. FGD was conducted on those students-teachers who filled Questionnaire and SES.

RESEARCH METHOD

Descriptive survey method and Data triangulation strategy were used to study the challenges faced by student-teachers of D. El. Ed. programme during virtual teaching-learning. The study involved eighty-five student-teachers of DIET, Pitampura which is one of the Govt. DIET of Delhi. Study involved both type of data viz., Qualitative and Quantitative data.

Population: Student-teachers of second year of D. El. Ed. Programme in all the Govt. DIETs of Delhi.

Unit of selection: DIET

Sampling: Convenience sampling technique was used for selection of a DIET for sampling in Delhi. All the student-teachers of second year in D. El. Ed. programme in sample DIET were selected as sample in the study. There were ninety-two student-teachers in second year for D. El. Ed. programme in DIET, Pitampura but only eighty-five student-teachers participated in the study. Seven student-teachers could not join due to their personal issues.

TOOLS

A standardized Socioeconomic Scale (SES) was used along with a self-developed Questionnaire and a Focus Group Discussion (FGD) for student-teachers of D. El. Ed. programme by the coordinator.

SOCIOECONOMIC SCALE

To know the socioeconomic status of the student-teachers selected as sample for the study "Modified Kuppuswamy socioeconomic scale updated for the year 2021" was used.

The Kuppuswamy SES has used occupation, education and total monthly income of the family as three parameters and each parameter is further divided into subgroups. Scores have been allotted to each subgroup. The total score of SES ranges from 3 to 29.

QUESTIONNAIRE

1. The Questionnaire was developed in order to study various challenges faced related to availability of physical resources and physical environment at home, during virtual teaching-learning.

The Questionnaire had three parts, namely A, B and C. Part A had questions for getting information about the demography of student-teachers. This part included questions regarding their name, section, serial number and roll no.

Part B of the questionnaire consisted of 5-point rating scale. Options given were: Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. Both types of statements i.e. negative and positive were framed on each parameter.

Part C of the Questionnaire consisted of subjective type questions. These questions were asked to know the justification and reason for responses opted for objective type questions

in part A and B of the Questionnaire. Though the questions framed were subjective in nature but required small and to the point answer.

Focus Group Discussion (FGD)

As the Questionnaire consisted of rating scale and objective type of questions so, it was decided to plan a Focus Group Discussion (FGD) to know the opinion, justification and reasoning for choosing an option in the Questionnaire. The content validity of the same was checked by the experts of the field.

Administration of Tools

Due to Covid 19 on its peak and DDMA order offline classes in DIET were suspended and all the work was being done through online mode. A few days later due to reduction in the number of cases in Delhi offline classes were started on alternate basis for student-teachers in DIET, Pitampura in the month of September 2021. Student-teachers were oriented about the present study. Their consent was taken for being the part of the study.

SES was conducted in the month of September 2021. After a gap of four days a Google Form of Questionnaire was provided to student-teachers through whatsapp group.

FGD was conducted on all those student-teachers (85) who filled SES and Google form. They were given assurance at the beginning of the SES that their responses would not affect them in any way. So, they could give responses freely according to their own thinking, feeling and insight. They were asked questions from FGD one by one in group consisting of seven student-teachers. Their answers were recorded and listed.

ANALYSIS OF DATA

(1) Socioeconomic status

Modified Kuppuswami socioeconomic scale updated for the year 2021 was used to know the socioeconomic status of student-teachers. The data was collected, tabulated and presented in the table 1.

Table 1: Data distribution represent the Socio-Economic Class of student-teachers (N=85)				
S No.	Socio-Economic Class	Range of Scores	Frequency Number	Frequency Percentage
1	Upper	26-29	–	
2	Upper Middle	16-25	6	7
3	Lower Middle	11-15	5	6
4	Upper Lower	5-10	62	73
5	Lower	<5	12	14
		Total	85	

The data represented in the table 4.1 revealed that the socioeconomic status of the three-fourth of student-teachers belonged to upper lower class (73%),while one-seventh (14%) belonged to lower class and negligible belonged to upper (7%) and lower middle (6%) class.

From the data presented in the table 1, it may be concluded that socioeconomic status to which student-teachers of D. El. Ed. programme belonged was upper lower class accept a few.

(2) Challenges related to availability of physical resources

2.1 Availability of device: Student-teachers were asked whether any type of device was available with them for attending classes held in virtual mode.

Table 2.1 : Distribution of data showing availability of devices (N=85)			
S No	Option	Number	Percentage
1	Yes	70	82.4
2	No	15	17.6

The device was available with more than eighty percent student-teachers (82.4%) and remaining had no device for attending classes held in virtual mode.

During FGD student-teachers revealed that in the beginning of online classes the device was not available with them but latter they managed to share it, borrow it or purchase it for attending classes.

Nearly twenty percent student-teachers had no device available with them for attending teaching-learning process in virtual mode.

2.2 Access to device: In order to know student-teachers had access to which device for attending classes in virtual mode, they were asked about availability of device with the options like whether they had mobile phones or laptop or desktop or both. Data collected has been tabulated in table 2.2.

Table 2.2 : Distribution of data showing devices used (N=85)			
S. no.	Name of Device	Number	Percentage
1	Mobile	80	94.1
2	Laptop	1	1.2
3	Desktop	Nil	Nil
4	Mobile & Laptop	4	4.7
5	Mobile & Desktop	Nil	Nil

The data represented in table 2.2 revealed that a majority of student-teachers (94.1%) used Mobile for attending teaching-learning through virtual mode. No student-teachers used Desktop for attending teaching-learning through virtual mode. Negligible number of student-teachers (1.2% and 4.7%) used Laptop and both devices Mobile and Laptop for attending teaching-learning through virtual mode respectively.

From the data presented in the table 2.2 it may be concluded that mobile phone was the device mainly used by student-teachers of D. El. Ed. program for attending teaching-learning in virtual mode.

2.3 Extent of usage: Student-teachers were asked about the extent of usability of Mobile phone with them for attending classes in virtual mode. The data was collected, tabulated and presented in the table 2.3.

S No.	Options	Number	Percentage
**Table 2.3: Distribution of data showing extent of usage to mobile phones (N=85)**
1	Always	31	36.5
2	Mostly	39	45.9
3	Sometimes	12	14.1
4	Rarely	3	3.5
5	Never	Nil	Nil

The data represented in Table 2.3 revealed that just more than one-third student-teachers (36.5%) in the sample group always had a Mobile phone for their use. Whereas nearly half the number of sample student-teachers had access to mobile phone for their use most of the times. About one-seventh student-teachers in the sample group sometimes had a mobile phone and a few of them rarely had it for their use.

During FGD those student-teachers who sometimes had a mobile phone revealed that they used to share mobile phone with their siblings at home. They used to attend only limited classes which they found more important to them.

From the data presented in table 2.3, it may be concluded that in all 17.6% student-teachers had difficulty in attending teaching-learning through virtual mode due to availability of mobile with them either sometimes or rarely.

2.4 Internet: Data represented in Table 2.4, revealed that more than seventy percent student-teachers (73%) used mobile data for attending teaching-learning through virtual mode.

		Wi-Fi	Mobile Data	Both
**Table 2.4 : Distribution of data showing availability of Internet connection for N=85**
Internet Connection available with student-teachers	Number	14	62	9
	Percentage	16.5	72.9	10.6

During FGD they revealed that sometimes they used Wi-Fi and sometimes used mobile data for attending teaching – learning through virtual mode. Number of student-teachers who had Wi-Fi connections at their home was not more. They were mostly dependent on mobile data for attending teaching-learning through virtual mode.

From the data presented in table 2.4, it may be concluded that student-teachers of D. El. Ed. program used mobile data mainly for attending teaching-learning through virtual mode.

During FGD they revealed that many a times they did not attend classes as it would use all their data for that day. They told that they used to purchase small plans and not plan of unlimited data for cost effectiveness. Some student-teachers told that due to lockdown they faced challenges of living hood. So, the question of getting internet plan in mobile was far from thinking. One child revealed, "mere mobile plan mein 1 gb data roze milta h per sari classes attend kerne ke liye mujhe atleast 2gb data chahiye hota tha, to mein kya kerta lunch time tuk to classes ghur mein attend kerta or lunch time mein ghur ke pass ke office mein jaker unka wi-fi use ker leta tha. Per vhan keval mein sunta tha interact nhi kerta tha

2.4.1 Erratic Power Supply: Student-teachers were asked about the challenge related to erratic power supply. The data was collected, tabulated and presented in table 2.4.1.

Table 2.4.1: Distribution of data showing erratic power supply for N=85							
S No	Challenge		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I hardly faced any challenge in attending classes due to erratic power supply.	No.	6	49	13	6	11
		%	7	57.6	15.3	7	12.9

The data represented in table 2.4.1, revealed that nearly twenty percent student-teachers agreed with the fact that they faced challenges in attending classes due to erratic power supply whereas eighty percent of the student-teachers were not agreed with the same fact. That means erratic power supply was a challenge for one-fifth proportion of the sample group.

2.4.2 Uninterrupted Internet: Student-teachers were asked whether they had an access to required software and uninterrupted internet connectivity in order to attend virtual classes. The data was collected, tabulated and presented in table 2.4.2.

Table 2.4.2: Distribution of data showing access to software and uninterrupted internet Connectivity (N=85)							
S No	Challenge		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I had access to required software and uninterrupted internet connectivity which enabled me to attend virtual classes.	No.	1	19	14	42	9
		%	1.2	22.4	16.5	49.4	10.6

The data represented in table 2.4.2 revealed that more than half the number of student-teachers agreed that they had access to required software and uninterrupted internet

connectivity which enabled them to attend virtual classes. Whereas one-fourth of the number of student-teachers disagreed with the statement and nearly one-sixth of the number of student-teachers gave no response.

During FGD those student-teachers who opted for neutral response disclosed that they did not have access to required software and uninterrupted internet connectivity which enabled them to attend virtual classes but they managed the access somehow.

Tables 2.4.1 & 2.4.2 show that erratic power supply, internet connectivity and access to require software was a challenge for nearly one-fifth and half the number of student-teachers respectively.

Software available:

Student-teachers were asked about the software available with them. Almost all of them revealed that MS Word and PPTs were available with them. They used the same during SEP also. Twenty-five percent student-teachers revealed that they preferred WPS instead of MS Word.

Student-teachers told during FGD that in the beginning, when classes were started in on line mode they used Zoom platform mainly. They took the help of siblings, friends and You tube for learning how to create a link? And how to join and attend meetings with the link provided? How to mute and unmute during the meeting? But as the time passed student-teachers leant to use many other platforms like Google meet, Cisco WebEx and Google classroom.

During FGD student-teachers told that in the beginning of the virtual mode, everything was very confusing as they were not aware of how to join classes through a link. But they mentioned that slowly and gradually they learnt it and use other platforms as well.

(3) Challenges related to Physical Environment at home

Student-teachers were attending online classes from their home where they missed peer interaction. They used to hesitate in keeping themselves unmute in the class. Some student-teachers mentioned that at home due to lack of learning environment it was very difficult to concentrate in the class.

