

Pedagogical Innovations in Teaching and Learning

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Abstract: In this technology-driven world, significant changes are required in the arena of teaching and learning. The expansion of pedagogical practices, innovative approach to teaching that integrates learning and real world is quintessential to get by with the changing dynamics of educational world. NEP-2020 has also acknowledged the importance of innovative techniques in education to contribute towards development of creative and critical thinking among learners. NEP 2020 promotes active pedagogy, development of core capacities and life skills, including 21st century skills, experimental learning at all stages, low stake board exams, holistic progress card, transformation in assessment to promote critical and higher order thinking among students, mainstreaming of vocational education and reforms in teacher education. Blended learning, competency based pedagogy, flipped classrooms, gamification, inquiry based learning, culturally responsive instructions etc are crucial to develop technology-enriched learning environment and shall provide learners diverse ways to pursue their curiosities and become active participants in learning. Learning should also be engaging and fun. These innovative strategies are still not familiar to many of the teachers and teacher educators. This paper intends to highlight the significance of innovative pedagogy, discusses on key takeaways of NEP-2020 in this regard, and provide an insight to each of these techniques with their prospects and limitations in current time.

Key Words: Pedagogy, innovation, teaching and learning, NEP-2020.

1. INTRODUCTION:

Multi-dimensional school systems are what we need to have in a globalised world when we think of quality in education and holistic development of learners. The design of curriculum transaction should address behavioural development of learners and teaching strategies should involve critical thinking (questioning, analyzing, making inferences), scientific thinking (open-mindedness, aversion to superstition, curiosity, formulation hypothesis, collecting and verifying data, making inferences), mathematical thinking (calculating probabilities based on facts, reasoning, generalizing, justifying, proving, problem solving), creativity so as to prepare the learners for the real world. Learners of present generation learn in different ways than those in older time. Experiential learning, digitalized education, smart classrooms, smart teachers are required to transact the curriculum updated as per the need of present time. NEP-2020 has also recommended adopting inclusive approaches, embracing multi-disciplinarity, using learner-centric methods. To rebuild India as global knowledge super power, new form of instructional methods must replace our existing methods. Some of these innovative practices in teaching and learning are discussed below:

Blended learning

Blended Learning is not merely a mixing of face-to-face and online mode, rather it is a well-planned combination of meaningful activities in both the modes (NEP 2020). Blended learning environment ensures increased student engagement in learning and enhanced teacher-student interaction, greater responsibility for learning, more flexible teaching and learning ecosystem, promotes self and continuous learning, offers better opportunities for experiential learning, and improved learning outcomes. "The blended learning mode will not only be beneficial for the students, but also for the teachers. Blended learning shifts the teacher's role from knowledge provider to coach and mentor. This shift does not mean that teachers play a passive or less important role in students' education," (UGC). Blended learning environment in fact provides diverse learning opportunities for learners to learn the way they are most comfortable with, and greater scope for debates and disputations. Covid 19 pandemic also proved that integrated learning is very convenient and flexible for both the learners and teachers. This flipped or blended approach enables learners to gain knowledge on their own and then supplement it with the personal attention of

instructor-led classroom training (either virtual or in-person teaching and teaching), the group interaction of social learning and finally, the hands-on practice of applied learning projects.

2. COMPETENCY-BASED EDUCATION:

Competency is a set of skills, abilities, knowledge that helps an individual perform a given task in real life. Every learning should go into the imbibing of skills that will help the individual perform tasks or take actions to lead a productive and joyful life.

Competency-based education (CBE) is an approach to teaching, learning, and assessment that focuses on the student's demonstration of learning outcomes and attaining proficiency in particular competencies in each subject. CBE integrates higher order thinking skills, interdisciplinary approaches and problem-solving as these are essential to the modern world and workplace. CBE puts forth the theory that the majority of students will achieve competence in the specified content area as long as they are given the opportunity and freedom to progress at their own pace and their learning experiences are structured according to their interests and needs (Priest, Rudenstine and Weisstein 2012; Steele, Lewis, Santibanez, Faxon-Mills, Rudnick, Stecher and Hamilton 2014; Sturgis and Casey 2018).

3. GAMIFICATION:

The New Education Policy (NEP) 2020 emphasizes on replacing rote learning with innovative and experiential methods, such as gamification and apps that deliver quality education. According to NEP-2020, the teaching of all pedagogical subjects will be enhanced through innovative and experiential methods, such as gamification and apps and with real-life experiences through films, theatre and storytelling, art and music, local literature, etc. Game elements can be used in teaching sessions to activate, engage learners in learning activities.

Gamification facilitates students to use all sensory organs and learn faster. The Gamification teaches the students the 21st century skills like Cooperation, Collaboration, Critical thing and Problems solving. "In today's digital generation gamification has become a popular tactic to encourage specific behaviours, and increase motivation and engagement. [Huang, Wendy Hsin-Yuan, and Dilip Soman. "Gamification Of Education." 2013. p.5] Gamification encourages students to accept failure as part of the learning process and reattempt learning tasks without embarrassment; it develops resilience, an important skill, which students need to thrive in daily life. Gamification enhances 21st century skills like critical thinking, problem-solving, spatial awareness, and visualization skills and offers personalized learning through fun & engaging environment, challenges, and rewards; it shows students that the learning journey belongs to them.

