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Leveraging the Advantage of Technology to Equip Teachers for the 21st Century

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Abstract

"A Teacher Can never truly teach unless he is still learning himself. A lamp cannot light another lamp unless it continues to burn its own flame." Gurudev Rabinder Nath Tagore Said the above word. How truly said by our philosophers and thinkers. The changing times and needs of society have called for empowering teachers for future generations.

Educational institutions and universities have a range of courses for interested students to pursue their undergraduate and postgraduate studies. Students desire to find appropriate hobbies in line with the degree courses they have completed. Employers expect that graduates should be able to perform almost immediately after joining their organization. Hence there is a considerable gap between knowledge acquired during college, institutions, and universities and the skills required by the employers. Here the educators are also involved in creating a knowledge gap.

NEP 2020 the holistic perspective of education is concerned with the development of every person's intellectual, emotional, social, physical creative, and spiritual potential. It seeks to engage the learners in the teaching-learning process and encourage the personal and collective responsibility of the mentors. The need of the hour is for teachers to be competent in both the basic skills and the modern skills of the 21st century.

Keywords: technology, advancement, empowering, future generation

Introduction

The 21st century is a techno-savvy era with rapid technological progress in each and every field. A revolutionary change is also occurring in the realm of education. The integration of technology and innovative approaches, after the pandemic and NEP 2020 revolutionized education. The main two pillars of education are revolutionizing how knowledge is imparted, accessed, and utilized. The objective of this paper is to examine how innovation and technological advancement may transform classrooms, provide professionals more authority, and improve student performance in the future of education.

Educational institutions and universities have a range of courses for interested students to pursue their undergraduate and postgraduate studies. Students desire to find appropriate hobbies in line with the degree courses they have completed. Employers expect that graduates should be able to perform almost immediately after joining their organization. Hence there is a considerable gap between knowledge acquired during the studies in college, institutions, and universities and the skills required by the employers. Here the educators are also involved in creating a knowledge gap We were in disruption due to the climate crisis and industrial revolution even before the pandemic covid 19. Automation, Analytical Artificial intelligence, and augmented reality have been disrupting the economy, industry, and education system for the past few decades. The pandemic has made it very challenging for the education system to deliver curricula effectively to students. A true professional brought the changes among themselves and many new things he learned by himself and updated himself with advanced techniques.

The vision of NEP2020 aims at building a global best education system rooted in Indian ethos, and aligned with the principles of the policy, thereby transforming India into a global knowledge superpower.

One of the key aspects of NEP2020 is to be able to extend learning beyond traditional

classroom teaching. An academic subject may be taught through sports and physical education, Art, Music, and dance based on the area of interest of the learner. For example, sports as a medium of teaching concepts of Science, Mathematics, Social Science, Environment Science, or Language. The one factor that can lead the Indian education system to produce Competent, Creative Skilled Employable, and Ethical learners is the Teacher.

NEP 2020 Holistic perspective of education is concerned with the development of every person's intellectual, emotional, social, physical creative, and spiritual potential. It seeks to engage the learners in the teaching-learning process and encourage the personal and collective responsibility of the mentors. The need of the hour is for teachers to be competent in not only the basic skills but also the modern skills of the 21st century.

Technology-based training is learner-centered rather than teacher-centered, there have been significant changes in the roles and duties of teachers and the learning process. Learners can use technology to aid their learning process and be educated without regard to time or place; in such an environment, they can readily collect and analyze data, test hypotheses, design experiments, and draw conclusions. Because using tools and technologies lowers some limitations in the classroom.

21st Century Skills and the Learners

- o Critical thinking
- o Creativity
- o Collaboration
- o ICT literacy
- o ICT Challenges
- o Flexibility
- o Leadership Qualities etc.

To tackle the above skills professionals, have to imbibe VARK learning styles among

themselves and always upgrade themselves with advancement.

For communication, creation, dissemination, storage, and management of information, ls employs a wide range of ICT instruments. In some settings, ICT has also become essential to the interaction between teaching and learning. Using students' personal smartphones or other devices for learning during class time, converting from chalkboards to interactive digital whiteboards, and the "flipped classroom" model in which students watch lectures on computers at home and complete more interactive exercises during class are a few examples of effective teaching techniques.

Materials and Methods

The study was conducted based on personal observation and Investigation by local educational institution professionals.

Results and Discussion

Technical education bridges the gap between 21st-century learners and teachers and makes learning fun and fruitful. When teachers are trained to use ICT and are digitally literate, the methods they choose can help students develop higher-order thinking skills, give them new and creative ways to express what they have learned, and better prepare them for the rapid technological change that is occurring in both society and the workplace.

Self-Progression

Personalized learning experiences that are catered to the requirements, skills, and interests of each individual student are made possible by technology. Teachers can target interventions and create personalized learning pathways by using data analytics, intelligent tutoring systems, and adaptive learning platforms to identify students' strengths and shortcomings. Instructors cater to a variety of learning preferences, and individualized instruction increases motivation and engagement for successful academic performance.

Blended teaching-learning

Blended learning is the integration of digital tools and internet resources with traditional classroom training. With this flexible approach, students can learn whenever and wherever they choose, at their own pace. Virtual classrooms, video lectures, interactive sessions, and collaborative platforms promote active learning, problem-solving, and global connections.

Virtual Reality and Augmented Reality

With the use of virtual reality and augmented reality technologies, students can have immersive learning experiences outside of the classroom. Applications for VR and AR offer interactive 3D models, virtual field trips, and simulations to improve learning and engagement across a range of subjects. For instance, illustrating difficult ideas, doing scientific experiments, or presenting historical events might help students learn more effectively and retain it.

Artificial Intelligence

Artificial Intelligence AI is a component of the digital evolution of education, and will not be realized unless instructors are equipped to manage the ever-changing technological landscape. Artificial intelligence (AI) is transforming education through intelligent tutoring, intelligent task automation, and adaptive learning systems. AI-enabled chatbots answer students' questions and free up teachers' time for more individualized interactions.

The game-like aspect

Learning becomes more engaging and fun when game-like features like leaderboards, point systems, and awards are added. Platforms for gamification inspire students, promote healthy competition, offer immediate feedback, and reward perseverance and skill mastery. It fosters a climate of positive learning that encourages critical thinking, creativity, and problem-solving.

Decisive Process Based on Data

Based on new resources, information, and communication technology propose several

possibilities for the development and evolution of the traditional teaching and training model. Teachers must be able to organize various forms of E-learning and E-learning programs, as well as transition courses from a static mood in which the focus is on the teachers to a student-centered atmosphere with a dynamic technique. Through the Internet, the learner can communicate with others. In this instance, the instructor participates in the knowledge created by others and shifts her function as a knowledge source. Teacher performance in classrooms and other learning environments is influenced by elements such as her attitude toward teaching, her ideas about the subject, and the environment in which she /he works.

Predictive modelling and data analytics help educators make more informed decisions because there is an abundance of educational data at their disposal. By monitoring students' progress, a learning management system enables teachers to identify challenging kids early on and take appropriate action. Finding trends and patterns in student behaviour, performance, and engagement data helps develop evidence-based teaching strategies and better results.

Conclusion

The learning process could be drastically changed in the future as we embrace innovation and technology growth in the classroom. Technology is revolutionizing education in a number of ways, including gamification, virtual and augmented reality, artificial intelligence, blended learning, gamification, and personalized learning. By embracing these developments, we can create inclusive, dynamic, and student-centered learning environments that equip students for the challenges of the future. while instructors and pupils adapt to these shifting surroundings.

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