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Contents

Awadh International Journal of Information Technology and Education
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1

Adaptation to Climate Change: Initiatives, Challenges & Consequences

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ABSTRACT

The rapid progression of climate change poses an existential threat to ecosystems, societies, and economies worldwide. As the global community grapples with rising temperatures, extreme weather events, and environmental degradation, adaptation has become a critical component of the response to climate change. This paper, titled delves into the multifaceted strategies employed across different sectors and regions to mitigate the adverse effects of climate change. By examining global and local initiatives, this research explores the innovative approaches to building resilience in vulnerable communities, sustainable practices in agriculture, urban planning, and energy systems.

The paper also critically analyzes the challenges that impede effective adaptation, including socio-economic disparities, policy gaps, financial constraints, and technological limitations. Moreover, it investigates the unintended consequences of adaptation efforts, such as maladaptation, biodiversity loss, and socio-cultural impacts. Through a comprehensive review of existing literature, case studies, and policy analysis, this paper aims to provide insights into the current state of climate adaptation, offering recommendations for more effective and equitable approaches. The ultimate goal is to contribute to the global discourse on sustainable development and climate resilience, envisioning a future where human and natural systems coexist harmoniously in a changing world.

Keywords— Climate Change, Sustainable Practices, Climate Adaptation.

INTRODUCTION

Climate change is a defining challenge of our time, with profound implications for natural systems and human societies. The increasing frequency and intensity of extreme weather events, rising sea levels, and shifting climatic patterns necessitate urgent action to adapt to these changes. Adaptation to climate change involves adjustments in ecological, social, and economic systems in response to actual or expected climatic stimuli and their effects. While mitigation efforts focus on reducing greenhouse gas emissions, adaptation seeks to minimize the damage caused by the changing climate and take advantage of potential opportunities.

Adaptation Initiatives

Governmental Policies and Strategies

Governments around the world have developed national adaptation plans to address climate vulnerabilities. Examples include the National Adaptation Programmes of Action (NAPAs) in developing countries, and the Climate Adaptation Plans in developed nations. These initiatives often involve infrastructure resilience projects, such as the construction of sea walls, and the integration of climate risks into urban planning.

Community-Based Adaptation

Local communities, particularly in vulnerable regions, are developing grassroots adaptation strategies. This includes the implementation of traditional knowledge systems, community-led disaster management plans, and sustainable agricultural practices that enhance resilience to climate variability.

Private Sector and Innovation

The private sector is increasingly playing a role in climate adaptation through investments in climate-resilient infrastructure, innovation in green technologies, and the development of insurance products designed to mitigate climate risks. The emergence of climate fintech and green bonds are examples of how financial instruments are being adapted to address climate change challenges.

Global Initiatives

- **Paris Agreement (2015):** The landmark international accord that brings nations together to combat climate change by limiting global warming to well below 2°C above pre-industrial levels. Adaptation is a central component of the agreement, with countries required to submit national adaptation plans.
- **Global Environment Facility (GEF):** A major financial mechanism supporting adaptation projects in developing countries, focusing on biodiversity, climate change, and land degradation.
- **Adaptation Fund:** Established under the Kyoto Protocol, this fund finances projects and programs that help vulnerable communities in developing countries adapt to the negative effects of climate change.

National and Local Initiatives

- **National Adaptation Plans (NAPs):** These are country-driven processes that enable developing countries to identify their medium- and long-term adaptation needs and develop strategies to address them.
- **City Resilience Strategies:** Urban centers, particularly in coastal and arid regions, are developing resilience strategies to address vulnerabilities related to climate change. Examples include New York City's Climate Resiliency Design Guidelines and Rotterdam's Climate Proof Program.

Community-Based Adaptation (CBA): This approach involves local communities in the planning and implementation of adaptation measures, ensuring that interventions are culturally appropriate and sustainable.

CHALLENGES IN CLIMATE CHANGE ADAPTATION

Financial Constraints

Funding remains a major obstacle to the effective implementation of adaptation initiatives, particularly in developing countries. The gap between the financial needs for adaptation and the available resources is widening, making it difficult to scale up successful pilot projects.

Political and Institutional Barriers

Political will and institutional capacity are critical to the success of adaptation efforts. However, in many regions, political instability, lack of governance structures, and corruption hinder the execution of adaptation plans. Furthermore, the integration of climate adaptation into national policies often faces resistance due to competing priorities and short-term political agendas.

Social and Cultural Challenges

Adaptation strategies may face opposition from communities due to cultural beliefs, social norms, or a lack of awareness. In some cases, adaptation measures may require significant lifestyle changes, which can be difficult to implement without adequate community engagement and education.

Socio-Economic Disparities

- **Vulnerability of Marginalized Communities:** The poorest and most marginalized communities are often the most vulnerable to climate change, lacking the resources to adapt effectively. This disparity exacerbates inequality and hampers global adaptation efforts.
- **Financial Constraints:** While there is a growing recognition of the need for adaptation, financing remains a significant barrier, particularly in developing countries. The estimated cost of adaptation in developing countries alone is expected to reach $140-300 billion per year by 2030.

Policy and Governance Issues

- **Lack of Coherent Policies:** The absence of cohesive policies and coordination among different levels of government can lead to fragmented and ineffective adaptation efforts.
- **Regulatory Hurdles:** In some cases, existing regulations can impede adaptation efforts, particularly in sectors like agriculture and water management.

Technological and Knowledge Gaps

- **Limited Access to Technology:** In many regions, particularly in the Global South, there is limited access to the technologies needed to effectively adapt to climate change. This includes early warning systems, climate-resilient infrastructure, and sustainable agricultural practices.
- **Knowledge and Capacity Gaps:** A lack of knowledge and capacity at the local level can hinder the implementation of effective adaptation measures.

CONSEQUENCES OF CLIMATE CHANGE ADAPTATION

Positive Outcomes

Effective adaptation can lead to reduced vulnerability to climate impacts, enhanced resilience of communities, and the protection of ecosystems. Additionally, adaptation efforts can create new economic opportunities, such as jobs in green industries and increased investment in sustainable infrastructure.

- **Increased Resilience:** Successful adaptation efforts can lead to increased resilience in communities, ecosystems, and economies, reducing the overall risk posed by climate change.
- **Co-Benefits:** Many adaptation strategies offer co-benefits, such as improved air quality, enhanced biodiversity, and increased food security.

Negative Consequences

- **Maladaptation:** Poorly designed or implemented adaptation strategies can lead to maladaptation, where actions taken to avoid or reduce vulnerability to climate change instead increase vulnerability.
- **Biodiversity Loss:** Some adaptation measures, such as the construction of hard infrastructure like sea walls, can lead to biodiversity loss and habitat destruction.
- **Socio-Cultural Impacts:** Adaptation efforts can sometimes lead to unintended socio-cultural impacts, such as the displacement of communities or the loss of traditional knowledge and practices.
- **Long-Term Implications:** The long-term success of adaptation strategies depends on their ability to anticipate and respond to future climate scenarios. Failure to consider the dynamic nature of climate change may lead to maladaptation, where efforts to adapt in the short term could increase vulnerability in the long term.

Unintended Consequences

However, adaptation can also have unintended consequences. For example, the construction of sea walls might protect certain areas while exacerbating erosion or flooding in adjacent regions. Moreover, adaptation measures that do not consider social equity may disproportionately benefit certain groups while leaving others more vulnerable.

OVERVIEW OF CLIMATE CHANGE IMPACTS IN INDIA

1. Agricultural Impacts India's agriculture is highly dependent on climatic conditions, making it vulnerable to climate change. The effects of changing rainfall patterns, temperature fluctuations, and extreme weather events on crop yields and food security are profound:

- **Changing Rainfall Patterns**: The Indian monsoon is critical for agriculture, as it provides about 70% of the country's annual rainfall. However, climate change has led to unpredictable and erratic monsoon patterns, with some regions experiencing intense rainfall and others suffering from prolonged droughts. For example, the state of Maharashtra has seen severe droughts in recent years, leading to crop failures and financial distress for farmers. Conversely, excessive rainfall in regions like Kerala has caused floods, damaging crops like rice and spices.
- **Temperature Fluctuations**: Rising temperatures have a direct impact on crop yields. For instance, wheat, a staple crop in northern India, is highly sensitive to temperature changes. An increase in average temperature during the wheat-growing season can lead to premature ripening, reducing grain size and overall yield. In Punjab, known as the "breadbasket of India," studies have shown a decline in wheat productivity due to rising temperatures.
- **Extreme Weather Events**: Cyclones, heatwaves, and unseasonal rainfall have become more frequent and intense, adversely affecting agriculture. The 2020 Cyclone Amphan caused extensive damage to crops in West Bengal, particularly paddy and jute, leading to significant economic losses for farmers.

2. Water Resources Climate change poses a severe threat to India's water resources, which are already under stress due to population growth and industrialization:

- **Monsoon Patterns**: The monsoon's unpredictability not only affects agriculture but also water availability. Regions that rely heavily on monsoon rains for their water supply, such as the Indian subcontinent, are experiencing altered rainfall patterns. The delayed and shortened monsoon seasons have led to water shortages in states like Tamil Nadu, which has faced severe water crises in recent years.
- **Glacial Melt**: The Himalayan glaciers, which feed major rivers like the Ganges, Brahmaputra, and Indus, are melting at an accelerated rate due to rising temperatures.

This glacial retreat has initially led to increased river flow, but in the long term, it threatens to reduce water availability, particularly during the dry season. This change could drastically impact the millions of people who depend on these rivers for drinking water, agriculture, and hydropower.

- **Groundwater Depletion**: Over-extraction of groundwater, combined with reduced recharge due to erratic rainfall, has led to alarming levels of groundwater depletion in many parts of India. In states like Rajasthan and Gujarat, groundwater levels are dropping, leading to water scarcity for both drinking and irrigation purposes.

3. Biodiversity and Ecosystems India is one of the world's most biodiverse countries, but climate change is threatening its rich natural heritage:

- **Shifts in Species Distribution**: As temperatures rise, many species are migrating to cooler areas. For example, several Himalayan species, such as the snow leopard, are moving to higher altitudes as their lower-altitude habitats become too warm. This shift can lead to increased competition for resources among species and may threaten species that cannot adapt quickly enough.
- **Habitat Loss**: Climate change is exacerbating habitat destruction. Coastal ecosystems like mangroves are particularly vulnerable to rising sea levels and increased storm surges. The Sundarbans, a UNESCO World Heritage site and home to the Bengal tiger, is under threat from rising sea levels, which are causing erosion and submergence of land.
- **Ecosystem Services**: The degradation of ecosystems due to climate change is also affecting the services they provide, such as pollination, water purification, and soil fertility. For example, the Western Ghats, a biodiversity hotspot, is experiencing changes in rainfall patterns, which are affecting the availability of water and the health of forests, thereby impacting the livelihoods of local communities who depend on these services.