3.1 Lack of separate peaceful corner at home: Most of the student-teachers mentioned that attending classes in virtual mode at home was very demotivating for them. They further mentioned that lack of separate peaceful corner at home for attending virtual teaching-learning was a source of distraction during on-line classes. The data regarding the same was collected and tabulated.

S No	Challenge		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Table 3.1: Distribution of data showing lack of separate peaceful corner at home (N=85)						
1	Lack of separate peaceful corner at home for attending virtual teaching-learning was a source of distraction during on- line classes.	No.	1	16	13	33	22
		%	1.2	18.8	15.3	38.8	25.9

The data represented in table 3.1, revealed that more than sixty percent agreed with the statement that lack of separate peaceful corner at home was a source of distractions during teaching-learning through virtual mode. They were not able to concentrate in the class as all the family members were sitting in one room. They were not able to unmute and ask their doubts as the sound of other family members disturbs the class. Twenty-two out of eighty- five strongly agreed that lack of separate peaceful corner at home was the source of distractions during teaching-learning through virtual mode.

Seventeen student-teachers disagreed with the statement and revealed that a peaceful separate corner was not a challenge for them. Thirteen student-teachers were neutral in their response to the same.

During FGD, some of them revealed that while attending classes we were given other home tasks to perform like cutting of vegetables, cleaning etc. Family members pointed out, "khali sun na to h, sath sath sunte jao. Koee dekh thoda na rha h". They further mentioned that due to noise at home they could not unmute themselves to ask doubts during classes in virtual mode.

MAJOR FINDINGS & CONCLUSION

The socio-economic status of student-teachers of D.El.Ed program was upper lower class, except a few as per modified version of Socio-Economic Scale of Kuppuswamy (2021), Indian Journal of Research, vol. 7, issue-3 p. 217-218. It clarified that total scores of occupation & education of the head of the family and total monthly income of the family ranges from 5 to 10 (as per scale) except a few.

Due to Covid 19, the teaching-learning process of D.El.Ed. program began in virtual mode. In the present study various challenges faced by student-teachers of D.El.Ed. programme are discussed. Dimension wise challenges are given:

CHALLENGES RELATED TO AVAILABILITY OF PHYSICAL RESOURCES

Nearly twenty percent student-teachers did not have any device to attend classes in virtual mode. To begin with it was a big challenge for them but later on they managed to share the device, borrow it or purchase it for attending classes. Mobile phone was the device which was mainly used by the student-teachers of D.El.Ed. program for attending teaching-learning in virtual mode. Sixteen percent student-teachers who managed to share mobile phone with their siblings used to attend only limited classes which they thought were more important.

Hence, such student-teachers had difficulty in attending all classes through virtual mode as they did not have availability of any mobile phone with them regularly. A majority of student-teachers used mobile data mainly for attending teaching-learning through virtual mode. Many a times they did not attend all the classes as it would had used all their data for that day. They told that they used to purchase small plans and not any plan with unlimited data for cost effectiveness. Ten percent of student-teachers faced challenges of livelihood due to lockdown. Getting internet plan in mobile was far from their reach. One child revealed, "mere mobile plan mein 1 gb data roze milta hai per sari classes attend kerne ke liye mujhe atleast 2gb data chahiye hota tha, to mein kya kerta lunch time tuk to classes ghur mein attend kerta or lunch time mein ghur ke pass ke office mein jaker unka wi-fi use ker leta tha. Per vhan keval mein sunta tha interact nahi ker sakta tha. It was very challenging to even self study as it also required internet data.

As per student-teachers version erratic power supply was also a challenge for them in attending all the classes regularly. Internet connectivity and access to the required software was a challenge for 40% to 50% student-teachers. Whereas 10% to 15% of them managed its access through friends and other known persons but for remaining it was a big challenge in attending classes in virtual mode. The change over from offline mode to online was sudden and abrupt due to pandemic and many student-teachers were not aware of how to join classes through a link or how to create a link or how to mute/un-mute during the meetings? The reason being due to non availability of physical resources with them, they were not aware of the use of all these things. So, in the beginning the virtual mode was very difficult for them in terms of procurement of a proper device, internet facility, software etc on one hand and learning to use them in attending classes and delivering lessons in SEP on the other. With the passage of time they procured these resources and learnt their use for attending classes in virtual mode. **Challenges related to Physical Environment at home**

Student-teachers faced challenges related to physical environment at home due to lack of separate peaceful place at home. It was a source of distraction during on line classes as all the family members were sitting in one room. They were not able to ask their doubts as sound of other family members could disturb the class. It was in agreement with "Parents need to help print material, ensure their children have the tools they need, as well as a quiet place to learn" (Normen Nic, 2020). Some of the student-teachers also mentioned that they were given other tasks to perform like cutting vegetables, washing etc. while attending classes at home. One student-teacher mentioned that my family member pointed out, "khali sun na to hai, kam ke sath sath sunte jao. Koee dekh thoda na rha hai". It was in agreement with "Creating a learning environment at home can have a significant impact on students" (Normen Nic, 2020).

MAJOR FINDINGS AND CONCLUSIONS

Major findings related to the challenges faced by the student-teachers during virtual teaching-learning were concluded on the basis of analysis of data. These findings are given as follows:

Socio-economic Background of the Respondents

Seventy three percent student-teachers belonged to the upper lower class, while 14% belonged to the lower class and 7% belonged to the upper and 6% to the lower middle class.

It may be concluded that socio-economic status to which student-teachers of D.El.Ed programmed belonged were upper lower class except a few as per modified version of Socio-Economic Scale of Kuppuswamy (2021).

Challenges related to Availability of Physical Resources

Availability of device

Availability of device for attending classes through virtual mode was a challenge for eighteen (18%) percent of the number of student-teachers of D. El. Ed. programme. In the beginning of online classes the device was not available with them but later on they managed to share it, borrow it or purchase it for attending classes.

Access to Device

Mobile phone was the device mainly used by the student- teachers of D.El.Ed program for teaching-learning in virtual mode.

Extent of Device Usage

In all, 17% respondents had difficulty in attending teaching- learning through virtual mode due to non-access of any mobile phone with them.

Internet

Number of respondents who had Wi-Fi connections at their home was not more. They were mostly dependent on mobile data for attending teaching- learning through virtual mode. *student-teachers of D. El. Ed. program used mobile data mainly for attending teaching-learning through virtual mode. During FGD they revealed that many a times they did not attend classes as it would use all their data for that day. They told that they used to purchase small plans and not plan of unlimited data for cost effectiveness. 10% told that due to lockdown they faced challenges of livelihood. So, the question of getting internet plan in mobile was far from thinking.*

Erratic Power Supply

Nearly 20% student-teachers agreed with the fact that they faced challenges in attending classes due to erratic power supply.

Uninterrupted Internet

Internet connectivity and access to require software was a challenge for 40% to 50% student- teachers. Whereas 10% to 15% of them managed its access but for remaining it was a big challenge in attending classes in virtual mode. Erratic power supply was also a big challenge for them.

◆ Software available

Hundred percent (100%) of the number of student-teachers revealed that MS Word and PPTs were available with them. They used the same during SEP also. Twenty-five percent (25%) of them revealed that they preferred WPS instead of MS Word.

During FGD student-teachers told that in the beginning of the virtual mode, everything was very much confusing as they were not aware of how to join through link. Sometimes after joining the class there was too much voice break. Further they told that slowly and gradually they learnt to use other platforms.

CHALLENGES RELATED TO PHYSICAL ENVIRONMENT AT HOME

◆ Lack of separate peaceful corner at home

Thirty-nine percent student-teachers agreed with the statement that lack of separate peaceful corner at home was the source of distractions during teaching-learning through virtual mode. They were not able to concentrate in the class as all the family members were sitting in one room. They were not able to unmute and ask their doubts as the sound of other family members disturbs the class. Whereas 25.9% of them strongly agreed that lack of separate peaceful corner at home was the source of distractions during teaching-learning through virtual mode. But 20% student-teachers disagreed with the statement and revealed that a peaceful separate corner was not a challenge for them while 13% were neutral in their response to the same.

Sixty-five percent student-teachers agreed that lack of separate peaceful corner at home for attending virtual teaching-learning was a source of distraction. During FGD, some of them revealed that while attending classes we were given other home tasks to perform like cutting of vegetables, cleaning etc. Family members pointed out, *"khali sun na to hai, sath sath sunte jao. Koee dekh thoda na rha h"*. They further mentioned that due to noise at home they could not unmute themselves to ask doubts during classes in virtual mode.

It may be concluded that more than half the number of sample student-teachers faced the challenge of lack of separate peaceful corner at home for attending classes in virtual mode. Along with this they faced the challenge of absence of learning atmosphere at their homes and absence of attitude of family members towards their studies.

BIBLIOGRAPHY

(1) Goldstein M, Hill T, Nisbet R, et. al. Socioeconomic Status - an overview | Science Direct Topics [Internet]. Available from: https://www.sciencedirect.com/topics/medicine-anddentistry/socioeconomic-status.

(2) Institute of Medicine (US) Committee on Assuring the Health of the Public in the 21st Century. The Future of the Public's Health in the 21st Century. Washington (DC): National Academies Press (US); 2002. 5, The Health Care Delivery System. Available

from: https://www.ncbi. nlm.nih.gov/books/NBK221227/. 3. Singh T, Sharma S, Nagesh S. Socio- economic status scales.

(5) Bairwa M, Rajput M, Sachdeva S. 2012 Modified kuppuswamy socioeconomic scale: social researcher should include updated income criteria. Indian J Community Med. 2013; 38(3):185–6. doi:10.4103/0970-0218.116358.

(6) Normen Nic, 2020 Challenges of the Virtual classroom, Blog, Education, Teachers,

(7) Banks Andrea, September 15, 2020, Common Obstacles students face in a virtual Classroom and how to manage them, Blog/INSIGHTS TO BEHAVIOUR/. https://insightstobehavior.com/blog/common-obstacles-students-face-virtual-classroom-manage/

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4

Ethical, Social and Technical Challenges and its Overcome of Artificial Intelligence in Education

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ABSTRACT

The use of artificial intelligence (AI) in education is growing, but it also brings ethical, social, and technical challenges. One ethical challenge is the potential for bias and discrimination in AI algorithms. To overcome this, AI systems should be designed with fairness and equity in mind and regularly audited for bias. Another challenge is the potential for job displacement, as AI can automate tasks currently performed by educators. Investing in reskilling and upskilling educators can help overcome this challenge. Finally, there is a need for interoperability and data privacy, as AI systems require large amounts of data to function effectively. To overcome this, technical standards for data interoperability and privacy should be developed, and all stakeholders involved in the use of AI in education should be aware of their responsibilities for protecting student data. In this paper, we will discuss the challenges of AI in education, including ethical, social, and technological issues.

Keywords: Artificial Intelligence, Ethical Challenges, Social Challenges, Technical Challenges, Reskilling, Upskilling, Interoperability, Data Privacy, Technical Standards, Stakeholders.