4. EXPERIENTIAL LEARNING:

NEP 2020 urges every school to shift from content based, rote learning to a competency based learning that helps learner to apply the concept learnt in real life situation. NEP encourage kolb's cycle of learning, a pedagogical approach that create a concrete experience that have a practical application of knowledge and skill to real world experience. In all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy. An important objective of the NEP is to foster 'experiential learning and critical thinking' among students. Experiential learning involves hands-on learning whereby students develop the capability of reflecting on their experiences. It moves beyond the boundaries of the classroom and involves students more actively and closely into the learning process. A student can continue to learn from his house, in the park, during a visit to a factory or an office during a visit. With modern technology, tools and online education platforms, students can work in groups from their own homes. Experiential learning is built upon foundations of interdisciplinary and constructivist learning approaches.

5. EMBODIED LEARNING:

Embodied Learning Refers to Pedagogical Approaches that Focus on Everyone's Innate, autonomous Competence – Physical, Emotional, and Cognitive – to build learning. Embodied pedagogy is fun and relaxing. Moreover, teachers go from being the class leader, to the facilitator and participant.

6. FLIPPED CLASSROOM:

A flipped classroom consists of students completing direct instruction, such as viewing a lecture online, prior to the in-class discussion of the material. The intent is for students to see the material beforehand. Flipped learning is the learning style that shifts from lecturing in class into performing a variety of activities. These activities shall be self-learning ones, as a result the educator' role will change from being a communicant into a coach and facilitator whereas the lecturing shall be done via the technology media such as online-video podcasting or screen casting and more. The role of students in the flipped learning model is to use self-directed learning methods to retrieve the lessons at home or

outside the school through flipped education tools such as Edmodo, YouTube, Google Apps, Dropbox, Educreation , GlogsterEdu Screencast, Socrative, Teaching Channel, Twitter(Trairut, and Namon, 2015)

In a flipped classroom, students take a much more active role in the flipped classroom model than in a traditional classroom. Students develop a familiarity with the material via videos or other instructional materials that are made available outside of the classroom. Flipped classroom model include more interaction time between students and teachers, better test scores, and less stress for students.

7. ARTS INTEGRATED AND SPORTS INTEGRATED PEDAGOGY:

Art-integration is a cross-curricular pedagogical approach that utilizes various aspects and forms of art and culture as the basis for learning of concepts across subjects, not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian art and culture in the teaching and learning process at every level. This art-integrated approach will strengthen the linkages between education and culture.(NEP2020)

Sports-integration is another cross-curricular pedagogical approach that utilizes physical activities including indigenous sports, in pedagogical practices to help in developing skills such as collaboration, self-initiative, self-direction, self-discipline, teamwork, responsibility, citizenship, etc. Sports-integrated learning will be undertaken in classroom transactions to help students adopt fitness as a lifelong attitude and to achieve the related life skills along with the levels of fitness as envisaged in the Fit India Movement(NEP2020).

8. NANO LEARNING:

Nano-learning is a highly targeted learning method designed to help people understand subject topics through smaller inputs in short time frames.The idea is to deliver short and simple concepts in an engaging format. The age of Instagram, SnapChat and YouTube has somewhat proven this as an effective method for content consumption through social media.

Effective nano-learning in the classroom would look something like this:

- Identifying a student's needs and the learning skills they need to improve.
- Considering the learning objectives, breaking it down into what they need to know to reach the objectives.
- Skills, knowledge and understanding is assessed through their response by survey or peer feedback.

Project based learning:

According to Terry Heick, there are three types of project-based learning.^[20] The first is (1)Challenge-Based Learning/Problem-Based Learning, (2)Place-Based Education, and (3) Activity-Based learning.The core idea of project-based learning is that real-world problems capture students' interest and invoke serious thinking as the students acquire and apply new knowledge in a problem-solving context. The teacher plays the role of facilitator, working with students to frame worthwhile questions, structuring meaningful tasks, and carefully assessing what students have learned from the experience. PBL can help educators:

- Teach students personal responsibility and critical time management skills
- Design assignments that hit higher-order stages in Bloom's taxonomy like analysis, synthesis and evaluation
- Provide multiple ways of assessing students at different stages of the project, whether through a portfolio, annotated bibliography, outline, draft product or finished project

9. CONCLUSION:

With the vision and mission of making India a Global Knowledge Superpower, NEP-2020 envisaged expansion of infrastructure, redesigning curricula, focus on holistic experiential learning and enhancing creative potential of learners. This can be achieved gradually with updated instructional methods. Technological advances have made us be transitioned to a more complex and fast-paced world. Kids are smarter today than they were 20 years ago. How will they learn better with old methods ? Why it is that we encourage newness of thinking but practicing old ways to teach in classroom? To best prepare the next generation, teachers must adopt innovative practices. These innovative strategies encourage questioning, exploration, technological usage. Learners are able to solve problems independently or with others. The ultimate goal is to foster student participation, promote better learning and increase academic outcomes.

We need sufficient number of trained teachers to execute all ideas and the plan. We need science teachers who are good at content as well as at method of teaching through technology, laboratory activities and innovation; language teachers who are good at phonetics and creative writing too; sports teacher who will also develop self motivation for a healthy lifestyle and fitness among students. For this, we need to redesign the pre-service training, recruitment procedure and in-service training of teachers and minimum standards are to be fulfilled by all the states in our country. Moreover, vigilance, Continuous supervision and research on ongoing practices are necessary.

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