4. Human Health Climate change is increasingly affecting human health in India, with various direct and indirect impacts:

- **Heatwaves**: India has seen a significant rise in the frequency and intensity of heatwaves, which are linked to an increase in heat-related illnesses and deaths. In 2015, a severe heatwave claimed over 2,500 lives across India, with states like Andhra Pradesh and Telangana being the worst affected. Prolonged exposure to extreme heat can lead to heatstroke, dehydration, and exacerbation of existing cardiovascular and respiratory conditions.
- **Vector-Borne Diseases**: Changes in temperature and precipitation patterns are expanding the range of vector-borne diseases like malaria, dengue, and chikungunya. Warmer temperatures and increased humidity create favorable conditions for

mosquitoes to breed, leading to more frequent outbreaks of these diseases in regions that were previously less affected, such as the Himalayan foothills and parts of central India.

- **Waterborne Illnesses**: Increased flooding and poor water management due to climate change are contributing to the spread of waterborne diseases like cholera, diarrhea, and typhoid. After the 2018 floods in Kerala, there was a significant rise in cases of leptospirosis, a bacterial infection spread through water contaminated by animal urine.

CONCLUSION

Adaptation to climate change is a complex and multifaceted challenge that requires coordinated efforts across all levels of society. While significant progress has been made in developing and implementing adaptation strategies, numerous challenges remain. Financial constraints, socio-economic disparities, policy gaps, and technological limitations all pose significant barriers to effective adaptation. Furthermore, the unintended consequences of adaptation efforts, such as maladaptation and biodiversity loss, highlight the need for careful planning and implementation. The impacts of climate change in India are wide-ranging, affecting agriculture, water resources, biodiversity, and human health. These challenges require urgent and coordinated action, including climate adaptation strategies, sustainable water management practices, conservation of ecosystems, and public health initiatives to mitigate the adverse effects.

This paper underscores the importance of a holistic and inclusive approach to climate change adaptation, one that takes into account the needs and vulnerabilities of all communities. By learning from past experiences and embracing innovative and sustainable practices, the global community can work towards a future where both human and natural systems can thrive in the face of climate change.

REFERENCES

- Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate Change 2022: Impacts, Adaptation and Vulnerability.* Cambridge University Press.
- United Nations Framework Convention on Climate Change (UNFCCC). (2015). *The Paris Agreement.* Retrieved from https://unfccc.int/process-and-meetings/the-paris-agreement
- Global Environment Facility (GEF). (2021). *Annual Report 2021.* Retrieved from https://www.thegef.org/publications/annual-report-2021
- Adger, W. N., et al. (2014). *Human Security.* In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects.* Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.

- Nelson, D. R., et al. (2007). *Adaptation to Environmental Change: Contributions of a Resilience Framework.* Annual Review of Environment and Resources, 32, 395-419.
- Berrang-Ford, L., et al. (2021). *Systematic Global Assessment of Adaptation to Climate Change.* Nature Climate Change, 11(11), 989-996.
- Schipper, E. L. F., et al. (2022). *Critical Reflections on Climate Change Adaptation Policies in Vulnerable Communities.* Environmental Science & Policy, 136, 13-22.
- Pelling, M. (2011). *Adaptation to Climate Change: From Resilience to Transformation.* Routledge.
- Sovacool, B. K., et al. (2017). *The Political Economy of Climate Change Adaptation.* Nature Climate Change, 7, 3-5.
- Smit, B., & Wandel, J. (2006). *Adaptation, Adaptive Capacity and Vulnerability.* Global Environmental Change, 16(3), 282-292.
- Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate Change 2022: Impacts, Adaptation and Vulnerability.* Cambridge University Press.
- United Nations Framework Convention on Climate Change (UNFCCC). (2021). *National Adaptation Plans: 2021 Progress Report.* UNFCCC Secretariat.
- Adger, W. N., et al. (2018). *"Human Adaptation to Climate Change: A Review of Empirical Research."* Annual Review of Environment and Resources, 43(1), 397-420.
- Smit, B., & Wandel, J. (2006). *"Adaptation, Adaptive Capacity and Vulnerability."* Global Environmental Change, 16(3), 282-292.
- Pelling, M. (2011). *Adaptation to Climate Change: From Resilience to Transformation.* Routledge.
- World Bank. (2020). *"Adaptation Principles: A Guide for Designing Strategies for Climate Change Adaptation and Resilience."* World Bank Group.
- Moser, S. C., & Boykoff, M. T. (2013). *Successful Adaptation to Climate Change: Linking Science and Policy in a Rapidly Changing World.* Routledge.

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Pp. 9-17

2

Emerging Pedagogical Techniques and Obstacles to their Adaptation

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ABSTRACT

Teacher education is a program designed to develop the proficiency and competency of educators with an aim of preparing upcoming teachers and practitioners with required knowledge, attitudes, skills and techniques to address the emerging challenges in day to day classroom situations. Additionally, in-service teachers should receive training to update their knowledge and enhance their capabilities, enabling them to tackle new challenges effectively using innovative pedagogical methods. Over the past few decades, various policy frameworks have been designed to meet the changing demands of diverse teaching approaches in higher education including teacher education. The National Education Policy 2020 (NEP) represents a significant effort to merge India's traditional value-based education with modern, technology-driven teaching and learning practices. Its primary goal is to transform the existing education system through a multifaceted strategy, including the development of teaching methods that promote experiential, holistic, integrated, inquiry-based, discovery-focused, learner-centered, discussion-oriented, flexible, and enjoyable education. To equip individuals with 21st-century skills, NEP 2020 emphasizes the need to revamp curricula and pedagogies, ensuring they are both high- quality and effectively delivered to learners. Pedagogical practices shape the learning experiences designed for students, directly affecting their learning outcomes. Hence, adopting appropriate pedagogy is crucial to successfully fulfilling curriculum objectives. This pedagogy should focus on fostering inclusivity through communication, discussion, debate, research, and opportunities for cross-disciplinary and interdisciplinary thinking. This paper aims to present innovative teaching methods designed to nurture learners' creativity beyond the constraints of time and space. It

focuses on three key objectives: introducing recently developed pedagogical techniques, identifying the challenges associated with their implementation, and proposing solutions to overcome these challenges.

Keywords: Innovative Techniques of Teaching, Pedagogical Transformation Tools, Digital Platforms of Learning, Teacher Education, Learner- centred Approach, NEP 2020.

INTRODUCTION

The COVID-19 pandemic has led to the closure of schools and colleges worldwide, leaving over 1.2 billion children out of classrooms globally. This situation has drastically transformed education, prompting a rapid shift to e-learning, where teaching occurs remotely via digital platforms. To adapt to post-COVID-19 educational challenges, the most straightforward response was transitioning existing curricula to online formats as effectively as possible. However, students have faced challenges such as prolonged screen time, overlapping lectures, limited opportunities for self-learning, connectivity issues, family disruptions due to COVID-19, and other stressors still there is a need for inventing new and innovative teaching techniques to create comfortable and attractive classrooms for effective learning.

Pedagogy and Its Importance

Pedagogy can be described as an art of fostering knowledge creation, distinguished by its dynamic and adaptable nature, tailored to varying contexts such as teachers, classrooms, institutions, and platforms. An important key aspect of pedagogy is constructivism. An effective pedagogical approach can incorporate the following elements:

- Pedagogy is an ever-evolving process; each approach is unique and can be adapted to meet the needs of 21st-century learning.
- It should align with the target audience, emphasizing the development of students' understanding and its connection to real-life scenarios.
- To enrich classroom experiences, various tools and methods can be employed to foster greater interaction and discussion within the class.
- Diverse assessment tools should be utilized to enhance the inclusivity and productivity of learners. Incorporating ICT into assessment and evaluation can provide learners with opportunities for self-assessment.

A significant limitation of current online teaching lies in the direct conversion of traditional teaching methods, like lectures, into digital formats. Teachers have made efforts to overcome these issues by incorporating flexible approaches, such as recorded videos, live sessions, and quizzes. The term ***innovative*** refers to employing advanced and original methods. In the context of *innovative pedagogical approaches,* it encompasses teaching methods that utilize appropriate tools and techniques in creative and novel ways, often in diverse combinations. These approaches aim to enhance the teaching-learning process by enabling learners to achieve defined learning outcomes, while fostering essential skills such as problem-solving,

teamwork, reflective thinking, adaptability, creativity, information management, and knowledge application.

Traditional pedagogy, derived from the science of teaching children (with "peda" meaning child and "gogos" meaning teaching), involves teachers determining the teaching method and guiding students who depend on them. Techniques like lectures, tutorials, practical exercises, assignments, quizzes, and discussions are classical methods that often yield better results in offline, interactive settings. In contrast, Malcolm Knowles (1978) introduced the concept of **Andragogy** ("andra" meaning adult), which emphasizes adult learning through more conscious and reflective approaches. Methods such as case teaching, role-playing, field visits, studio work, and games are often more effective in higher education than traditional pedagogical approaches, as they create an engaging learning environment led by the teacher.

In the 21st century, increasing web connectivity has given rise to new teaching approaches. In 2000, Stewart Hase and Chris Kenyon introduced the concept of **Heautagogy, or Self-determined learning**, aimed at developing learners who can take charge of their education. In this approach, the teacher's role shifts to mentoring students to learn independently from various sources. Heautagogical methods such as flipped classrooms, mentoring, mini-projects, short films, guided reading, and case studies offer innovative options for adapting to the "new normal" in online teaching.

PEDAGOGICAL TRANSFORMATION FROM TRADITIONAL TO INNOVATIVE METHODS

Teachers in the 21st century encounter a range of challenges, such as keeping pace with rapidly advancing technology, addressing diverse student needs, managing large class sizes, supporting students' mental health, navigating bureaucratic demands, and cultivating critical thinking in learners. Emerging trends in teacher education play a crucial role in helping educators enhance their knowledge and teaching strategies to better engage students. These trends aim to create a dynamic and effective teaching-learning environment. Below are some innovative pedagogical practices reflecting transformation in teaching practices from traditional to modern ways of teaching and learning and fostering active student participation.

Experiential Learning: Experiential learning denotes to learning through experience or reflection on doing. Hands-on learning serves as a form of experiential learning, offering academically focused experiences that provide a practical context for applying and practicing new concepts, methods, theories, or policies. Students can serve through internet for searching the facts, figures and information and can enhance their wisdom and learning through experiences.