INTRODUCTION

Artificial Intelligence (AI) can be used in various areas of education, including student assessment, personalization of learning, and administrative tasks. In student assessment, AI can be used to provide personalized feedback and adaptive testing, which can help students identify areas where they need more support and guide them towards the most effective

learning strategies (Martin, 2018). AI can also be used to personalize learning experiences by providing tailored content and recommendations based on students' interests, abilities, and learning styles (Holstein & Solomon, 2018). Furthermore, AI can help automate administrative tasks such as grading, scheduling, and course planning, allowing educators to focus on more impactful activities such as teaching and mentoring students (Bielikova & Simko, 2020).

AI has revolutionized many industries, from healthcare to finance, and education is no exception. AI has the potential to transform education, making it more personalized, efficient, and effective. However, the implementation of AI in education is not without its challenges. In this paper, we will discuss the challenges of AI in education, including ethical, social, and technological issues.

ETHICAL CHALLENGES OF AI IN EDUCATION

Bias and Discrimination

AI algorithms can be biased, perpetuating existing social and cultural prejudices and discrimination. For example, an AI-powered assessment tool that favors English-speaking students over non-English speaking students is unfair and discriminatory (Mittal & Desai, 2019). Educational institutions must ensure that the algorithms used in AI-powered tools are transparent, auditable, and free from bias.

Privacy and Data Security

The use of AI in education involves the collection and analysis of massive amounts of data from students. This data may include sensitive personal information, such as health records and social security numbers. Ensuring the privacy and security of this data is critical to protecting students' rights and maintaining their trust in educational institutions. Educational institutions must establish strict policies and procedures for collecting, storing, and sharing data that align with data privacy regulations.

Accountability and Responsibility

The use of AI in education raises questions about accountability and responsibility. Who is responsible if an AI-powered tool fails to provide accurate assessments or recommendations? Should students be held accountable for the actions of AI-powered tools? These are critical questions that need to be addressed to ensure that the use of AI in education does not lead to unintended consequences (Yousuf & Abdullah, 2020).

Lack of Human Interaction

AI-powered tools can reduce the amount of human interaction between students and teachers, leading to reduced opportunities for personalization, empathy, and emotional support (Lomas 2019). While AI can enhance the learning experience, it cannot replace the human touch that is essential in education. Educational institutions must find a balance between the use of AI-powered tools and the need for human interaction.

STRATEGIES FOR OVERCOMING ETHICAL CHALLENGES

Diversity and Inclusion

To address bias and discrimination in AI systems, diversity and inclusion must be a priority. AI development teams must be diverse and inclusive to ensure that AI systems are developed with an understanding of different perspectives and experiences (Buolamwini & Gebru, 2018).

Data Privacy and Security

To address data privacy and security concerns, strict regulations must be in place to protect students' data. Data must be encrypted, and access must be restricted to authorized individuals.

Autonomy and Control

AI systems must be developed with the goal of enhancing autonomy and control rather than limiting them. AI systems should be designed to empower students and teachers to make informed decisions and take control of their learning and teaching processes.

Transparency and Explain ability

To promote transparency and explainability, AI systems must be developed with clear and concise explanations of the decision-making process (Dosi & Kim, 2017). AI systems should be designed to provide feedback and insights into the decision-making process to enhance transparency.

Responsibility and Accountability

To ensure responsibility and accountability, AI systems must be developed with clear guidelines for responsibility and accountability. A system of checks and balances should be established to ensure that AI systems are used ethically and effectively.

AI in education has the potential to transform the learning experience, but it also presents ethical challenges. To address these challenges, it is essential to prioritize diversity and inclusion in AI development, protect data privacy and security, empower autonomy and control, promote transparency and explainability, and establish responsibility and accountability (Boluy, 2021). By taking these steps, AI in education can be used ethically and effectively to enhance student learning outcomes.

SOCIAL CHALLENGES OF AI IN EDUCATION

Equity and Access

AI tools can provide personalized learning experiences, but they also have the potential to exacerbate existing inequalities in education (Ahmed & Iglesia, 2020). For example, students who do not have access to the internet or technology may be left behind in AI-powered classrooms. Furthermore, AI algorithms can be biased, perpetuating existing inequalities and discriminating against certain groups of students. This can result in unfair outcomes, such as lower grades or limited access to educational resources.

Job Displacement

The implementation of AI in education may lead to job displacement, especially for teachers and support staff. AI systems can automate tasks such as grading, scheduling, and administration, potentially reducing the need for human labor.

Social Isolation

AI systems may reduce human interaction in education, leading to social isolation among students. Human interaction is essential for the development of social skills, empathy, and emotional intelligence. Overreliance on AI systems may lead to a lack of these essential skills.

Digital Divide

AI systems require access to technology, and not all students have access to the necessary technology. This can create a digital divide, where students from low-income families or rural areas are at a disadvantage (Hargittai & Hinnant, 2008).

Privacy and Data Security

AI tools can collect vast amounts of data from students, such as their learning preferences and performance data. This raises significant concerns about privacy and data security. For example, students' personal information may be used for commercial purposes or accessed by unauthorized individuals. Furthermore, data breaches can compromise student confidentiality and trust in educational institutions.

Accountability

AI tools can make decisions that impact student learning outcomes, but it is essential to ensure that these decisions are fair and transparent. Educational institutions must ensure that AI algorithms are reliable, and decisions made by AI tools are justified and explainable. Additionally, there must be mechanisms in place to ensure that students can appeal decisions made by AI tools and that accountability is maintained.

Human Interaction

AI tools can provide personalized learning experiences, but they also reduce the amount of human interaction between students and teachers. This can impact the quality of learning experiences, as human interaction is critical for student engagement and motivation. Furthermore, AI tools may not be able to provide the emotional support and guidance that students require, such as feedback on their progress or encouragement to continue learning.

AI has the potential to transform education in unprecedented ways, but it also presents several social challenges that must be addressed. Educational institutions must ensure that AI tools are designed and implemented in ways that are equitable, respect student privacy and data security, promote accountability, and preserve human interaction. By addressing these social challenges, AI can be used to improve student learning outcomes and ensure that education remains a valuable and enriching experience for all students.

STRATEGIES FOR OVERCOMING SOCIAL CHALLENGES OF AI IN EDUCATION

Increased Diversity and Inclusion in AI Development

One solution to the bias challenge is to increase diversity and inclusion in the development of AI algorithms. A diverse group of developers can help to identify and address potential biases before they become embedded in AI systems.

Transparency

To address privacy concerns, AI developers must be transparent about what data is collected, how it is used, and who has access to it. Additionally, data security protocols must be put in place to protect students' personal information.

Equitable Access

To address inequality concerns, there must be a concerted effort to ensure that all students have access to AI-powered tools. This may involve providing schools in low-income areas with additional resources or investing in technological infrastructure to ensure that all students have access to the necessary technology.

Ethical Guidelines

To address ethical concerns, there must be clear ethical guidelines for the development and use of AI in education. These guidelines should include principles such as fairness, accountability, and transparency.

Professional Development for Educators

To address employment concerns, educators must be provided with professional development opportunities to learn how to effectively use AI in the classroom. Additionally, educators must be trained to recognize the limitations of AI and to understand the role that educators will continue to play in the future of education.

AI has the potential to transform education, providing personalized learning opportunities and improving educational outcomes. However, AI also poses social challenges that must be addressed to ensure that it is used ethically and equitably. By increasing diversity and inclusion in AI development, promoting transparency, ensuring equitable access to AI-powered tools, establishing ethical guidelines, and providing professional development for educators, we can address the social challenges of AI in education and create a future in which AI is used to enhance, rather than replace, the role of educators.

Technological Challenges of AI in Education

Artificial intelligence (AI) is revolutionizing the education sector, from personalized learning to predictive analytics. However, the adoption of AI in education is not without its challenges. One of the significant challenges of AI in education is the technological challenges that it poses.

Technical Reliability

AI systems are only as reliable as the technology they are built on. Technical issues such as hardware failures, software glitches, and connectivity problems can affect the effectiveness of AI systems in education.

Compatibility Issues

AI systems need to be compatible with existing educational systems and tools. This can be a challenge, especially if the existing systems are outdated or incompatible with the AI system.

Integration and Adoption

Integrating AI systems into educational systems requires careful planning and coordination. There may be resistance from stakeholders, such as teachers, students, and parents, who are unfamiliar with AI systems or skeptical of their effectiveness.

Data Collection and Analysis

One of the primary technological challenges of AI in education is data collection and analysis. AI-powered education systems generate large amounts of data from various sources, including student performance data, learning resources, and assessment results. However, analyzing this data effectively and efficiently requires significant computational resources, sophisticated algorithms, and advanced data management tools.

Lack of Interoperability

Interoperability is another significant technological challenge facing the implementation of AI in education. Interoperability refers to the ability of different systems and applications to communicate and exchange data seamlessly. In an educational setting, interoperability is crucial for integrating different systems, such as learning management systems (LMS), student information systems (SIS), and assessment tools, to create a unified learning experience (Griffiths, 2021). However, the lack of standardization and compatibility between these systems often makes it difficult to integrate them, leading to inefficiencies, data duplication, and loss of data.

Technical Infrastructure

The implementation of AI in education requires robust technical infrastructure to support the processing, storage, and management of large volumes of data (Ally, 2019). However, many educational institutions lack the necessary technical infrastructure, including high-speed internet connectivity, cloud computing resources, and data storage facilities. Inadequate technical infrastructure can limit the scalability and effectiveness of AI-powered education systems, leading to slow processing times, frequent system crashes, and data loss.

Algorithm Bias

Algorithm bias is another significant technological challenge facing AI implementation in education. Algorithms used in AI systems are often trained on historical data, which can be biased and reflect past inequalities, stereotypes, and discrimination. As a result, AI systems

may generate biased recommendations, reinforcing existing inequalities and impacting student learning outcomes negatively.

System Security

The implementation of AI in education creates new security risks that must be addressed to protect the privacy and security of student data. AI systems collect vast amounts of data, including personal information, learning data, and assessment results, which can be vulnerable to cyber threats, such as hacking, data breaches, and identity theft. Ensuring the security of AI-powered education systems requires implementing robust security measures, such as encryption, authentication, and access controls.

STRATEGIES FOR OVERCOMING TECHNOLOGICAL CHALLENGES

Integration of Data Standards

The integration of data standards can help overcome the lack of interoperability challenge by establishing common data formats and protocols that enable different systems to communicate and exchange data seamlessly. This can improve data quality, reduce data duplication, and enhance the overall efficiency of AI-powered education systems.

Investment in Technical Infrastructure

Investment in technical infrastructure can help overcome the technical infrastructure challenge by providing the necessary resources to support the processing, storage, and management of large volumes of data (Yadav & Rathore, 2018). This can include investing in high-speed internet connectivity, cloud computing resources, and data storage facilities, among other things.