Experiential Learning Cycle focuses on experiential, inquiry and discovery based teaching learning methods. Experiential learning goes through a cycle of four stages:

1. **Concrete Experience**: At this stage, individual encounters a new situation or experience, or reinterprets the existing one.
2. **Reflective Observation**: This is the stage of analyzing the new experience, with a focus on identifying any inconsistencies between the experience and prior understanding.
3. **Abstract Conceptualization**: Reflection leads to the development of a new idea or the modification of an existing concept, signifying learning from the experience.
4. **Active Experimentation**: This is the last stage of experiential learning where newly formed idea is applied to the real-world situations to observe the outcomes.

Cybergogy: Cybergogy is a modern pedagogical framework specifically designed for online and digital learning environments. It focuses on using technology to create engaging, interactive, and effective learning experiences. Cybergogy combines elements of pedagogy, andragogy and heautagogy to cater to the needs of diverse learners in a virtual context.

E learning: E-learning refers to a learning environment that utilizes information and communication technologies (ICTs) as a platform for teaching and learning activities. It is often described as "pedagogy empowered by technology." E-learning can also be seen as a network- enabled transfer of skills and knowledge, delivering education to a large number of learners either simultaneously or at different times. With rapid advancements in technology and learning systems, e-learning has gained widespread adoption. The introduction of computers laid the foundation for this revolution, and with the rise of smartphones, tablets, and other devices, these tools have become integral to modern classrooms. Traditional books are gradually being replaced by electronic educational materials such as optical discs or USB drives. Knowledge can now be accessed via the internet, which is available 24/7, allowing learners to connect anytime, anywhere.

Blended Learning: Also called as Hybrid learning, **Blended learning** is an educational approach that combines traditional face-to-face classroom teaching with online learning activities. This model allows for a more flexible and personalized learning experience, as it integrates the benefits of both in-person and digital learning environments. In an era of rapid developing educational technologies, blended learning tools have notably affected the ways in which we communicate and learn. It fosters learning and teaching in a variety of ways such as:

- Flexible situation for learning in terms of time and place.
- Amalgamation of both online and traditional classroom setting of learning
- Promotion to personalized learning style.
- Varied learning modalities including LMS, digital resources along with lectures.

Online Certificate Courses: Massive Open Online Courses (MOOCs): Massive Open Online Courses (MOOCs) are free online courses available for anyone to enroll. The term

MOOCs (Massive Open Online Courses) was first time introduced by Dave Cormier of the University of Prince Edward Island in 2008 to present a variety of vast online courses led by George Siemens of Athabasca University and Stephen Downes of Canada's National Research Council. MOOCs have revolutionized the learning landscape, offering an affordable and flexible way to acquire new skills, advance careers, and access quality education on a large scale.

Masses globally engage with MOOCs for various purposes, including career advancement, transitioning to new fields, supplementing education, preparing for higher education, lifelong learning, and more.

What MOOCs Stand for?

- **Massive**: MOOCs courses are massive as they draw the attention of larger participants.
- **Open**: They are accessible to everyone, free of charge, and encourage shared learning through open content and discussions.
- **Online**: These courses are conducted entirely through online platforms.
- **Course**: MOOCs courses provide structured learning with facilitators, materials, a defined schedule, and a central topic of interest.

Several major platforms inviting MOOCs, including Coursera, Udacity, edX, and Future Learn. However, any course meeting the criteria cannot be measured as MOOC, even if hosted independently.

Significant Features of MOOCs

- **Free Access**: Most MOOCs are free to enroll.
- **Global Reach**: Enables access to education and expertise from across the globe.
- **Collaborative Learning**: Offers opportunities to connect and collaborate with peers worldwide.
- **Networking**: Facilitates building and maintaining professional and academic networks.
- **Skill Development**: Helps participants acquire digital skills and contribute to lifelong learning.
- **Diverse Participation**: Course participants are often from various countries and backgrounds.
- **Distributed Content**: Learning materials are spread across the web rather than centralized.
- **Flexible Interaction**: Engagement occurs across various platforms, including blogs, websites, and social media.

- **Dynamic Learning**: Participants and instructors actively aggregate, remix, and repurpose content throughout the course.

MOOCs have reshaped traditional education, making knowledge more accessible and fostering a global learning community.

A **Learning Management System** (**LMS**) is a software platform designed to manage, document, track, report, automate, and deliver educational courses, training programs, or learning and development initiatives. The LMS is a set of software tools designed to manage user- learning interventions including online, virtual classroom, and instructor-led courses. These are web-based and facilitate "anytime, anyplace, any pace" access to learning content and administration. Hence, for such system organizations can have commercial systems (Blackboard, WebCT, eCollege, and Desire2Learn) and different open source (Moodle, Sakai, Segue, and Coursework). The LMS creates virtual learning environment used by universities and colleges allow instructors to manage their courses and exchange information with students, promotes collaboration, critical reflection, etc., and is suitable for 100% online classes as well as to supplement face-to-face learning.

Peeragogy or Paragogy: Both words refer to peer-based learning where peers or group of learners learning together and teaching each other and the key principle that drives peeragogy is co-learning or co-creating. As an innovative way of learning, peeragogy is a collaborative, learner-driven approach to education where peers (students or learners) play an active role in the teaching and learning process. In a peeragogical framework, learners take on responsibilities typically held by teachers, such as guiding discussions, offering feedback, and sharing knowledge and resources with one another.

Self- learning: In *the words of Malcom Knowles, Self- learning is* a process where **individuals** take the lead, either independently or with the help of others, to assess their learning needs, set learning objectives, identify resources (both human and material), and evaluate their learning achievements.

Personalized learning Environment: Personalized learning system is an individualized way of learning which is designed to cater the individual strengths, needs, skills, and interests. Under this pedagogical approach, each student gets a learning plan that's based on what they know and how they learn best. Artificial Intelligence (AI) evident to be effective in personalizing the learning experience through a combination of intelligence machine with humanistic features of thinking, speech recognition, learning and planning etc.

CHALLENGES IN ADAPTING WITH EMERGING PEDAGOGICAL TECHNIQUES DURING POST-COVID- 19

1. **Technical Issues**: Unfortunately, experts say, technical issues are bound to happen in an online-only environment.

The solution: Orienting upcoming generation with latest technological advancement and evolving tools and devices. Provision of recorded classroom sessions can also prove to be effective.

2. **Lack of In-Person Interaction:** The lack of in-person interaction with both instructors and classmates can be particularly challenging. The adjustment can be particularly difficult for students taking classes that are better suited for the face-to-face format, like those with science lab components.

The solution: In order to control such obstacle, while not ideal for all learners, the best alternative to actual face-to-face interaction may be videoconferencing programs like Zoom, Skype or Face Time, Google Meet, Cisco webx. Discussion through mobile phones with teachers and peers is also an useful option.

3. **Continuing Enthused**: In physical campus students may not be attending classes as per the prescribed schedule. In that case, it may be difficult to keep them motivated on a coursework with continuity.

The solution: In addition to creating a daily schedule and finding a productive workspace, it can also help to simply focus on the ultimate goal. It is suggested to review and cross check all of those items completed and staying in connection with friends, peers and teachers. Knowing that will help to motivate the learner as well.

4. **Distractions and Time Management**: While studying from home or wherever students may be, there can be more distractions than usual, especially with family and possibly younger siblings around. As a result of these distractions time management becomes more challenging.

The solution: Here, in this case, scheduling play a significant role and helps in balancing learner's personal and academic life. Following points can be effective in this context:

a. Students should prioritize their physical and mental health, even if life is busier than usual.
b. Students should also try to identify a quiet time and place in their house to complete their coursework, if possible.
c. If their other responsibilities become too overwhelming, students should consider talking with their academic adviser about course load options.
d. For instance, some schools and colleges are allowing students to switch at least some classes to a pass-fail grading system, which could help ease some anxieties, experts say – though the policy changes vary across colleges.

SUGGESTIONS FOR EDUCATORS AND PRACTITIONERS FOR EFFECTIVE ADAPTATION TO INNOVATIVE PEDAGOGICAL TECHNIQUES

Innovative pedagogies are essential for fostering a conducive environment for the adoption and sustainability of these approaches in education. Following suggestions may prove to be useful in working with latest pedagogical strategies and techniques:

a. Thrust on Continuous Learning: Educators should prioritize ongoing professional development to enhance their knowledge, skills, and competencies in innovative pedagogies (UNESCO, 2021).

b. Encourage Collaboration: Encourage collaboration among teachers to share best practices, co-design curriculum, and provide peer support in implementing innovative approaches (OECD, 2019).

c. Individualized Learning: Tailor instruction to meet the diverse needs and learning styles of students by incorporating flexible instructional strategies and differentiated learning experiences (European Commission, 2020).

The Administration of educational institutions need to foster a culture that values experimentation, risk-taking, and continuous improvement, where educators feel empowered to innovate and explore new teaching methods (Dede, 2010).They must be facilitated with opportunities of collaboration, exchange of ideas, sharing resources, and collectively addressing the challenges in implementing innovative pedagogies (OECD, 2019). NEP 2020 also emphasizes competency- based education and project- based learning, hence, the curriculum framework and assessment strategies must be reviewed and updated to align with the principles of innovative pedagogies.

CONCLUSION

Sudden arrival of covid-19 pushed the human life towards evolution of a new world order wherein the technology is trying to replace the teacher in terms of time and place. Acceptance and adaptation to latest pedagogical techniques has become a need of hour and its significance cannot be ignored because of its vast spread scope and capacity to transform whole teaching-learning style. Beside many challenges in their implementation, NEP 2020 has laid emphasis on the revival of curriculum, teaching methodology and assessment strategies. By embracing lifelong learning, fostering collaboration, providing support and resources, and promoting a culture of innovation, stakeholders collectively can create an enabling environment that empowers educators practitioners to adopt and sustain innovative approaches, ultimately benefiting student learning outcomes.

REFERENCES

❖ Behera, S. (2024). Innovative Pedagogical Practices in Teacher Education.IJFMR, E-ISSN: 2582-2160. https://www.ijfmr.com/papers/2024/2/15488.pdf

- Chandraja, C. V., Ajayan, T., Ruskin S. & George, M. (2024). Innovative Pedagogies: Adapting Teaching Strategies For Modern Learning Environments. IIP Series, E-ISBN: 978-93-6252-523-9. https://www.iipseries.org/assets/docupload/rsl2024 AFB36 2D7F2D6F33.pdf
- Gangly, P.K. & Chakraborty, R. (2018). Innovative Pedagogies to transform Education & Leapfrogging: 21st Century Scenario. JETIR, ISSN-2349-5162, Vo.5, Issue-12. https://www.jetir.org/papers/JETIR1812D03.pdf
- Guidelines for Innovative Pedagogical Approaches & Evaluation Reforms. NEP 2020. Govt. of India Report. https://www.ugc.gov.in/pdfnews/1031121_Guidelines-Innovative-Pedagogical- Approaches-Evaluation-Reforms.pdf
- Gyawali, Y.P. & Mehndroo M. (2023). The 21st Century Model for Pedagogical Transformation: Exploring Teachers' Identity and Professional Responsibility. JoNG, E-ISSN 2822-1559, Vol.6, Issue-1-2
- OECD. (2019). Teaching for the Future: Effective Classroom Practices to Transform Education. UNESCO. (2017). ICT in Education Policy Formulation and Implementation: A Sourcebook.
- UNESCO. (2021). Education in a Post-COVID World: Nine Ideas for Public Action.