Algorithm Fairness and Transparency

Algorithm fairness and transparency can help overcome the algorithm bias challenge by ensuring that AI algorithms are trained on diverse and unbiased datasets and implementing measures to detect and mitigate algorithmic bias. Additionally, ensuring transparency in the design and implementation of AI-powered education systems can help build trust among stakeholders and reduce the risk of bias and discrimination.

Secure Data Management

Secure data management can help overcome the system security challenge by implementing robust security measures, such as encryption, authentication, and access controls, to protect the privacy and security of student data.

One of the key security measures that can be implemented is encryption, which involves encoding the data in a way that makes it unreadable to unauthorized parties. This can prevent data breaches and unauthorized access to sensitive information. Another important measure is authentication, which involves verifying the identity of users and devices before

granting access to data (Stoecklin, 2018). This can prevent unauthorized access to the data by ensuring that only authorized users and devices are granted access.

Access controls are another crucial security measure. Access controls can limit who can view, edit, or delete data, ensuring that only authorized individuals can access it. This can help prevent data leaks or misuse of data by unauthorized parties.

Implementing secure data management practices can help overcome system security challenges by protecting student data from unauthorized access, misuse, or disclosure. By implementing encryption, authentication, and access controls, educational institutions can ensure that the privacy and security of student data are maintained. This, in turn, can help build trust with students and parents, which is essential for the successful implementation of AI in education.

CONCLUSION

AI has the potential to transform education, making it more personalized, efficient, and effective. However, the implementation of AI in education is not without its challenges. Ethical challenges, such as bias and discrimination, privacy and data security, and accountability and responsibility, must be addressed. Social challenges, such as job displacement, social isolation, and the digital divide, must also be considered. Technological challenges, such as technical reliability, compatibility issues, and integration and adoption, must be overcome. By addressing these challenges, AI can be used to enhance education, providing students with personalized learning experiences that cater to their individual needs.

REFERENCES

- ❖ A. Lomas, "AI-powered language learning platform Busuu adds new study tools, expands to APAC," TechCrunch, 07-Aug-2019. https://techcrunch.com/2019/08/07/ai-powered-language-learning-platform-busuu-adds-new-study-tools-expands-to-apac/.
- ❖ Abu-Ayyash, A., & Al-Sayyed, R. (2019). Artificial intelligence in education: A review. Journal of Educational Technology & Society, 22(2), 111-126.
- ❖ Ally, M., & Prieto-Blázquez, J. (2019). The potential and pitfalls of learning analytics. The International Journal of Information and Learning Technology, 36(3), 173-183. https://doi.org/10.1108/IJILT-10-2018-0141
- ❖ B. Du Boulay, "Artificial Intelligence as an Effective Educational Tool and Its Impact on Learning," Computers & Education, vol. 158, p. 103927, 2021. https://doi.org/10.1016/j.compedu.2020.103927
- ❖ Bielikova, M., & Simko, M. (2020). Potential of Artificial Intelligence in Education. In EAI/Springer Innovations in Communication and Computing (pp. 3-16). Springer, Cham. https://doi.org/10.1007/978-3-030-36708-1_1

❖ Biswas, G., Kinnebrew, J. S., Segedy, J. R., & Demirer, V. (2013). Supporting self-regulated learning with Study software: The Learning Kit project. In Handbook of Self-Regulated Learning and Performance (pp. 205-220). Routledge.

❖ Blikstein, P. (2016). Artificial intelligence and education for the 21st century. Cognition and Instruction, 34(3),

❖ Buolamwini, J., & Gebru, T. (2018). Gender shades: Intersectional accuracy disparities in commercial gender classification. Conference on Fairness, Accountability and Transparency, Proceedings of Machine Learning Research, 81, 1-15. https://doi.org/ 10.1145/3190508.3190539

❖ D. Griffiths, "Edtech Interoperability: The State of Play," EdTech Magazine, 2021. [Online]. Available: https://edtechmagazine.com/higher/article/2021/03/edtech-interoperability-state-play-perfcon.

❖ Doshi-Velez, F., & Kim, B. (2017). Towards a rigorous science of interpretable machine learning. arXiv preprint arXiv:1702.08608.

❖ Floridi, L. (2019). The ethics of AI in education: a research agenda. Journal of Philosophy of Education, 53(1), 18-38. https://doi.org/10.1111/1467-9752.12348

❖ Goel, S., Liu, F., Kannan, A., & Zou, J. (2021). Privacy-preserving machine learning for medical imaging. Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2722-2731.

❖ Gulson, K. N., & Webb, S. A. (2018). Unpacking the 'black box'of artificial intelligence in education. Learning, Media and Technology, 43(3), 119-135.

❖ Hargittai, E., & Hinnant, A. (2008). Digital Inequality: Differences in Young Adults' Use of the Internet. Communication Research, 35(5), 602-621. https://doi.org/10.1177/ 0093650208321782

❖ Hirschberg, J., & Manning, C. D. (2015). Advances in natural language processing. Science, 349(6245), 261-266.

❖ Holstein, K., & Solomon, G. (2018). Artificial intelligence in education. EDUCAUSE Review. Retrieved from https://er.educause.edu/articles/2018/6/artificial-intelligence-in-education

❖ J. He, J. Baxter, E. He, A. Khandelwal, and X. Y. Wang, "Principles of Explainable AI and its Applications in Medicine," Current Pharmacology Reports, vol. 6, no. 5, pp. 308-318, 2020. https://doi.org/10.1007/s40495-020-00232-4

❖ Jin, L., Li, Y., Huang, Y., Wang, F., & Li, M. (2019). Personalized learning paths based on association rule mining for ubiquitous learning. IEEE Access, 7, 23278-23287.

❖ Knight, P., & Carragher, B. (2019). Social justice and educational uses of artificial intelligence. Oxford Review of Education, 45(4), 464-479.

❖ Liu, Y., Wang, Y., & Liu, Y. (2020). Application of artificial intelligence in education: Present developments, potential, and future directions. Frontiers in Psychology, 11, 565759. doi: 10.3389/fpsyg.2020.565759

❖ M. P. Stoecklin, "Encryption: An Introduction to Protecting Data," Journal of AHIMA, vol. 89, no. 3, pp. 36-41, 2018. https://pubmed.ncbi.nlm.nih.gov/29509061/

❖ Martin, F. (2018). Will AI replace or enhance teachers? AI's role in education. Tech & Learning. Retrieved from https://www.techlearning.com/tl-advisor-blog/will-ai-replace-or-enhance-teachers-ais-role-in-education

❖ N. Mittal and J. V. Desai, "Artificial Intelligence in Education: Issues and Challenges," International Journal of Emerging Technologies in Learning (iJET), vol. 14, no. 02, pp. 137-151, 2019. https://doi.org/10.3991/ijet.v14i02.8919

❖ O'Donoghue, J., & Punch, S. (2020). Ethical considerations in the use of AI for educational assessment. Educational Research and Evaluation, 26(1-2), 65-80.

❖ R. K. Yadav and S. S. Rathore, (2018). "Big Data Analytics for Improved Decision-Making in Higher Education," in Proceedings of 2018 3rd International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS), pp. 218-223. https://doi.org/10.1109/CSITSS.2018.00054

❖ S. Ahmed and A. Iglesias, "AI for Personalized Learning: Opportunities and Challenges," IEEE Intelligent Systems, vol. 35, no. 3, pp. 64-70, May/June 2020. https://doi.org/10.1109/MIS.2020.2987824

❖ S. R. H. Yousuf and S. A. Abdullah, "Data Privacy and Security Issues in the Use of AI in Education," International Journal of Emerging Technologies in Learning, vol. 15, no. 22, pp. 66-78, 2020. https://doi.org/10.3991/ijet.v15i22.12456

❖ Selwyn, N., & Nemorin, S. (2020). Reconsidering the ethics of educational technology research in the age of algorithmic decision-making. Learning, Media and Technology, 45(2), 131-145. https://doi.org/10.1080/17439884.2020.1726768

❖ Sengupta, E., & Bhattacharya, S. (2019). Ethical challenges of AI in education: A review. International Journal of Emerging Technologies in Learning, 14(13), 36-49. https://doi.org/10.3991/ijet.v14i13.11510

❖ The European Commission's "Ethics Guidelines for Trustworthy AI": https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai

❖ The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems: https://ethicsinaction.ieee.org/

❖ UNESCO. (2020). Artificial Intelligence in Education: Opportunities, Challenges and Risks. UNESCO.

❖ UNESCO. (2021). Ethics of Artificial Intelligence. https://en.unesco.org/themes/ethics-artificial-intelligence

❖ UNESCO's "Steering AI and advanced ICTs for knowledge societies: A human rights, ethical and societal framework" report: https://unesdoc.unesco.org/ark:/48223/pf0000374387

❖ Van Laerhoven, T., & Bleumers, L. (2019). Ethics of artificial intelligence in education: Current concerns and future visions. Frontiers in Education

❖ Van Loon, A. M., & Ros, A. (2020). Ethics of educational AI. Educational Philosophy and Theory, 52(5), 525-533. https://doi.org/10.1080/00131857.2019.1657363

❖ Wang, X., Yang, J., & Gao, X. (2021). Ethical challenges of AI in education and their solutions: a systematic review. IEEE Access, 9, 21644-21657. https://doi.org/10.1109/access.2021.3056076

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Plagiarism among Student Community: A Matter of Concern

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ABSTRACT

Plagiarism is fast becoming an "academic hurricane". The writers, academicians and educationist discuss various aspects of plagiarism. It's important to discuss various aspects of plagiarism, but at the same time it is important to find the main reasons which force students to copy, document and submit some others work as their own. This paper tries to review the basic reasons which force the academic intellectuals to plagiarise. The paper also tries to study the causes of plagiarism from the point of view of the students. The study of the reasons which forces students to plagiarise are many and which can be classified into deliberate and unintentional. The ignorance about the concept of plagiarism, its ineffective implementation in academic circles and the little or the complete absence of the consequences of plagiarism by students led students to wilfully copy and use someone else work as their own. There is an urgent need to look into the causes from the point of view of every stake holder, so that future of academics and academic writing can be saved. This will also save the future generation and will force them to produce their original work, conserve, preserve and prevent its misuse.   .

Keywords: Plagiarism, Digital Literacy, Student Community.

WHY STUDENTS PLAGIARISE?

"[Plagiarism is]… passing off someone else's work, either intentionally or unintentionally, as your own, for your own benefit". (Carroll 2007, p. 9)

According to *Collins English Dictionary,* "**Plagiarism** is the practice of using or copying someone else's idea or work and pretending that you thought of it or created it."

The word Plagiarism is derived form the English word "plagiary" which traces its root to the latin word "plagirus". Branhart (1988, p. 801) which means that if someone uses another's word or ideas in a wrong and unlawful manner.

Plagiarism has emerged as a major issue and problem in education and more so in higher education. Plagiarism is becoming an obstacle in the development and growth of intellectual competency among the academic community.

Although plagiarism has been discussed from various perspectives, yet the basic question which needs immediate attention is: **Why, for that matter students plagiarise?**

The paper discusses the various reasons and problems students face which leads them to plagiarism or encourage academic stealing among them. If we analyse the reasons behind plagiarism we can see that it's not that it is always un intentional or ignorance which drives them to plagiarism , but at times it is intentional and justified by them.