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3

Historiography and the Issue of Objectivity: Tensions in Teaching History

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ABSTRACT

The question of objectivity in historiography remains one of the most contentious debates in the discipline of history. While historians strive for accuracy, the interpretation of historical events is often shaped by ideological, political, and cultural influences. This article examines the nature of history, the process of historical writing, the challenges of maintaining objectivity, and the implications for history teaching. By analyzing selected historical events, this study explores the tensions that arise from subjective interpretations and the impact they have on historical pedagogy. The discussion aims to provide a nuanced understanding of historiography, demonstrating how historical narratives evolve over time and how history educators can approach these challenges in the classroom. Finally, it discusses the implications of these tensions for history teaching, arguing for a balanced approach that fosters critical thinking and acknowledges the constructed nature of historical narratives.

Keywords: Historiography, Objectivity, Subjectivity, Historical Interpretation, Teaching History, Bias in History, Historical Methodology, Nationalism and History, Postcolonial Historiography, Critical Thinking in History Education.

INTRODUCTION

History is often perceived as a straightforward account of past events, but it is far more complex. It involves the selection, interpretation, and presentation of facts, which are influenced by the historian's perspective, cultural context, and available sources. The question of objectivity in history has been a central concern for historians and educators alike. Can history be truly objective, or is it inevitably shaped by subjective interpretations?

The challenge of historical objectivity has existed since the earliest forms of historiography. Ancient historians such as Herodotus and Thucydides approached history differently, with Herodotus incorporating narrative and myth while Thucydides aimed for empirical analysis. Over time, historical writing evolved, incorporating various methodologies and perspectives, from medieval chronicles to modern historiographical approaches. Each era brought its own biases, shaped by political ideologies, religious influences, and societal structures.

In the 19th and early 20th centuries, the positivist school of history, led by figures like Leopold von Ranke, sought to establish history as an objective science based on empirical evidence and rigorous source criticism. However, postmodernist scholars, such as Michel Foucault and Hayden White, later challenged this notion, arguing that historical narratives are inevitably shaped by the historian's linguistic and cultural framework. This debate continues to influence historical scholarship today, as new perspectives emerge to reexamine previously accepted accounts. Moreover, the issue of objectivity is not just an academic concern but has real-world implications. History is often used as a tool for nation-building, propaganda, and ideological reinforcement. Governments and institutions shape historical narratives to serve political agendas, affecting public perceptions of the past. Educational curricula reflect these biases, leading to contested interpretations of historical events across different nations and communities.

This article delves into the nature of history, the processes of historical writing, and the challenges of ensuring objectivity. It also examines specific historical events to illustrate the role of interpretation and discusses the implications of these issues for history teaching. By understanding the tensions between objectivity and subjectivity, historians and educators can foster a more critical and balanced approach to historical study.

What is History?

History is commonly defined as the study of past events, particularly in human affairs (Carr, 1961). It serves as a record of human experiences, societal transformations, and cultural developments. However, history is not a mere collection of facts; it is an interpretative discipline that relies on evidence, narrative construction, and analysis. E. H. Carr (1961) argues that history is shaped by historians' perspectives, raising questions about the possibility of achieving absolute objectivity. Furthermore, history functions as both an academic discipline and a tool for constructing collective memory, reinforcing identities, and influencing present-day political and social dynamics. The ways in which history is taught and understood directly affect societal perceptions of the past and contemporary issues.

History is the study of past events, societies, and individuals, aiming to understand how and why things happened. However, history is not merely a collection of facts; it is a constructed narrative shaped by the historian's choices of sources, perspectives, and interpretations (Jenkins, 1991). The past is immutable, but history is constantly reinterpreted as new evidence emerges and societal values evolve. This distinction between the past and

history underscores the subjective nature of historical writing. The philosopher R.G. Collingwood (1946) argued that history is the re-enactment of past thoughts in the historian's mind, emphasizing the interpretive nature of the discipline. Similarly, E.H. Carr (1961) described history as a dialogue between the historian and the facts, where the historian's perspective plays a crucial role in shaping the narrative. These perspectives highlight the dynamic and interpretive nature of history, challenging the notion of history as a purely objective discipline.

How History is written?

The process of writing history, or historiography, involves the selection of sources, interpretation of evidence, and construction of narratives. Historians rely on primary and secondary sources, but the interpretation of these sources is influenced by personal, cultural, and ideological biases. For example, national histories often emphasize certain events while minimizing others to create a cohesive national identity. This selective representation of history raises concerns about historical accuracy and impartiality. Moreover, historiographical approaches vary widely, including political, economic, social, and cultural history. The Annales School, for instance, prioritizes long-term social structures over political events, while postcolonial historians critique Eurocentric narratives (Foucault, 1972; Said, 1978).

The writing of history involves selecting, analyzing, and interpreting sources to construct a coherent narrative. Historians rely on primary sources, such as documents, artifacts, and eyewitness accounts, as well as secondary sources, which interpret primary evidence. However, the process of selection and interpretation introduces subjectivity. For example, the historian's choice of which events to emphasize or omit can significantly shape the narrative (Evans, 1997). Additionally, the cultural and political context in which a historian writes influences their perspective. For instance, colonial histories often reflected the biases of imperial powers, marginalizing indigenous perspectives (Said, 1978).

The historian's methodology also plays a crucial role in shaping historical narratives. Quantitative methods, such as statistical analysis, may provide a more objective view of certain phenomena, but they cannot capture the complexity of human experiences. Qualitative methods, such as oral history, offer rich insights into individual experiences but are subject to the biases of both the interviewee and the interviewer (Thompson, 2000). The interplay between these methods highlights the challenges of achieving a balanced and objective historical narrative.

The Challenge of Objectivity in History

Objectivity in history refers to the ideal of presenting historical facts without bias or personal interpretation. However, historians operate within specific social, political, and intellectual contexts that shape their perspectives. The subjectivity inherent in source selection, language, and narrative construction makes complete objectivity unattainable. Some historians argue for a middle ground, advocating for critical historiography that acknowledges subjectivity

while striving for factual accuracy (Evans, 1997). The influence of dominant ideologies, government control over education, and the historian's own background all contribute to the shaping of historical narratives. Moreover, history is often rewritten in response to new evidence or changing political contexts, further demonstrating its fluid nature. Historians are products of their time and culture, and their interpretations are inevitably influenced by their own perspectives. The issue of interpretation is further complicated by the availability and reliability of sources. For instance, the history of marginalized groups, such as women and indigenous peoples, has often been overlooked due to a lack of written records or the dominance of Eurocentric perspectives. In such cases, historians must rely on alternative sources, such as oral histories or archaeological evidence, which require careful interpretation.

The postmodern critique of history further complicates the notion of objectivity. Postmodernists argue that all historical narratives are constructed and that there is no objective truth to be discovered (Jenkins, 1991). While this perspective has been criticized for leading to historical relativism, it has also encouraged historians to be more reflexive about their methods and assumptions.

Examples of Interpretation in Historical Events

The role of interpretation in history is evident in the study of key events. For example, the causes of World War I have been debated for decades. While some historians emphasize the role of militarism and alliances, others focus on economic competition or the failure of diplomacy (Fay, 1928). Similarly, the interpretation of the French Revolution varies widely, with some historians highlighting its ideals of liberty and equality, while others focus on its violence and social upheaval (Hobsbawm, 1962). These differing interpretations demonstrate how historical narratives are shaped by the historian's perspective and the questions they seek to answer.

Another example is the historiography of the Holocaust. Early accounts often focused on the role of Nazi leaders and the machinery of genocide, while more recent scholarship has emphasized the experiences of victims and the complicity of ordinary people. This shift reflects broader changes in historical methodology and the increasing importance of social history.

The interpretation of colonialism also illustrates the role of perspective in historical writing. In Britain, colonial histories often emphasized the civilizing mission of empire, while in former colonies, they focused on resistance and exploitation (Chakrabarty, 2000). These differing narratives highlight the political and cultural dimensions of historical interpretation.

Case Studies

1. **The Partition of India (1947):** Interpretations of the Partition vary significantly. While some historians emphasize British colonial policies as the primary cause (Jalal, 1995), others highlight communal tensions and political failures (Chatterji, 2007). Indian and Pakistani textbooks often reflect nationalist narratives that emphasize victimhood and external blame rather than acknowledging internal complexities (Khan, 2018).

2. **The French Revolution (1789-1799):** Liberal historians view the Revolution as a triumph of democracy and individual rights (Soboul, 1965), while conservative scholars focus on its violent excesses and the failure of radical policies (Furet, 1981). Marxist interpretations emphasize class struggle, whereas revisionist historians argue for the role of culture and ideology in shaping revolutionary events (Doyle, 1989).
3. **World War II and Hiroshima/Nagasaki (1945):** The justification for dropping atomic bombs remains contested. American narratives often depict it as a necessary step to end the war, while Japanese accounts emphasize the humanitarian devastation and question its necessity (Dower, 1986). The Cold War further shaped how these events were interpreted, with some historians arguing that nuclear deterrence played a greater role than military necessity (Walker, 2005).

Tensions between Objectivity and Subjectivity

The tension between objectivity and subjectivity in history has significant implications for historiography and education. On one hand, the pursuit of objectivity encourages historians to critically evaluate evidence and avoid bias. On the other hand, the recognition of subjectivity highlights the importance of diverse perspectives and the need to question dominant narratives. This tension is particularly evident in the teaching of history, where educators must balance the presentation of facts with the exploration of multiple interpretations.

The struggle between objectivity and subjectivity in history leads to tensions in historical discourse. Postmodernist scholars argue that all history is subjective, as narratives are constructed based on the historian's positionality (Foucault, 1972). In contrast, empiricist historians advocate for rigorous source-based analysis to minimize bias (Evans, 1997). These tensions create challenges for educators in presenting balanced historical narratives while acknowledging multiple perspectives. The rise of digital media and information accessibility has further complicated these issues, as differing historical interpretations can now be disseminated widely, leading to debates over historical truth and misinformation.

For example, the teaching of colonialism in schools often reflects national narratives that either glorify or condemn the colonial past. In Britain, the history curriculum has been criticized for downplaying the violence and exploitation of empire (Cannadine, 2013). Conversely, in former colonies, history education may emphasize resistance and liberation, sometimes at the expense of a nuanced understanding of the colonial period (Chakrabarty, 2000). These examples illustrate how historical narratives can be shaped by political and cultural agendas, complicating the pursuit of objectivity.

The tension between objectivity and subjectivity also raises ethical questions for historians. For instance, should historians strive to remain neutral when studying events such as genocide or slavery, or is it their responsibility to take a moral stance? The historian's role as both a scholar and a moral agent is a contentious issue that has significant implications for the practice of history (Evans, 1997).

IMPLICATIONS FOR TEACHING HISTORY

The objectivity-subjectivity debate has significant implications for history education. Teachers must navigate the fine line between presenting established facts and encouraging critical thinking (Wineburg, 2001). Curriculum design often reflects national ideologies, influencing how history is taught (Berger, 2008). Teaching methods such as inquiry-based learning, comparative analysis, and engagement with primary sources can help students develop critical thinking skills. The challenges of objectivity and subjectivity have profound implications for history education.

Teachers must navigate the tension between presenting established facts and encouraging critical thinking about interpretations. One approach is to teach history as a discipline of inquiry, where students learn to analyze sources, evaluate evidence, and construct their own interpretations (Wineburg, 2001). This approach fosters historical thinking skills and helps students understand the constructed nature of history.

Moreover, history education should incorporate diverse perspectives to challenge dominant narratives and promote inclusivity. For example, teaching the history of slavery in the United States should include not only the perspectives of slaveholders and abolitionists but also the voices of enslaved people themselves. By engaging with multiple perspectives, students can develop a more nuanced understanding of the past and its relevance to the present.

The use of primary sources in the classroom is another effective way to teach students about the interpretive nature of history. By analyzing primary sources, students can see how different interpretations of the same event can arise from different perspectives and biases (Wineburg, 2001). This approach encourages students to think critically about the sources of historical knowledge and the processes by which history is constructed. Finally, history education should address the ethical dimensions of historical interpretation. Students should be encouraged to consider the moral implications of historical events and the responsibilities of historians in representing the past (Evans, 1997). This approach not only fosters critical thinking but also helps students develop a sense of ethical responsibility in their engagement with history.

CONCLUSION

While the pursuit of objectivity in history is a noble goal, complete neutrality remains elusive. Historiography is inherently interpretative, shaped by the historian's perspective, available sources, and prevailing intellectual paradigms. Understanding these complexities is crucial for both historians and educators. In teaching history, fostering critical thinking and engaging with multiple viewpoints can help students appreciate the richness of historical narratives while recognizing the challenges of objectivity. By acknowledging the tensions between objectivity and subjectivity, educators and historians can contribute to a more nuanced and responsible engagement with the past.

The issue of objectivity in history is a central concern for historians and educators alike. While complete objectivity may be unattainable, historians must strive for balanced and critical approaches to their work. Similarly, history education should emphasize critical thinking and the exploration of diverse perspectives. By acknowledging the subjective nature of history while upholding rigorous standards of evidence and analysis, we can foster a deeper understanding of the past and its enduring significance.

REFERENCES

- Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism.* Verso.
- Berger, S. (2008). *Telling the Truth About History.* Norton.
- Cannadine, D. (2013*). The undivided past: History beyond our differences*. Knopf.
- Carr, E. H. (1961). *What is history*? Cambridge University Press.
- Carr, E. H. (1961). *Writing the Nation: A Global Perspective.* Palgrave Macmillan.
- Chakrabarty, D. (2000). *Provincializing Europe: Postcolonial thought and historical difference.* Princeton University Press.
- Chatterji, J. (2007). *What Is History?* Penguin.
- Collingwood, R. G. (1946). *The idea of history*. Oxford University Press.
- Dower, J. (1986). *The Spoils of Partition: Bengal and India, 1947-1967.* Cambridge University Press.
- Elton, G. R. (2002). *War Without Mercy: Race and Power in the Pacific War.* Pantheon.
- Evans, R. J. (1997). *In defense of history*. Granta Books.
- Evans, R. J. (1997). *The Practice of History.* Blackwell.
- Fay, S. B. (1928). *The origins of the World War* (2nd ed.). Macmillan.
- Foucault, M. (1972). *In Defence of History.* Granta.
- Furet, F. (1981). *The Archaeology of Knowledge.* Pantheon.
- Hobsbawm, E. (1962). *The age of revolution*: 1789–1848. Weidenfeld & Nicolson.
- Jalal, A. (1995). *Interpreting the French Revolution.* Cambridge University Press.
- Jenkins, K. (1991). *Rethinking history*. Routledge.
- Marwick, A. (2001). *The Sole Spokesman: Jinnah, the Muslim League, and the Demand for Pakistan.* Cambridge University Press.
- Novick, P. (1988). *The New Nature of History: Knowledge, Evidence, Language.* Palgrave Macmillan
- Said, E. W. (1978). *Orientalism*. Pantheon Books.

- Soboul, A. (1965). *Theorizing Historical Consciousness.* University of Toronto Press.
- Spivak, G. C. (1988). *Can the subaltern speak?* In C. Nelson & L. Grossberg (Eds.), *Marxism and the interpretation of culture* (pp. 271–313). University of Illinois Press.
- Thompson, P. (2000*). The voice of the past: Oral history* (3rd ed.). Oxford University Press.
- Wineburg, S. (2001). *Historical thinking and other unnatural acts: Charting the future of teaching the past.* Temple University Press.
- Wineburg, S. (2001). *The French Revolution 1787-1799.* Random House.

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4

Action Research on Impact on Learner's Participation in Classroom Teaching Learning Process by Implementation of Activity Based Learning in Science Curriculum Transaction in Upper Primary School Level

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ABSTRACT

From the review of NEP 2020 about Classroom practices it has been found that pedagogical approaches should emphasized on sustainable development doing innovations with rationale of Think Global and Act Local. The present action research was carried out in schools of Delhi with upper primary level students in science classes. It was found during phase I of internship programme of B.Ed trainees with help of observations and discussion with teachers that students were not active and involved in classroom learning process, though classrooms are places where all impossibilities can be converted to possibilities. The present action research was conducted to explore reason behind lack of student's participation and on the basis of that actions were taken. The study was conducted in two phases, firstly pre test was taken to know level of students performance and on the basis of that actions were taken and then impact was analyses. Actions taken mainly included activity based teaching by use of low cost teaching aids, demonstration of activities in classroom etc. The sample for the study comprised of selected private schools of East district of Delhi with random sampling technique students of classes VI-VIII.

Findings of study indicated that use of activity based teaching learning involvement of student in classroom increased; there was enhancement in concept clarity and performance level also increased.

Keywords: Sustainable development, Activity based teaching learning and pedagogical approaches.

INTRODUCTION

If we think of development, progress and transformations for welfare of society then change automatically becomes part of the whole process and with same view NEP 2020 with vision of Holistic development-cognitive, affective, psychomotor abilities and enhancement of competencies to transform Indian Education system formulated and is in action mode now with acceptance of fact that the world is growing with a faster pace in the 21st century due to rapid development of science and technology. As stated *The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills.[NEP 2020, 4.4]*

This indicates preparing students to live and face the world in the 21st century which is challenging and daunting. As mentioned in statement by **Edwards and Usher (2000)** "Change and uncertainty require lifelong learning," it means preparing the students towards acquiring the 21st century learning skills should not be delayed and no student should be restricted and debarred for gaining or acquiring these skills. This is now emphasized through a significant body of literature focusing mainly on three topics – motivations for a new model of learning, the specific competencies and skills needed to function effectively in the twenty-first century, and the **Pedagogy** required to stimulate those capabilities (Cynthia, 2015). With changes in content of curriculum and for deeper understanding of concepts across subjects, and their interrelations, and to enable the acquisition of the various aforementioned values, dispositions, and capacities, **Pedagogy** in the classroom must become more effective.

Science Pedagogy in Perspective of NEP 2020

Science does not simply sit down & pray for things to happen, but seeks to find out why things happen. It experiments and tries again and again and sometimes fails and sometimes succeeds & so bit by bit it adds to human knowledge. This modern world of ours is very different from ancient world or the middle ages. This great difference is largely due to Science**."**

- Pandit Jawaharlal Nehru.

As a subject in schools science draws significant components across the curriculum provide an interdisciplinary understanding and appreciation of the role of Science in everyday life. Though NCF 2005 recommends for "**Good Science Education as one that is true to the child, true to life and true to science".** Modifications in curriculum transaction on the basis of new National curriculum Framework for school Education demands more emphasis on development of 21st century skills such as scientific temper and evidence-based and critical thinking, sense of aesthetics and art; oral and written communication and mental and physical fitness and well-being. Obviously demands for strong correlation and interventions in

three aspects majorly Pedagogy: **approaches, strategies and transaction along with** Content which should be meaningful, experiential, holistic and rooted in Indian Values and But a major challenge in current school education is related to Science in the school curriculum is the focus on facts and definitions, often with a neglect for the development of conceptual understanding and the capacities for scientific inquiry. On other hand with NEP2020 as stated learning should be experiential, meaningful to child which can be related to real life experiences while being connected to Indian roots also demands for Change in Role of Teachers, Innovator and Facilitator.Science Education should be taught in such a way **according to *Udosen & Ekukinam, 2013* Science should be taught in such a way that students are occupied by suitable activities.**

The NEP 2020 aims to overhaul the education system, including science education, to make it more relevant, interactive, and aligned with the needs of the 21st century. By fostering a culture of inquiry, innovation, and inclusivity, NEP 2020 envisions producing scientifically literate citizens capable of contributing to the nation's growth and development. For which it emphasized on Curriculum and Pedagogy Reform such as the revision of the curriculum to make it more relevant, enjoyable, and suited to 21st-century needs and focused on conceptual understanding rather than rote learning with introduction of contemporary subjects like artificial intelligence, machine learning, and data science. And of the pedagogical approach suggested is activity based leaning in classrooms which in turn can ensure holistic development.

REVIEW OF LITERATURE

- **Aggarwal, P., & Gupta, R. (2017). Inquiry-Based Learning in Science: An Overview. *Journal of Science Education*, 15(2), 45-58:** Research indicates that inquiry-based learning, where students engage in experiments and problem-solving activities, enhances understanding and retention of scientific concepts. However, its implementation is inconsistent due to a lack of resources and trained teachers.
- **Patil, N., & Patil, R. (2018). Success of Activity-Based Science Curriculum in Enhancing Student Learning. Education Innovations, 12(1), 44-59.:** The research finding indicates that as emphasized by the NCF, activity-based learning is shown to improve conceptual understanding and foster a positive attitude towards science. Programs like the Activity-Based Science Curriculum (ABSC) have demonstrated success in several states.
- **Kumar, S., et al. (2019). Impact of Pedagogical Methods on Student Achievement in Science. *Journal of Educational Studies*, 14(2), 78-94**.: The study findings lead to conclusion that the impact of curriculum transaction on student achievement in science varies. Studies show that students exposed to interactive and inquiry-based methods perform better in assessments compared to those taught through traditional methods.