Wilhoit (1994) analysed the common practises used by the students to plagiarise: Stealing material from other source and passing it as their own. It may include:

Publishing or using someone elses work as ones own without giving due credit to the original author.

Copying material in whole or in parts and using it for ones own assignments.s work and pass it as their own to save their efforts and time.

Non acknowledgement and absence of quotation marks in the material used for producing another work.

On the brief review of the literature related to plagiarism, the following main causes could be identified:

1. **Unintentional and Ignorance**: The students are never taught about the plagiarism nor what exactly constitutes plagiarism. They remains unaware and ignorant about the whole issue. During school days it self they are guided to cheating and taking other works casually by teachers, parents and classmates. Hence when they reach colleges or universities they are ignorant of the issue and consider all acts of copying as a normal academic behaviour.

2. **Ignorance of parents and teachers**: Although we are living in a world of technology, yet copying and forwarding others emails, discussions etc on the internet are a daily feature. Neither the parents, nor the teachers are sensitised, oriented and alert towards this act of copying. The students in -adherently follows his elders. Minor forms of cheating are not considered an offence by them.

3. **Language as a Barrier**: The easy availability of learning material, especially in professional courses forces students to copy and use it for its easy access. The absence of effective translators and software's especially in regional languages also is a big hindrance.

4. **Cultural differences among the countries, Universities and students**: The cultural interpretations of what is considered as cheating and what constitutes plagiarism and what is considered as original also leads to plagiarism.

5. **Lure of foreign degrees and courses**: the greed for degrees especially foreign degrees and courses forces students to pay unreasonable fees and expenses. As a result they plagiarise and universities help them so that they get the return of their expenditure without going through the grill of academic rigour. Many of the times the students who are not competent or eligible to take up a course take admission for various reasons and plagiarise to forcefully complete the given assignments.

6. **External Pressures**: the students in higher education face many kinds of stress and strain in higher education. These include family pressure to excel at any cost; competition among peers and between the colleagues to get promotions and higher grades also forces students to plagiarise.

7. **Unplanned And Poor Management Skills Of The Students**: The poor management skills of the students especially, in relation to their study schedules and activities leave them with little time to devote and plan their studies .As a result the students, in order to complete their work on time finds it convenient to copy paste their assignments.

8. **Too Many Commitments and Exposure**: In a digital age, the students are preoccupied with too many   commitments which may be studies, work or interest related. Exposure to many things in one go forces them to complete too many task in a small time and coping and cheating are the easiest way out.

9. **Laziness among the students**: The students find it difficult to complete their hands on task due to their laziness and willingness to complete work on hand. It seems easier to them to plagiarise and complete their work.

10. **Lack of Academic Skills**: The academic institutions especially the schools and colleges, which are considered as the base of higher education, does not make efforts to develop academic skills among students. The students are not trained about the academic skills nor are efforts made by the universities to develop the same. The poor notes taking skills, lack of knowledge about the ways of accessing intellectual resources, use of library resources and internet resources also led students to use resources without acknowledging the original work.

11. **Paraphrasing is not Considered As Plagiarism**: The students do not consider paraphrasing as a form of plagiarism. Often, summarizing in their own words and paraphrasing is considered similar, hence no attention is paid while paraphrasing someone else work.

12. **Academic Dishonesty**: Lack of value system especially in relation to academics among the students is a major cause of plagiarism among students.

13. **Lack of Interest**: The students lack interest in the kind of assignments given to them. The rigor of going through the academic resources is too much for them, hence copying is considered easy and effortless. Some institutes in order to complete the work of the students pass on previous work of the students to the new batch without even giving a thought that this act constitutes plagiarism.

14. **Plagiarism is not a priority**: For the students when assignment completion, marks and employment becomes a priority cheating or copying material or resources is not considered a big deal by them.

15. **Creativity is not prioritised in Academic circles**: The students creativity especially in relation to their own ideas (even of low values) are not given priority even by their mentors or even by the students themselves. This lack of interest and priority which leads to low confidence among the students forces them to continue with what is easily available. The student lacks confidence to express their ideas in any form and considers the word of experts as the last words hamper their own thinking.

    Moreover ,students living in almost remote places, both academically and economically may not be aware if what they are writing is considered as plagiarised or not.

16. **Mismatch between Demand and Supply**: In countries like India, where the number of students are growing and the number and quality of teachers are not increasing correspondingly, its a great challenge for both teachers and students to be aware of the issue of plagiarism. Unavailability of required teachers does not leave them with sufficient time and resources to monitor plagiarised work. Often in many cases, teachers themselves are not aware of what should be considered as plagiarised work.

17. **Jargon of Technical Terms**: The students are faced with the dilemma of too many terms for writing. APA, MLA and other forms of citation and references are considered asjargon un solvable and un deciphered by many.

18. **Empty vessel model**: Some students see themselves according to the empty vessel model. They are trained and developed to think that they have come to schools to be filled in by others. These may be their teachers, text books, internet or experts who all are waiting to give and fill as much as they can, without considering whether the vessel is filled, empty ,ready for being filled and suitable for what is to be filled. The job of the student is to collect, summarise quote and provide evidence of the work of these experts without questions and ideas. They are not searching but only "researching" of what is being done by others.

19. **Different Learning Styles of the Students**: The students have different learning styles from mere rot memorisation to note taking and copying. The skills of analysis, synthesis and academic writing are not present among students. Hence, when they reach higher education they are not able to cope with the demands of higher education and as result fell prey to copying and writing.

20. **Deliberate and Easy access to Outside Help**: With the advent of innovative methods and the easy availability of resources, writing material, publications and internet the amount and quality of resources is easily available. Hence students find it easier to copy and complete their work.

21. **Availability of professionals for the students**: Pay and submit is the new motto of many professional writers. The emergence of professionals who can produce any kind of academic work with the payment and guarantee both quality and honesty is also a cause of increase plagiarism in education.

22. **Intentional breach of laid out rules:** In todays value system breaking rules, indiscipline and misconduct is considered heroic, and produce thrills among students. Hence, students knowingly break rules for thrills and creating disturbances.

23. **Digital Plagiarism**: The emergence of internet and e-learning has also led to proliferation of digital plagiarism. This form of plagiarism from digital sources, which offers easy access and opportunities, poses new challenges to education sector globally. Cyber-cheating, cyber-plagiarism, academic cyber-sloth are the terms that been used to describe digital plagiarism. The students download music, movies etc are a habit with the students and they do not consider it an act of plagiarism. Anything and everything available on web is **not free for the taking is not** been considered by the students both for academic and other downloading.

24. **Repercussions and Punishments for Plagiarism**: The students are not aware about the legalities and consequences of plagiarism. The amount of fines, blacklisting, and other repercussions are not being advocated and practised by the Institutions. In addition students are not aware of "fair use clause" and other local policies which allow students to use and access other resources legally for academic work.

CONCLUSION

This paper tried to explore the various reasons for which students restore to plagiarism. The reasons could easily be categorised as deliberate, violation and ignorance towards towards plagiarism. But the analysis of the reasons discussed leads to the conclusion that there may be various causes of plagiarism but it is the duty of every stake holder to be aware, sensitise and action oriented towards this kind of academic dishonesty. If all the stake holders play their roles effectively and honestly then, it is easier to prevent the practise of plagiarism. A step towards a right direction will lead to academic honesty and development of value system and respect to the owners of academic work by the students. This may also lead to development of true academic value system among the academic community.

BIBLIOGRAPHY

❖ Carroll, J (2007) "A Handbook for Deterring Plagiarism in Higher Education", second edition, Oxford Centre for Staff Learning and Development

❖ Joseph, J. (2006), "A study on opinions of regular primary school teachers towards inclusive education of children with menta l retardation", National Institute for the Mentally Handicapped (NIMH) Secunderabad, Andhra Pradesh.

❖ QAAView point: "Plagiarism in UK Higher Education" www.qaa.ac.uk/publications/information-and-guidance/publication?PubID=3054)

❖ Robert Harris "Anti-Plagiarism Strategies for Research Papers" Penn State Pulse Surveys on Academic Integrity from 1999. Teaching And Learning With Technology, Pennsylvania University(1999)

❖ Ashworth, Peter, and Philip Bannister. "Guilty in Whose Eyes? University Students Perceptions of Cheating and Plagiarism in Academic Work and Assessment."

❖ Studies in Higher Education. 22 (1997): 187-204. Academic Search Premier.

❖ EBSCO host. DePaul University Libraries, Chicago, IL. 18 December 2005. Bowden, Darsie. "Coming to Terms: Plagiarism." English Journal. 85.4 (1996): 82- 85.

❖ ProQuest Education Journals. ProQuest. DePaul University Libraries, Chicago, IL. 18 December 2005.

❖ Michelle Navarre Cleary, DePaul University

❖ https://www.aub.edu.lb/it/acps/Documents/PDF/WhyStuPlagiarize.pdf

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Excerpts on Technology use in National Education Policy 2020

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ABSTRACT

The National Education Policy 2020 of India emphasizes the use of technology in education as a means to enhance learning and teaching, as well as to increase access to education. This includes the use of digital and online resources, such as e-books, online classes, and virtual labs, as well as the use of technology for assessment and evaluation. Additionally, the policy calls for the integration of technology education into the curriculum, and the use of technology for teacher training and professional development. Overall, the goal of incorporating technology into education is to improve the quality of education and make it more accessible to all students.

Keywords: Technology, National Education Policy, Education, Teaching, Learning.

NEP MENTIONS THE USE OF TECHNOLOGY IN SEVERAL AREAS

The National Education Policy (NEP) 2020 of the Government of India emphasizes the use of technology in education to improve access, equity, and quality of education. The policy mentions the use of technology in several areas, including:

- *Digital Infrastructure*: The policy calls for the development of a robust digital infrastructure to support online and blended learning. This includes the establishment of a National Educational Technology Forum (NETF) to coordinate and guide the development and use of technology in education.

- *Digital Content*: The policy calls for the development of a national digital repository of educational resources, including textbooks, simulations, and virtual labs, to support online and blended learning.

- *Teacher Training*: The policy calls for the use of technology to enhance teacher training and professional development, including the use of digital platforms for teacher training and the development of digital lesson plans.

- *Learning Outcomes*: The policy calls for the use of technology, such as adaptive learning software, to personalize learning and improve student outcomes.

- *Online Learning:* The policy calls for the development of an online learning ecosystem to support online and blended learning, including the use of virtual classrooms and virtual labs.

- *Artificial Intelligence*: The policy calls for the integration of Artificial Intelligence (AI) in education, including the use of AI-enabled tools for personalizing learning and assessing student progress.

- *Access to Technology*: The policy calls for the provision of affordable and accessible technology, including internet access, to support online and blended learning, particularly in rural and disadvantaged areas.

As per the information provided in the official website of National Education Policy 2020

TECHNOLOGY USAGE FOR HANDICAPPED STUDENTS OR TEACHERS [2]

1. In the section "Inclusive Education" (Chapter 6, page 62) the NEP mentions "The use of technology will be used to support the education of children with disabilities, including the development of accessible digital content and assistive devices."

2. The policy calls for the use of technology to create accessible digital content and assistive devices for students with disabilities, such as text-to-speech software, screen readers, and other tools to help them access and engage with educational materials. Additionally, the policy also calls for the use of technology to support the needs of teachers with disabilities, through the provision of training and resources to help them effectively use technology in their teaching.

3. It is also emphasized the use of technology in the education of children with disabilities, including the development of accessible digital content and assistive devices.

NEP RECOMMENDS USE OF TECHNOLOGY TO PROMOTE TRANSPARENCY IN EDUCATION SYSTEM [2]

Specifically, the policy calls for the use of technology to improve transparency and accountability in the management of educational institutions, through the use of digital tools and platforms for data collection, analysis, and reporting. Additionally, it also mentions the use of technology to enhance transparency in the assessment and evaluation of students and teachers, through the use of digital platforms for continuous and formative assessment, and the use of data analytics to improve the quality of education.

In the section "Strategies for Implementation" (Chapter 6, page 65) the NEP mentions " Use of technology for transparency and accountability in management, assessment, and evaluation of educational institutions and teachers."

It is also emphasized the use of technology for transparency and accountability in management, assessment, and evaluation of educational institutions and teachers.

IMPORTANCE OF ARTIFICIAL INTELLIGENCE [2]

NEP includes several references to artificial intelligence (AI) and its potential impact on education in the country, which can be found in the following sections:

- In the section "Strategies for Implementation" (Chapter 6, page 64) the NEP mentions "Incorporating Artificial Intelligence (AI) and other digital technologies in teaching-learning process, assessment and in educational administration"

- In the section "Teacher Education" (Chapter 7, page 69) the NEP mentions "Teacher education institutes will also have to prepare teachers to use technology, including Artificial Intelligence (AI), in teaching."

- In the section "Higher Education" (Chapter 8, page 75) the NEP mentions "Artificial Intelligence (AI) and Data Sciences will be given priority for research and innovation"

- In the section "Promoting Indian Language Computing" (Chapter 8, page 78) the NEP mentions "The National Artificial Intelligence portal will be created to promote collaboration and sharing of resources in the field of Indian Language Computing, including Artificial Intelligence."

It states that AI should be incorporated into the curriculum at all levels of education, from primary school to higher education. It also calls for the establishment of AI research centers and the creation of a national AI portal to promote collaboration and sharing of resources. Additionally, the policy encourages the use of AI in education to improve access to quality education for all students, particularly those in remote and underserved areas.

RECOMMENDATIONS OF NEP FOR TECHNOLOGICAL SUPPORT FOR TEACHERS

The National Education Policy (NEP) 2020 of India, which was released in July 2020, includes several recommendations on how technology should be used to support teachers in delivering instruction. Some of these recommendations include:

- Providing teachers with professional development opportunities to develop the necessary skills to effectively integrate technology into their teaching.

- Encouraging the use of technology to create personalized learning experiences for students, such as adaptive learning and gamification.

- Using technology to facilitate collaboration and communication among teachers, such as through online professional learning communities.

- Creating a national digital infrastructure that supports the use of technology in education, including high-speed internet access and the development of digital resources.

- Encouraging the use of technology for assessment and evaluation, such as through online testing and formative assessment tools.

- Promoting the use of technology in creating multilingual educational resources and making them accessible to all.

Overall, the NEP 2020 places a strong emphasis on the use of technology to support and enhance teaching and learning in India.

CONCLUSION

The National Education Policy (NEP) of the Government of India recognizes the importance of technology in education and aims to integrate it effectively in the learning process. The NEP emphasizes the use of technology for personalizing learning, providing access to quality educational resources, and promoting multilingualism. Additionally, the policy aims to increase the use of technology for teacher training, assessment and feedback, and administrative tasks. The government plans to establish a National Educational Technology Forum to promote innovation and research in the use of technology in education. The NEP aims to ensure that technology is used to enhance the quality of education and improve the learning outcomes for all students in India.

REFERENCES

❖ https://mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_05082020.pdf

❖ https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

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NEP 2020: A Paradigm Shift in Education through Technology

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ABSTRACT

The National Education Policy (NEP) 2020 is a comprehensive document that outlines the vision and direction for education in India. One of the key aspects of the NEP 2020 is the emphasis on leveraging technology to transform education and provide access to quality education to all. The NEP 2020 envisions a shift from rote learning to a more holistic, multidisciplinary approach to education, which emphasizes critical thinking, creativity, and problem-solving skills. Technology plays a crucial role in enabling this transformation by providing access to a range of digital resources and tools that support personalized and experiential learning. The NEP 2020 promotes the use of digital learning modules, AI-based learning, and the incorporation of augmented and virtual reality into education. This paper focuses on the role of technology in education in NEP 2020.

Keywords: NEP 2020, Information and Communication Technology (ICT), Higher Education, Online Education, Reforms.

INTRODUCTION

The NEP 2020 (National Education Policy 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The policy emphasizes the importance of training teachers in the use of technology for education. Teachers should be equipped with the necessary skills to deliver online and blended learning and to use digital tools for assessment and evaluation. Covid-19 pandemic has forced the educational institutions all across the globe to adopt new age technologies and utilize the

virtual zone to shift to online learning in which we are gradually moving away from the advantages that could be imbibed through the offline learning which are as we said mainly the concept of discipline and social relations which are very important aspects. Studies suggest that people are getting physically and emotionally detached and isolated due to the virtual connections that technology offers through digital platforms. On the other hand by using virtual zone learners can receive a personalized, customized and a very creative learning experience.

The National Education Policy (NEP) 2020 is a comprehensive document that outlines the vision and direction for education in India. One of the key aspects of the NEP 2020 is the emphasis on leveraging technology to transform education and provide access to quality education to all. The NEP 2020 envisions a shift from rote learning to a more holistic, multidisciplinary approach to education, which emphasizes critical thinking, creativity, and problem-solving skills. Technology plays a crucial role in enabling this transformation by providing access to a range of digital resources and tools that support personalized and experiential learning. The NEP 2020 acknowledges the potential of technology in transforming education and emphasizes the need for a comprehensive approach to harness the benefits of technology in education.

KEY WAYS IN WHICH THE NEP 2020 PROMOTES THE USE OF TECHNOLOGY IN EDUCATION:

1. **Digital infrastructure:** One of the key areas of focus in the NEP 2020 is the promotion of digital education.The NEP 2020 envisions the creation of a robust digital infrastructure that provides seamless connectivity and access to digital resources for all learners. This includes the establishment of digital classrooms, digital repositories of learning resources, and the provision of internet connectivity in all schools and higher education institutions. The NEP 2020 envisions the creation of a digital infrastructure for education that can provide equitable access to high-quality educational resources and opportunities for all learners, regardless of their geographic location or socio-economic background. This will be achieved through the use of digital technologies such as online learning platforms, educational apps, and e-books.

2. **Online learning**: The NEP 2020 recognizes the potential of online learning to provide access to quality education to learners who are unable to attend traditional classrooms. The policy emphasizes the need to develop high-quality online learning resources, including MOOCs (Massive Open Online Courses), e-books, and educational videos, and to integrate these resources into the curriculum. The National Education Policy (NEP) 2020 in India recognizes the importance of online education as a means of providing education to a large number of learners, especially in situations where traditional forms of education are not feasible or desirable. The policy aims to leverage technology to provide quality education to all learners, including those in remote and disadvantaged areas.

3. **Adaptive learning:** The National Education Policy (NEP) 2020 document released by the Government of India emphasizes the need for adaptive learning approaches to improve the quality and effectiveness of education. Adaptive learning is a method of personalized learning that uses technology to provide individualized instruction and feedback to learners based on their needs, abilities, and interests. The NEP 2020 recognizes that every learner has unique needs and learning styles. Technology can enable adaptive learning, which tailors learning experiences to the needs and abilities of individual learners. This includes the use of learning analytics and AI-powered tools to provide personalized feedback and support to learners.

4. **Teacher training:** The NEP 2020 recognizes that the effective use of technology in education requires skilled and trained teachers. The policy emphasizes the need for teacher training programs that equip teachers with the necessary skills and knowledge to effectively integrate technology into their teaching. The policy emphasizes the importance of training teachers in the use of technology for education. Teachers should be equipped with the necessary skills to deliver online and blended learning and to use digital tools for assessment and evaluation. The NEP 2020 also emphasizes the importance of training teachers to effectively use digital tools in the classroom and to create digital content that is culturally relevant and linguistically diverse. The policy envisions the creation of a National Educational Technology Forum (NETF) to facilitate the exchange of ideas and best practices related to digital education among stakeholders.

CONCLUSION

The NEP 2020 marks a paradigm shift in education in India, with technology playing a central role in transforming the learning experience for learners across the country. The NEP 2020 recognizes the transformative potential of digital education in enabling access to high-quality educational opportunities for all learners and empowering them to become lifelong learners and contributors to society. The NEP 2020 recognizes the potential of online education to improve access to education and to enhance the quality of teaching and learning. The policy provides a framework for the development of online education in India and aims to ensure that all learners have access to high-quality education, regardless of their location or socio-economic status.

REFERENCES

❖ *IIEP-UNESCO*, Velasquez, A., Graham, C. R., & West, R. E. (2013). An investigation of practices and tools that enabled technology-mediated caring in an online high school. The International Review of Research in Open and Distributed Learning, 14(5), 277-299.

❖ Major Challenges and Possible Enablers of ICTs Integration in TE – Dr. J.D. Singh Ph.D, Sen. Lecturer, GV College of Education (CTE), Sangaria-335063 (Rajasthan).

❖ Dr. Kondapalli, Rama. "Transformational Value of ICTs in Teacher Education: Learnings from India". https://wikieducator.org/images/e/ef/PID_619.pdf.

❖ Kundu, Arnab. "A Sound Framework for ICT Integration in Indian Teacher Education". ResearchGate.November,2020.https://www.researchgate.net/publication/346108026_A_Sound_Framework_for_ICT_Integration_in_Indian_Teacher_Education

❖ NEP_Final_English_0.pdf (education.gov.in).

❖ New Education Policy | Government of India, Ministry of Education.