- **Aggarwal, P., & Gupta, R. (2017). Inquiry-Based Learning in Science: An Overview.** ***Journal of Science Education*****, 15(2), 45-58.**: Research indicates that inquiry-based learning, where students engage in experiments and problem-solving activities, enhances understanding and retention of scientific concepts. However, its implementation is inconsistent due to a lack of resources and trained teachers

OBJECTIVES OF THE STUDY

- To conduct pre-test to find out reasons for lack of participation of students in science classes.
- To develop plan of action for enhancing student active participation on basis of pre test results.
- To analyze difference in student participation level on basis of actions taken in the form of activity based learning.
- To suggest strategies for effective science curriculum transaction on basis of the action research conducted.

SIGNIFICANCE OF THE STUDY

The present study titled "**Action Research on impact on learner's participation in classroom teaching learning process by implementation of Activity Based Learning in Science Curriculum Transaction in upper primary school level"** would be input in imparting different strategies for enhancing not only participation level of students in classroom but also will also lead to better concept development which in fact will increase achievement level of students. The findings of the study would lead to development of scientific attitude among students.

OPERATIONAL DEFINITIONS

1. Student Participation- In this problem student participation means involvement of student in diff activities taking place during teaching learning process in science pedagogy.
2. Activity Based learning - means here means diff strategies and method based on learner centered approach used by teachers during transaction of science curriculum in the classes VI-VIII.
3. Upper primary level - Classes VI-VIII of private selected schools of Delhi.

METHODOLOGY

- Sample for the Study: The sample for the study comprised of 10 Secondary and senior secondary level private schools of East Delhi including Students of VI-VIII Classes and Science Pedagogy Teachers.

- Sampling Technique: For the present study Purposive sampling technique was used for selection of schools and classes of science only .
- Tools used

a) Observation schedule- To know about the pattern of curriculum transaction in science classes and involvement of students in teaching learning process

b) Self prepared Pre test - To analyze level of performance of students and their concept clarity in selected running topics in classes VI-VIII

c) Action plan - demonstration of activities for explanation of concepts

d) Post Test - analyze difference in student participation level on basis of actions taken in the form of activity based learning.

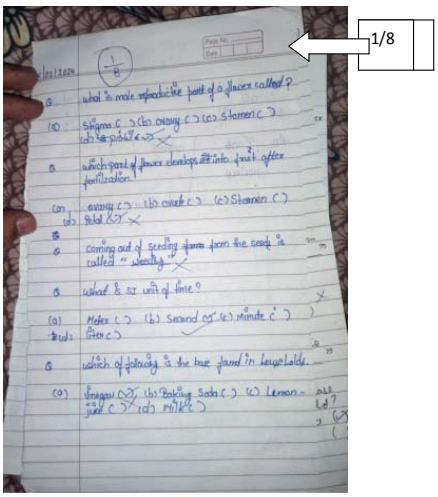
EXECUTION OF ACTION RESEARCH

Phase I

Prospective Teachers of one of the B.Ed College affiliated to GGSIPU Delhi of semester I during PSE I conducted observations of science curriculum transactions at upper primary level classes of selected Schools for 15 days with help of self constructed observation schedule and checklist.

Phase II

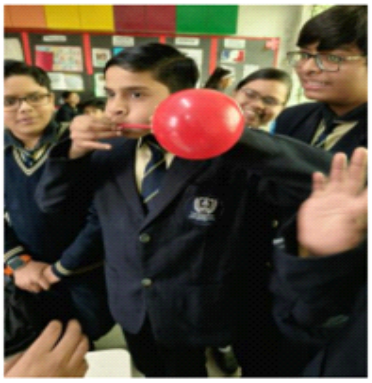
As a part of PSE II, another 15 days tenure of training in which prospective teachers conducted self-constructed pretest on the topics which were taking place namely Motion, Reproduction in flower (specially structure of flower) and Acid and Base in classes that time to know level of concept clarity and interest level of students.



Phase III

On the basis of performance of students in pre test prospective teachers along with teacher educator adopted certain strategies such as activity based learning in form of demonstrations with locally available material for enhancing participation in classroom teaching learning process and for development of scientific attitude etc.

Type of Activities Conducted: Action Taken

<table>
<tr>
<td>Day 1: We have conducted some activities related to our pedagogy where we had brought the apparatus with us. We conducted the "action-reaction" newton third law activity in class 7th.</td>
<td>  </td>
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<tr>
<td>Day 2- we conduct another activity in the same class. in this experiment we demonstrate the air pressure concept. students enjoy and learn from it with interest.</td>
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  </td>
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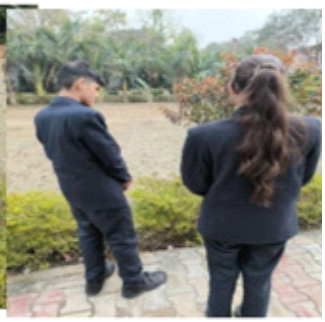
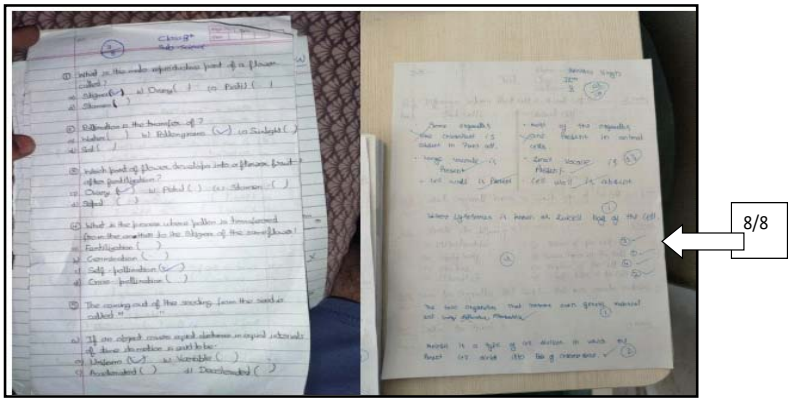
</table>

Day 3- This time we ensure that students participate itself and after learning from the concept, they explain what they learn one by one. Multiple time concept repeats in the classroom. and many queries also appear and answer by us.	
Day 4: we conduct the board activity, in which the concept of genetic is repeatedly represent by different-different students of class 9th. Multiple time similar problem with different examples is solved by the students itself.	  
Day 5: On the day 5, we conducted a quiz in class 8th to aware students about more of discussion and the listening power because this action can lead to reduce the indiscipline even more. The students were listening properly because they wanted to answer. We made a quiz about science books activities which generally students know.	
Day 6: Topic of types of plants is explained by ground visit of the samarth school, observation is used here to define the difference between herbs and shrubs, between trees and shrubs.	 

Phase IV

Conduction of self constructed post test to analyze difference in student participation level on basis of actions taken in the form of activity based learning.

Performance on Post Test



ANALYSIS AND INTERPRETATION

Phase I

During phase I: Prospective teachers through observation with help of checklist of science classes taken by teachers in sampled schools found that method of teaching mainly comprised of reading from books and explanation done in abstract manner. Majority of teachers did not use any TLM or ICT resources for transaction of curriculum. More than 85% schools did not have laboratories in functioning state or they are only used for senior secondary classes. Lack of resources for conducting activity based classes due to lack of funds and support to teachers.

Phase II

On conduction of pre test it was analysed from the scores obtained by students that there was lack of concept clarity, lack of interest in science subject, not able to understand application type of questions toward due to traditional pattern of teaching learner remain passive. As the performance of students was very low more than 70% of them obtained less than 2 marks out of 8questions of 1 mark each. Only 30 % scored above 50% marks.

Phase III

With intervention of activity based leaning in teaching learning process it was found that the students initiated to come in front to perform activity by themselves and became more focused and neglected to disturb the class as they were finding the activities interesting. And demanded conduction of more such activities. Moreover classroom management problem also resolved as the whole class became quit whenever when activity material was even

demonstrated on table The major analysis on basis of action taken revealed that learner become active by adopting strategy of activity based learning.

Phase IV

Post test performance of students lead to interpretation that now students are not scared of application skill based questions as their conceptual clarity has been enhanced due to participation in activity based teaching learning process. More than 80% students were able to perform correct answer and remain eager to attend class, backbenchers want to sit in front now science became their top most liked subject.

STRATEGIES FOR EFFECTIVE SCIENCE CURRICULUM TRANSACTION ON BASIS OF THE ACTION RESEARCH CONDUCTED

Teachers are the key elements in the classroom that ignite the minds of children for seeking knowledge. We need to improve teacher quality by providing training and equipping them with modern teaching aids, tools, and methodologies such as smart classrooms and digital course content. analysis of action research h conducted has revealed that certain changes in pedagogy of transaction of curriculum problems related to lack of interest in subject, lack of participation in classroom activities and lack of understanding in concepts can be overcome.

Following strategies can be beneficial for stakeholders of education world:

- Provision of teaching learning materials in classroom should be ensured.
- Time to time training of teachers in designing and creation of appropriate material and its implementation
- Integration of science with art and other subjects can be ensured.
- Planning of science calendar in which experiential learning experiences can also be provided.

CONCLUSION

The action research confirms that Activity-Based Learning positively impacts learners' participation in the science curriculum at the upper primary school level. By making learning more engaging, inclusive, and effective, ABL prepares students not only for academic success but also for practical problem-solving in real-life situations. To maximize the benefits of ABL, it is essential to address the associated challenges through strategic planning, resource allocation, and continuous professional development for educators. Ultimately, the adoption of ABL represents a progressive step towards a more interactive and student-centered approach to science education.

REFERENCES

❖ Almeida, A. (2020). Advantages of NEP-2020 Archives. Retrieved November 6, 2020, from Trade Brains website: https://tradebrains.in/tag/advantages-of-nep-2020/

- Cynthia Luna Scott. The Futures of Learning 2: What kind of learning for the 21st century? UNESCO Education Research and Foresight, Paris. [ERF Working Papers Series, No. 14].
- Edwards, R. and Usher, R. 2000. Lifelong learning: The postmodern condition of education? In T.J. Sork, V. Chapman, & R. St. Clair (Eds.), AERC2000: Proceedings of the 41st Annual Adult Education Research Conference (pp. 95- 100). Vancouver, Canada: University of British Columbia.
- NCF, 2005.National curriculum framework.National Council of Education Research and Training, New Delhi.
- Sahoo, P.R. (2021). Reimagining the Role of Science Education in Development of 21st Century Learning Skills with Reference to NEP 2020. Educational Quest: An Int. J. Edu. Appl. Soc. Sci., 12(2): 161-168.