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National Education Policy 2020
Indian Higher Education's Jeopardized Future

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ABSTRACT

The NEP wants more people to go to college and learn vocational skills. Public and private schools should both help with this. Colleges should become more independent and focus on research and teaching. The National Research Foundation will fund research and help schools work together. The NEP thinks the Indian education system is too big and needs to change. The NEP also wants more teacher and school autonomy. The government will create a group to help make these changes happen. Reforming university governance is a big challenge as it requires balancing autonomy with strong leadership. The NEP proposes Institutional Development Plans (IDPs) where teachers set targets approved by the board of governors, but competition for scores may limit autonomy. We need to see how HEIs and students are given sovereignty in the market being constructed. The new education policy gives students more freedom to choose courses across institutions and store their credits digitally. This move towards flexibility is viewed as a neo-liberal approach to education reform. However, there are concerns that this may lead to a dilution of the transformative roles of teachers, as students exercise consumerist choices. The growing dominance of MOOCs has led to the unbundling of education, which may erode the idea of a university as a space for socialization and diversity. Students cannot simply buy their degrees and must still work hard to earn them. Technology has transformed higher education, especially during the pandemic, and the NEP has further boosted the adoption of online teaching. Online education eliminates the limitations of time and space associated with traditional classroom teaching, but quality and dialogue are debatable issues. The classroom experience is different from online learning, but teachers can use online teaching to prepare for formal and transparent transactions in the classroom. The NEP will give

autonomy to teachers and institutions, making the market highly competitive. Online teaching is generally cheaper but may require additional expenses for special assistance. Offering online courses is lucrative for institutions, and the UGC has identified courses for development of high-quality MOOCs.India cannot overcome the digital divide without significant government investment in building infrastructure for internet access points in every district. Many students will need additional academic support due to the lack of regular teacher-student interaction, similar to the "doubt counters" set up in coaching institutions in Kota, Rajasthan. The NEP proposes allowing top 100 foreign universities to enter India. However, the quality of delivery may not match that of attending classes in person. For-profit online managers may collaborate with universities to manage MOOCs. Competition can result in unethical practices and the decline of institutions over time. Values are important for institutions to achieve excellence.

Keywords: National Education Policy 2020, Higher Education, Reforms, Jeopardize Future.

INTRODUCTION

The National Education Policy (NEP) that was announced on 29 July 2020 is only the third education policy the Government of India has brought out since independence. The final version of the NEP as approved by the cabinet is an outcome of more than five years of deliberations and consultations. The draft of the National Education Policy, 2019 (DNEP) was placed before the nation in May 2019. The NEP has been announced at a time when the education sector as a whole is passing through a serious crisis of unprecedented disruption. In this article, I would like to tease out the possible implications of some of the policy measures pertinent to the construction of the regulatory framework as mooted in the NEP ostensibly for the purpose of overhauling the Indian higher education sector.

The Indian higher education system is poised for a total reconfiguration if the proposed regulatory structure with support from various institutions is installed. Reform of the higher education sector is more of a daunting challenge because of the typicality of the university governance structure. Further, education7, which is in the concurrent list of the Constitution, poses challenges in a federal set up to take on board all the states for successful implementation of any aspect of a policy. However, the advent of technology in the realm of education is turning out to be a game changer. There is uncertainty as to how the future will shape up amidst the global- and national-level imperatives the universities have to negotiate with in the post-pandemic era in the context of a new global order.

HIGHER EDUCATION REFORM

The NEP recommends that the tempo of expansion in the gross enrolment rate in higher education should be sustained, and it should reach 50% by 2035 (NEP section 10.8) from 26.3% in 2018 but with a change in its composition. Vocational education should constitute at least 50% of learners by 2025 (NEP section 16.5). In the expansion, public and private sector are expected to contribute equally. Affiliation of colleges should be phased out over a

period of 15 years. The NEP has suggested three categories of institutions: research-intensive universities teaching-intensive universities and autonomous accredited colleges (AC), with provision for transition from AC to the other two (NEP section 10.3) based on their performances and plans. All the institutions will be encouraged to become multidisciplinary education and research university (MERU) by 2030. The National Research Foundation (NRF) will fund research and ensure coordination among the research institutions and the higher education institutions (HEIs).

The policy recommendations follow clearly from the diagnosis of the challenges facing the Indian higher education sector. Among many issues listed by the NEP (NEP section 9.3), the issue of absence of teacher and institutional autonomy assumes significance to comprehend the rationale behind the higher education reform. It was argued by the DNEP that excessive micro-management stifled the teachers and suffocated the institutions in exercising autonomy to innovate and flourish. The steady growth in privatisation did not lead to much of an improvement in the quality because privatisation mutated to commercialisation, which is inimical to the delivery of quality education (NEP section 18.2). The NEP observes fragmentation of the higher education system has restricted free flow of ideas within the sector, generating confusions and conflicts in regulating the sector resulting in a serious compromise with the objective of promoting multi disciplinarily in teaching and research. The DNEP observed that the Indian higher education is unduly large in terms of sheer numbers, resulting in smaller sizes of the institutions and suboptimal utilisation of its resources, human and physical (DNEP, p 203). This rendered the smaller HEIs, in particular, economically unviable. The NEP reiterates DNEP to advocate for adoption of binary accreditation, ostensibly to trim the size of the higher education sector (NEP section 18.4).

Let us see how the NEP seeks to construct a market that will be mainly engineered by state policies and facilitated by the four institutions to be working under the overarching higher education commission of India (HECI).

A QUASI-MARKET FOR HIGHER EDUCATION

Setting up of a regulatory authority by dismantling the University Grants Commission (UGC) and the All India Council for Technical Education was earlier recommended by the National Knowledge Commission (NKC) in 2007 and the Yash Pal Committee Report in 2009. The NEP argues that fragmentation of the Indian higher education system has created fault lines between general and professional education, public and private, centre and the states and national and foreign institutions, with many of them being in operation without proper approval. These fragmentations have created confusions for the regulators and the stakeholders, rendering regulatory interventions ineffective and enforcement difficult. This has made the present system of regulation and funding unsustainable.

The NEP has suggested setting up of an overarching Higher Education Commission of India (HECI) (NEP section 18.3). This will be supported by four pillars, National Higher

Education Regulatory Council (NHERC), National Accreditation Council (NAC), the Higher Education Grants Council (HEGC), and the General Education Council (GEC).

The NHERC will focus on "light but tight" regulation, with emphasis on transparency in financial probity (NEP section 18.3). Private- and the public-funded HEIs will be treated equally. Good governance, transparency in financial affairs and financial probity through disclosure will be the major focus of the NHERC. However, it may be noted that accounts may show that no profit is being made, whereas accounting manipulations ensure siphoning out of surplus. After all, subversion of the educational processes is not a big deal in education, and this is a root cause behind poor quality of higher education (Chattopadhyay 2009).

The NAC as a "meta-accrediting body" has been assigned a lead role in developing an ecosystem of accreditation agencies to cover all the HEIs (NEP section 18.4). In the new scenario, the NAC is required to accomplish a huge role of grading quality and screening of the institutions.

The HEGC (NEP section 18.5) will carry out the task of allocation of grants based on a transparent criteria and the international development programme submitted by the HEIs. It has not yet been made clear in the NEP how the grants will be allocated, how much of it will be based on cost of inputs historically determined or to be normatively determined based on some criteria to ensure justice in the allocation of grants across the universities. This has been a long-standing contentious issue with the UGC in the determination of grants fairly and equitably among the centrally funded universities in particular.

The GEC will act as an academic standard setting body to remain concerned with the learning outcomes and quality of education (NEP section 18.6). The professional bodies like Indian Council of Agricultural Research (ICAR), National Council of Teacher Education (NCTE) will get transformed into Professional Standard Setting Bodies (PSSBs) and they will eventually become members of the GEC. The GEC will formulate National Higher Education Qualification Framework (NHEQF) to be in conformity with the National Skill Qualification Framework (NSQE) to facilitate the integration of vocational education into higher education. The GEC will frame norms for credit transfer and equivalences through NHEQF. The role of National Institutional Ranking Framework (NIRF) has been underplayed because ranking is after all a relative indicator of institutional performance, which makes the ranking of a HEI unstable and unreliable.

UNIVERSITY GOVERNANCE

Reform of university governance is the most challenging feature of higher education reform because it needs balancing between autonomy of the teachers and the departments and strong assertive leadership of the university amid the independent voices that emanate from the various stakeholders within the higher education sector. Absence of technology in the sphere of university functioning, which essentially depends on the agency of the teachers

and the students, adds to the challenge of university governance (Chattopadhyay 2009). It appears that the present system of complying with UGC regulations for appraising faculty performance and faculty recruitment will be replaced by what the NEP termed as the Institutional Development Plan (IDP) (NEP section 12.3). The IDP would require the faculty to set their own targets, which would constitute the institutional target to be realised over a period of time regarding publications, research, teaching and curricular design duly approved by the board of governors (BoG) of the respective institutions. The interesting question is whether IDP allows for teacher auto-nomy the NEP emphasises upon. Though the targets are set by the teachers themselves and not by the regulator unilaterally as it is the system prevalent now, it does not give much autonomy because targets are to be set in the context of intense competition among the HEIs to earn a good score by the NAC and compete for funds.

It is possible that the HEIs might be politely reminded that they had already been bestowed with financial autonomy under the Graded Autonomy scheme[1] and they can approach the Higher Education Funding Agency (HEFA) to borrow to fund for their capacity expansion. It is, however, well understood that financial autonomy does not reinforce academic autonomy, instead it circumscribes institutional autonomy which permeates to the level of teacher autonomy eventually because institutional performance is an outcome mainly of the teachers' performances.

If the argument is that a market is being constructed, we need to see how do the providers, that is, the HEIs and the consumer–students are being besto-wed with sovereignty (Jongbloed 2004; Chattopadhyay 2009).

STUDENTS' SOVEREIGNTY

The most important dimension of students' sovereignty is the freedom to choose courses across the institutions and earn transferable credit, which they can now store digitally in what the NEP suggests, setting up of an Academic Bank for Credits (ABC) (NEP section 11.9). Prior to the NEP, the students were already given the freedom to choose a maximum of 20% of the courses online from the offerings of SWAYAM (Study Webs of Active-learning for Young Aspiring Minds). This has now been enhanced to 40% per semester vide a public notice three days after the NEP was announced (GoI 2020a). This can be viewed as an extension of the existing choice-based credit system (CBCS) as indicated in the "public notice." The students are now therefore enabled to transcend the time and space associated with the traditional "in-class" teaching. Making students sovereign is neo-liberal in its approach to reform higher education.[2] But this would recast the teacher–student relationship with implication for teaching–learning outcome.

It may therefore be conjectured that if extreme forms of flexibility to the students become a reality by policy design facilitated by technology, it remains doubtful whether a thorough understanding of a discipline or a subject area will be feasible in most cases as difficult and

rigorous courses will get slighted by the choice exercising consumerist students. There is a central belief every department holds, and a university mission reflects. Exercise of uninhibited choices of courses even to the extent of 40% would dilute the transformative roles that the teachers of a department cherish to deliver (GoI 2020A). To take into acc-ount individual students' preferences, their future plans and competencies, the existing system does provide a reasonable amount of flexibility, which however varies across the departments and HEIs.

This phenomenon of the growing dominance of massive open online courses (MOOCs) has led to the unbundling of the education delivery (McCowan 2016). Over time, short-term micro courses will be offered with a clear focus on the learning outcomes as desired and demanded by the changing requirements for skill in the job market. Unbundling is the phenomenon of MOOCs, which is essentially a fall out technology. McCowan (2016) argues that commodification and unbundling are linked. It destroys the idea of a university as a space. It limits socialisation of the students so desirable in a country like India to appreciate the diversity and make students sensitive and responsible, which are supposed to be inculcated not only in the classroom and from reading books, but also outside the classroom, in the campus in the course of interaction with the students and the faculty. The idea of a university as a space suffers a gradual erosion (McCowan 2016).