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5

English and ICT in the Classroom

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ABSTRACT

With the advancement of technology in the twenty first century, teaching has taken a complete different connotation. We have come a long way from the chalk and talk method which put the teacher in the centre as the frontrunner. In today's digital day and age, the learner has become the centre of the learning process. The teacher has access to a multitude of teaching resources and these resources are being used to create a blended learning classroom. In this paper, we shall try to understand the implications of ICT in an English classroom in the Indian context.

Keywords: ICT, English Classroom, Blended Learning.

INTRODUCTION- A HISTORICAL PERSPECTIVE

English is a second language for most Indian learners. Looking at the development of English from a historical perspective, English was introduced by the British in India as not merely a language or medium of instruction like many other languages in the country but as a tool to divide and conquer. In several interpretations of Lord Macaulay's Minutes of Education, it is reiterated that the knowledge of English would inculcate 'superior morals' which were responsible in making the British a 'superior race'. It is pertinent to note here that Lord Macaulay has often been credited with the introduction of English as a medium of instruction and an official language for the government. Since then, even after the ousting of the British from our country English has shifted from being a foreign language to a second language and in many modern, contemporary settings, even the first language in the Indian context.

The Evolution of Teaching of English

The teaching of English has also gone through many changes and paradigm shifts. While earlier there was an emphasis on rote memorisation, drilling activities from primers and dictations, the focus is now gradually but most definitely shifting towards communicative English and learning the language through the process of immersion. In a teacher-centric classroom, the teacher is responsible for the child's learning and this learning must be capable of being assessed through behavioural outcomes. Therefore it is easier for the teacher to draw a list of words and give a dictation to her students. This dictation is later marked which gives all the stakeholders; the teachers, the parents and the student an objective understanding of how well the child knows the spellings of 'difficult words'. The same process is applied to rote memorisation of question answers from literary texts, grammar topics, so on and so forth. However with this practice of teaching, which begins quite early on the child constantly feels alienated from the language and needs to put in effort to overcome this fear. In recent times, one sees a paradigm shift from this to a learner-centric classroom. In such a classroom, the focus is on the learner and her/his progress in learning a new language, in this case English. This classroom is more interactive, less threatening and teaches English not just as a language but with the intent of it being purposive in nature.

ICT in an English Classroom

ICT refers to Information and Communication Technology. It does not limit itself to just computers but encompasses the internet related ecosystem as well as the mobile one, powered by wireless technology and system. ICT has revolutionised the process of teaching and learning. The spreading innovations in ICT's such as personal computers, Internet, mobile phones, and many other ICT tools, have caused a 'paradigm shift' in teaching and learning of all subjects; and the traditional model of teaching and learning has been replaced by transformed pedagogy (Juceviciene, 2008;Somekh,2007) One of the most important aspects of ICT is that it has brought the world to our fingertips. Gone are the days when people would switch on the radio or eagerly wait for the newspaper to read the daily news. Now the news is available on our fingertips. ICT has permeated all domains of existence and it has become a way of life. The younger generation seems more adept at using ICT and in education; ICT has achieved a status of its own. Online learning platforms, Virtual classrooms, Digital textbooks and Educational apps are all excellent examples of the implications of ICT in classrooms. In English classroom teaching and learning, ICT has acquired an even bigger role. The teaching of English must begin with a basic premise- English or any other language is purposive in nature. This means that the knowledge of a language is fruitful if we are able to use the language in real-life settings. ICT has an important role to play in the fulfilment of this objective. Through the use of various video-surfing websites, it is important to expose children to TV shows and movies specifically in the target language or movies in the mother tongue of the child with English subtitles. This can be attested as one of the most effective ways to learn English. In fact, many shows and movies have been made on this theme

which shows the main character(s) struggling to learn English but gradually getting a grasp of it. Educational apps have been developed which aid the learning of a new language and can be easily installed on a smartphone. These apps ensure a continuity in learning as the apps can be accessed even at home. The virtual world has opened many avenues to accelerate the teaching of English. Search engines have the capability of teaching pronunciations of all the words available to mankind. This gives the learner a sense of control thereby making the class more learner centric. It also gives the student an opportunity to personalise their learning. While ICT enables and aids collaborative learning in the teaching and learning of all subjects, this takes precedence in English language learning as any the learning and/or acquisition of any language requires collaboration and interaction. One of the most important and relevant aspect of the use of ICT for English language education is that it gives the learner access to a wide range of resources for the acquisition and perfection of all the four skills of LSRW, i.e. Listening, Reading, Speaking and Writing. While there are plenty of ICT resources available to teachers and students alike, we must organise these resources in a coherent whole and so that there is no scrambling of resources during the learning process.

CONCLUSION

It has been reiterated time and again that there has been a paradigm shift in the very conceptualisation of teaching and consequently its implications, too. ICT has become a part and parcel of our lives and we cannot imagine a positive, enabling and successful classroom without the use of ICT and blended learning. ICT has permeated English classrooms in the form of multimedia resources, educational apps, access to search engines and collaborative virtual classrooms. This has created a vast multitude of options available to learners, especially the ones at the nascent stage to create a self- paced learning environment for English language learning and acquisition.

REFERENCES

- Allen, H.B. & Campbell, R.N. (1972). Teaching English as a Second Language. New Delhi: Tata McGraw Hill.
- Allen, W. (1962). Living English structures. Longman Publications: London.
- Cheng, H. & Dornyei, Z. (2007). The Use of Motivational Strategies in Language Instruction: The Case of EFL Teaching in Taiwan. Innovation in Language Learning and Teaching. Vol. 1.
- Position Paper- Curricular Areas. 2005. New Delhi: NCERT

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6

Ethical Considerations in Using AI Tools for Education

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ABSTRACT

The impact of artificial intelligence on education necessitates both excitement and prudence as it becomes more prevalent in our daily lives.

Proponents contend that AI presents excellent chances for individualised instruction, simplifies administrative duties, and introduces innovative teaching methods. Privacy, equity, and the potential to displace traditional teaching positions remain concerns, nevertheless.

Keywords: ICT-Based Education, Sustainable Development Goals, Digital Literacy, Access to Education, Gender Equality, Digital Divide.

INTRODUCTION

Artificial Intelligence In Education

AI refers to the use of computer systems that are capable of carrying out tasks that normally require human intelligence in order to improve educational opportunities, expedite administrative procedures, and assist teachers. Machine learning, natural language processing, and robots are examples of AI technologies that can personalise learning by adjusting pace and content to meet the needs of each individual student. By taking into account different learning styles and speeds, this individualised approach makes sure that every student gets the support and tools they require to be successful.

AI can help teachers by automating administrative work in addition to providing personalised learning. Teachers can devote more time to instruction and student involvement by cutting down on the amount of time spent on these monotonous duties. Insights into student performance and development can also be obtained through AI-powered solutions, allowing for early intervention for failing students and identifying high achievers. Customised student support and better decision-making are made possible by this data-driven approach.

AI in education can support interactive learning environments and creative teaching strategies. AI has the potential to revolutionise education by making it more efficient, individualised, and accessible as it develops.

The Advantages of Artificial Intelligence in Education

ETHICAL CONSIDERATIONS IN USING AI TOOLS FOR EDUCATION

Personalized Learning

Personalised learning is the most praised advantage of AI in education. AI algorithms are able to assess each student's individual learning preferences, learning styles, strengths, and shortcomings in order to tailor the educational content for them. This personalisation can significantly enhance the learning process, making it more engaging and effective.

Ethical Concerns

Concerns around prejudice and data privacy are ethical issues brought up by personalised learning. Large volumes of personal data, such as academic performance and behavioural

patterns, are needed for AI systems. To protect students' privacy and stop the spread of societal biases, this data must be handled carefully.

Administrative Efficiency

Teachers may concentrate on teaching and ensure consistent, objective results by using artificial intelligence (AI) to streamline administrative tasks like scheduling, grading, and resource distribution.

Ethical Concerns

Despite these benefits, automating administrative tasks raises ethical questions. For instance, automated grading systems must be thoroughly tested to ensure accuracy and fairness.

Any biases or errors in these systems could have a big impact on children's academic futures. The increasing reliance on AI for administrative tasks also raises concerns about job displacement for administrative professionals.

Accessibility and Inclusivity

AI has the potential to increase inclusivity and accessibility in education. AI-powered assistive technology, which includes features like text-to-speech, speech-to-text, and predictive text, can help students with impairments. By offering real-time translation services that promote communication in multilingual classrooms, AI can also aid in overcoming language obstacles.

Ethical Concerns

To prevent new kinds of exclusion, the use of AI for accessibility must be strictly controlled. Not every school or student has equal access to cutting-edge technology.

Existing educational disparities may be made worse by this digital gap. Furthermore, in order to meet the various needs of all students—including those with disabilities—AI technologies must be created with inclusivity in mind..

Teacher Support and Professional Development

AI has the potential to be a useful tool for professional development and teacher support. AI can give teachers insights and suggestions to enhance their teaching methods by examining student performance data and classroom interactions. In order to promote ongoing professional development, AI can also assist in identifying areas in which educators may require additional training.

Ethical Concerns

Concerns concerning the devaluation of human judgement are another ethical issue raised by AI's growing presence in education. In order to provide emotional support and comprehend the complex requirements of their students, teachers are essential. The

value of these human elements of education could be diminished by an over-reliance on AI tools. In order to eliminate inequalities in the quality of education, instructors must also receive sufficient training on how to use AI tools. This training should be egalitarian..

Student Engagement and Motivation

AI can improve student motivation and engagement through interactive learning and gamification. By modifying task complexity to correspond with students' progress, adaptive learning platforms can keep students engaged and motivated. Additionally, AI-driven analytics can detect student disengagement and offer prompt remediation.

Ethical Concerns

However, the use of AI to boost engagement must be balanced with considerations of ethical design. Gamification techniques, for example, can sometimes lead to addictive behaviors or reduce intrinsic motivation for learning. It is essential to design AI systems that foster a healthy and sustainable approach to learning.

Data Privacy and Security

AI in education handles vast amounts of personal data, which brings up significant privacy and data security issues. To prevent misuse, breaches, and unauthorised access to student information, educational institutions must implement robust data protection policies. This entails establishing clear data governance guidelines, ensuring secure storage, and encrypting data. It should also be possible for parents and children to ask for the deletion of their data or to learn more about how their data is being used.

Accuracy and Reliability

The digital divide is one of the most pressing ethical challenges surrounding AI's usage in education. Educational gaps could develop if all children do not have equal access to technology and internet connectivity. In order for all students to benefit from AI-enhanced learning, policymakers and educational institutions must work together to ensure that all students have access to the tools and resources they require. This includes providing poor populations with devices, internet access, and technical assistance

Dependence on Technology

Concerns have been raised concerning the possible harm that the growing use of AI tools in education could do to students' capacity for critical thought and problem-solving.Students risk losing their capacity for independent thought and the development of critical cognitive abilities if they rely too heavily on AI for answers. It's crucial to find a balance between promoting pupils to use traditional teaching strategies that develop critical thinking and creativity and employing AI as an additional tool,

Accuracy and Reliability

The digital divide is one of the most pressing ethical challenges surrounding AI's usage in education. Educational gaps could develop if all children do not have equal access to

technology and internet connectivity. In order for all students to benefit from AI-enhanced learning, policymakers and educational institutions must work together to ensure that all students have access to the tools and resources they require. This includes providing poor populations with devices, internet access, and technical assistance.

Equity of Access

One of the main ethical issues with AI use in education is the digital divide. Educational disparities may worsen if all kids do not have equal access to technology and internet connectivity. In order for all students to profit from AI-enhanced learning, legislators and educational institutions must collaborate to guarantee that all students have access to the tools and resources they need. This entails giving underprivileged populations gadgets, internet connectivity, and technical assistance.

The Evolving Role of Educators

The introduction of artificial intelligence into education is altering the role of educators. Although AI can manage many administrative jobs and provide personalised support to students, it cannot replace the human parts of education, such as empathy, guidance, and the ability to recognise and respond to students' emotional and social needs.

Teachers must adapt to this shifting world by utilising artificial intelligence as a tool to enhance their instruction while keeping the essential human touch. Continuous professional development and training are required to provide instructors with the necessary abilities to properly integrate AI into their teaching methods.

Future Trends and Innovations

In the future, new AI technologies have the potential to change education even more. Innovations such as artificial intelligence based virtual reality (VR) and augmented reality (AR) can create immersive and interactive learning experiences. Educational games and simulations powered by artificial intelligence can increase engagement and motivation.

Furthermore, developments in natural language processing (NLP) and speech recognition can benefit language acquisition and communication.

However, these future patterns provide significant ethical challenges. The usage of VR and AR in education raises concerns about the effects on students' mental health and well-being. Educational games with artificial intelligence must be developed to discourage addictive behaviour and promote healthy learning habits. It is critical to ensure that these new technologies are created and implemented ethically in order to maximise their benefits while minimising their potential harm.

CONCLUSION

The integration of AI tools in the education system holds immense potential to enhance learning experiences, improve administrative efficiency, and support teachers and students. However, it also brings forth significant ethical considerations that must be addressed to

ensure responsible and equitable use. Policymakers, educators, and technologists must collaborate to develop frameworks and guidelines that prioritize fairness, data privacy, and equity of access. By addressing these ethical challenges, we can harness the power of AI to create a more inclusive, effective, and just education system for all.

REFERENCES

- Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
- Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence, 1*(9), 389–399.
- Kay, J., & Kummerfeld, B. (2019). Creating personalized systems that people can trust: Transparency, control, and privacy. *ACM Transactions on Interactive Intelligent Systems, 8*(4), 1–30.
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence unleashed: An argument for AI in education*. Pearson Education.
- Slade, S., & Prinsloo, P. (2013). Learning analytics: Ethical issues and dilemmas. *American Behavioral Scientist, 57*(10), 1510–1529.

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7

Concepts and Principles of Curriculum

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ABSTRACT

Curriculum construction should follow the principle of utility, according to which educators must include content that is useful to the individual and society. In addition, the curriculum must consist of rich and valuable content that would be useful later in life.

This helps students to transfer their understandings across learning areas. They are better equipped to make connections to their own experiences and the wider world, both now and when looking to the future.

Curriculum refers to all the activities that go on in the school, playground, auditorium in the co-curricular activities of the pupils. Teachers and students perform their respective roles in these activities.

Keywords: Planetarium, Co-curricular activities, Democratic country, Leisure for pleasure, Principle of creativity etc.

INTRODUCTION

The students study several subjects in the class-room. They also play games. They participate in sports and competitions. They draw pictures, sing songs, and go for picnic and excursions. They visit museum, zoo and other places like planetarium etc. So, curriculum is a broad term. It is more than the list of books and syllabus.

Tanner and Tanner say," Curriculum is the reconstruction of knowledge and experience systematically developed under the auspices of the school, to enable the learner to increase his or her control of knowledge and experience"

The students study several subjects in the class-room. They also play games. They participate in sports and competitions. They draw pictures, sing songs ,and go for picnic and excursions. They visit museum, zoo and other places like planetarium etc. So, curriculum is a broad term. It is more than the list of books and syllabus. It covers all other activities of the students in the school. Curriculum covers all other activities outside the classroom and in the school environment.

Education tries to develop Important -traits of the students

A. knowledge of language,

B. developing skills of practical world and

C. inculcate interests, attitudes and mental values.

Following is the principles of curriculum design or construction:

1. Concern for social needs.
2. Principle of creativity
3. Harmony between work and play
4. Principle of utility-manual labour and practical skills.
5. Principle of Attention to the child's Needs and Interest
6. Principle of Good Behaviour and co-operation.
7. Principle of Growth and Development

For Layman curriculum is merely syllabus or an outline of courses of study. But the concept of education is broad. Education has three main purposes imparting knowledge, developing life-skills and inculcating interests, attitudes and values suitable for pupils. The curriculum gives emphasis on knowledge and classroom teaching, gives scope for practical activities and training in skills and activities and interests. Curriculum refers to all the activities that go on in the school, playground, auditorium in the co-curricular activities of the pupils. Teachers and students perform their respective roles in these activities.

According to Secondary Education Commission, curriculum does not mean the academic subject experience that a child receives at school.

Munroe says, "Curriculum includes all those activities which are utilized by a school to attain the aims of education."

At the time of designing curriculum, the following principles are necessary.

The principle of utility: it is important. We consider the practical utility of the subject. In designing language curriculum, we should consider those languages which are useful. We should teach the students common words used in daily life-rice, egg, bread, fruits, cake, butter, salt, sweet etc. In math's the children should learn the numbers first-1,2,3,4,5,6,7,8,9,10,0

The children in India need not learn Latin and Greek. We must be selective otherwise the burden of syllabus will become heavy.

Attention to social needs: we should have concern for the child and his role in society. He or she should learn the words (relation) father, mother, uncle, aunt, brother, sister, teacher. A child learns how to behave. We have certain social customs. A child learns that in school, Indian children should learn the history of India and know about the heroes of our country. During the British rule, Indian students learnt the history of England and the Queen Victoria before everything.

Principle of creativity: At the time of framing the curriculum, it should be borne in mind what is the intellectual level of the pupils of the class. Students can make sentences in a different manner. An average student will make sentence with the word 'fly'. For example, Birds fly in the air. But a child with creative tendency will perhaps write a sentence like this- "when I went to Agra and saw the Taj Mahal, my mind flew to the historical period of the Shah Jahan (Mughal period of history)."

Principle of using 'leisure for pleasure: The students need some break after three or four classes. They should utilize the time intelligently. They can go to the library and read the newspaper in English. They can play indoor games in the common Room. The time table should include some activities like games. The students will enjoy it. It will refresh their mind.

Principle of democratic values: India is a democratic country. A child should be trained in schools in such a manner that he becomes a good citizen in future. He should believe in the principle of equality and learn how to work in a group with co-operation. A student should learn how to respect others in society.

CONCLUSION

Curriculum Development is the step-by-step process of designing and improving the course offered at schools, colleges and universities. Even though each institution will have its own process, the broad stages of the framework consist of analysis, design, implementation, and evaluation.

Curriculum refers to specific lessons and academic content taught in schools and educational institutes for a particular course or program. On the other hand, curriculum development is a process that aims to improve the curriculum by using various approaches.

REFERENCES

- American Classical League. The Classical Investigation. Part I, General Report. Princeton, New Jersey: Princeton University Press, 1924. 305 p.
- Bagley, William C. and Kyte, George C. The California Curriculum Study. Berkeley, California: University of California, 1926, 430 p.
- Bobbitt, Franklin. The Curriculum. Boston: Houghton Mifflin Company, 1918. 295 ð.
- Bobbitt, Franklin. Curriculum Making in Los Angeles. Supplementary Educational Monographs, No. 20. Chicago: University of Chicago, 1922. 105 p.
- Bobbitt, Franklin. How to Make a Curriculum. Boston: Houghton.
- Bobbitt, Franklin. Curriculum Investigations. Supplementary Educational Monographs, No. 31. Chicago: University of Chicago, 1926. p. 1-6.
- Bonser, Frederick Gordon. The Elementary School Curriculum. New York: Mac-Millan Company, 1923. 466 p.
- Caswell, H. L. "The Alabama Curriculum Program." Peabody Journal of Education. 8: 16-23; July, 1930.
- Charters, W. W. Curriculum Construction. New York: Macmillan Company, 1924. 352 p.
- Cocking, Walter D. Administrative Procedures in Curriculum Making for Public Schools. Contributions to Education, No. 329. New York: Bureau of Publications, Teachers College, Columbia University, 1928. p. 48, 65-66, 67-94.
- Coleman, Algernon. The Teaching of Modern Foreign Languages in the United States. New York: Macmillan Company, 1929. 299 p.
- Denver Public Schools. The Denver Program of Curriculum Revision. Denver, Colorado: Board of Education, 1927. 103 p.
- Harap, Henry. The Technique of Curriculum Making. New York: Macmillan Company, 1928. 315 ð.
- Hopkins, L. Thomas. Curriculum Principles and Practices. Chicago: Benjamin H. Sanborn & Company, 1929. 617 p.
- Horn, Ernest and McBroom, Maude. "Curriculum-Making in the University Elementary School of the State University of Iowa." Twenty-Sixth Yearbook, Part 1. National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Company, 1926. Chapter 17, p. 291-96.
- Lincoln School Staff. Teachers College. Curriculum Making in an Elementary School. Boston: Ginn & Company, 1927. 359 p.

- Meriam, Junius L. Child Life and the Curriculum. Yonkers-on-Hudson, New York: World Book Company, 1920. 538 p.
- National Committee on Mathematical Requirements, J. W. Young, Chairman. The Reorganization of Mathematics in Secondary Education, Part I. Boston: Houghton Mifflin Company, 1927. 181 p.
- National Education Association, Department of Superintendence. "The Elementary School Curriculum." Second Yearbook. Washington, D. C.: the Association, 1924. 296 p.
- National Education Association, Department of Superintendence. "Research in Constructing the Elementary School Curriculum." Third Yearbook. Washington, D. C.: the Association, 1925. 405 p.

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