It may help reminding that the students are not the typical consumers. Not only do the students suffer from information asymmetry regarding the courses they desire to opt for, the students cannot buy their degrees either, as they are needed to be diligent and dedicated to earn degrees unlike what happens in a consumption goods market where paying the price ensures acquisition of a well-specified product.

ONLINE TEACHING IS A GAME CHANGER

The advent of technology mediated teaching along with the rapid improvement in the internet connectivity has already begun to usher in major transformative changes in the higher education sector. Major disruption in the academic activities triggered by the pandemic has expedited this embrace of technology. The NEP has given a further boost to the process of adoption of technology with all the might and zeal possible to tide over the present crisis of disruption, but most of these changes will remain embedded in the university structure of functioning and delivery. Online teaching transforms traditional "in-class" teaching radically. The averseness of a part of the academia towards open distance learning (ODL) and online teaching is no longer of any significance in the emerging scenario.

Online education obliterates the concept of time and space, which are associated with the "in-class" offline teaching. While classroom teaching is a typical example of a service, online teaching, if digitised and recorded, transforms "in-class" teaching into a digital product, which has the potential to become eternally available and to anybody in the world subject, of course, to the discretion of the teacher and/or the institution. Essentially, classroom teaching ceases to remain confined within the four walls of the classroom with the initiation of

online teaching. This has very significant implications for the way the market is shaping up in the wake of an increased thrust for regularising online teaching. Of course, it would not be prudent to argue that "in-class" offline and online teaching are equivalents in terms of their impact on learning outcomes. The issue of quality is debatable and highly contextual. The opportunity for dialogue which shapes the way classroom discussions evolve, and often, it takes a new direction opening up a new vista in understanding will now get somewhat restricted by the options that are available in the popular platforms, like raising hand or by typing in questions without inhibition in the chat box marked Q and A. Though the present trend for webinars indicate active participation, having dialogue in classroom is a different ball game altogether. However, the teachers will now be more prepared for the classroom as transactions become formal and transparent.

AUTONOMY OF TEACHERS

If we go by what the NEP prescribes, the autonomy to be given to the teachers and the institutions will liberate the HEIs to chart out their own paths and compete for glory in a life-and-death situation. The sovereignty by giving choice will actually make the market highly competitive and more so in the future, with the possible entry of some of the top-ranking foreign universities in the Indian market. Though it is believed that the average cost of online teaching is generally low, with the marginal cost of addition of a student seeking admission being minimal, it need not always be the case if expenses are incurred to provide special assistance to the students who need special help to cope with the frailties of online teaching (The Economist Intelligent Unit 2020).

Otherwise, offering of online courses is generally found to be very lucrative because marginal revenue in the form of fees exceeds low marginal cost for a considerable number of students that can be very high for an institution. The UGC has identified 171 undergraduate MOOCs courses in six subjects of humanities and social sciences. The UGC is inviting "expression of interest" from the HEIs and faculty "to develop high quality MOOCs in these identified areas comparable to international standards" (GoI 2020a).

QUALITY AND ACCESS

Not any time soon India is going to overcome the problem of digital divide unless the government spends massively on building up infrastructure in every district by developing some designated access points where the students can gather to access the internet and attend online classes. It is also to be recognised that a good many number of students will need additional academic support in absence of the regular teacher–student interaction.[3] The way some reputed coaching institutions in Kota, Rajasthan have set up "doubt counters" for the students, which are managed by the junior teachers to help students beyond the class hours to clarify their doubts, similar centres/counters will have to be opened up in the not too distant future where online teaching for the majority will become normal and acceptable, albeit perforce.

INVITING FOREIGN UNIVERSITIES

Allowing the participation of the foreign universities has been an issue for the policymakers. Though DNEP remained silent on this issue, the NEP has raked up this long debatable issue again. The union budget speech for 2020–21 has already announced the approval of the external commercial borrowings (ECBs) and encouragement for foreign direct investment (FDI) in higher education to facilitate the inflow of resources to fund capacity build-up envisaged by the HEIs. The NEP proposes to allow only the top 100 universities, presumably as per the ranking of the Quacquarelli Symonds (QS) or the Times Higher Education (THE), to enter the Indian market. It may be noted in this context that the universities are not akin to the cell phone factories where quality of product produced by a newly set up factory will be of exactly the same quality as produced by the other existing factories located elsewhere in the world. This is because technology and human capital embodied in the teachers and the students are non-replicable (Chattopadhyay 2009).

The aspects of quality a foreign university can ensure is the course content and evaluation and not necessarily delivery. Learning is a life time experience which cannot be reproduced as the concept of space in a university loses its significance and sanctity.[4] If the students can access the classes being conducted in real time in the foreign universities, the quality of delivery is somewhat maintained in absence of immersing in the ambience in the class and learning from peers. Many EdTech companies, what are called for-profit online managers (OPMs), will now enter into collaboration with the universities to manage the logistics of delivery of the online courses as university administration may find it difficult to handle the challenges associated with the MOOCs (The Economist Intelligence Unit 2020).

We are already aware of how competition within a department can take ugly forms in the form of indulgence in unethical practices like grade inflation and dilution of the course content to attract students and appease them. Even Bok (2013) noted this even in the context of the United States. This competition can become a widespread practice much to the detriment of genuine and rigorous scholarship. This is not to deny that this competition will also make life difficult for many indolent teachers who have been rather non-passionate in their conduct of teaching and research over the years.[5] The problem is that the serious teachers will have to face the heat of competition and some will succumb only at the expense of excellence, which is not warranted. As pointed out by Bok (2013: 379–80), without values, no institution can survive and achieve excellence. Practices bordering on immorality do not take much time for others to emulate and eventually let it precipitate the decline of an institution over time. There are many instances of this gradual decline of many universities in India.

AN UNEQUAL AND BIPOLAR MARKET

With the possibility of capacity expansion by the best of the universities in the form of online teaching, there will emerge two segments in the market, one with the good quality as certified and accredited and the other populated by the rest.

This will lead to different valuation of the degrees in the job market as the higher education market gets further differentiated. The NAC will move towards binary grading over time, which will usher the non-performing HEIs out.

The fees will be determined depending on the accreditation score of the institutions, which is essentially a proxy for the quality of the institutions (NEP 18.14). Linking fees with quality will accentuate the inherent differentiation that exists in the higher education sector and promote higher education as a status good or a "positional good" impeding the process of social mobility unless adequate safeguards are put in place to protect the underprivileged what the NEP defines as SEDGs, the socio-economically disadvantaged groups.

CONCLUDING REMARKS

The higher education reform world over has been largely informed by the neo-liberal logic of privatisation, university governance reform in line with the principles of new public management and construction of a quasi-market for higher education under the supervision of a regulatory authority with support from other institutions. Expanding the scope of students' choice of courses is the primary policy measure in the name of sovereignty, which will foster marketisation of higher education. Though the NEP has recognised the utmost importance of raising public funding to 6% of gross domestic product, it seems unlikely in a federal set-up amid the crisis. However, the government is opening up channels for infusion of more funds through higher education financing agency and from abroad through external commercial borrowings and FDI.

The NEP emits an unmistakable signal of generating competition to rejuvenate the institutions in a state engineered market by giving autonomy to the teachers and the HEIs subject of course to strict compliance with modes of accountability mechanisms as suggested. The NEP seeks to encourage private participation but at the same time curb commercial practices. It will turn out to be a competitive game not all the HEIs will succeed to survive. The NEP is virtually silent about the future of the reservation policies in HEIs, though scholarships are to be provided for the SEDGs. Given the peculiarities of higher education, neither a market in a typical sense can be constructed nor is it desirable if "publicness" is to be nurtured while higher education evolves to be a global good, if not a global public good.

NOTES

1. If the HEIs belong to the Category I institutions as per the categorisation of the Graded Autonomy.

2. Recognising that education needs to be funded by the state, Friedman suggested construction of an education market by providing financial assistance to the students in the form of education vouchers to construct market and infuse competition.

3. The drop out rate in online courses can be very high (The Economists Intelligence Unit 2020, p 29).

4. The Economist Intelligence Unit (2020) has suggested "online universities" as one of the five innovative future models of higher education which would offer courses "anytime, anywhere, and to anyone."

5. This is much more pronounced if the students are funded through education vouchers which makes cost recovery a matter of survival for the HEIs.

BIBLIOGRAPHY

❖ Bok, Derek (2013): *Higher Education in America*, Princeton: Princeton University Press.

❖ Chattopadhyay, S (2009): "The Market in Higher Education: Concern for Equity and Quality," *Economic & Political Weekly*, 18 July, pp 53–61.

❖ — (2010): "An Elitist and Flawed Approach Towards Higher Education," *Economic & Political Weekly*, 1 May, Vol XLV, No 18, pp 15–17.

❖ Government of India (2018): Ministry of Human Resource Development UGC (Categorisation of Universities [only] for Grant of Graded Autonomy) Regulations 2018, *The Gazette of India*, 12 February 2018 (Part III, Section 4), https://www.ugc.ac.in/pdfnews/1435338_182728.pdf.

❖ — (2019): *The National Education Policy Draft*, Ministry of Human Resource Development, https://www.mhrd.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN_Revised.pdf.

❖ — (2020): The National Education Policy 2020, Ministry of Human Resource Development, New Delhi, https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English.pdf.

❖ — (2020a): Public Notice: Expression of Interest (UG Course Mapping/SWAYAM) dated 31 July 2020, New Delhi: UGC, https://www.ugc.ac.in/pdfnews/----498---17-11------_Public-Notice-EOI.pdf.

❖ Jongbloed, Ben (2004): "Regulation and Competition in Higher Education," *Markets in Higher Education: Rhetoric or Reality?*, Pedro Teixeira, Ben Jongbloed, David Dill and Alberto Amaral (eds), Dordrecht/Boston/London: Kluwer Academic Publishers.

❖ McCowan, Tristan (2016): "Universities and the Post-2015 Development Agenda: An Analytical Framework," published online 18 August 2016 with open access at Springerlink.com, https://link.springer.com/article/10.1007/s10734-016-0035-7.

❖ Nixon, E, R Scullion and M Molesworth (2011): "How Choice in Higher Education Can Create Conservative Learners," *The Marketisation of Higher Education and the Student as Consumer*, E Nixon, R Scullion and M Molesworth (eds) , Oxon, UK: Routledge.

❖ The Economist Intelligence Unit (2020): *New Schools of Thought: Innovative Models for Delivering Higher Education*, A Report by the Economist Intelligence Unit, https://www.qf.org.qa/eiu#:~:text=In%20'New%20Schools%20of%20Thought,institutions%20in%20today's%20changing%20world.https://www.fimpes.org.mx/covid19/images/banners/doctos/HEQatar.pdf.

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