Pedagogical Innovations for Effective Learning NEP-2020

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Abstract- **Innovation and diffusion of knowledge are at the heart of the growth process, be it in the area of education or industry. Continuous innovation is, therefore, crucial for all the educational systems. The skill to think and to innovate is a desirable 21st century skill from the students. Innovation in education encourages students and demands teachers to be proactive to research, explore, and use multiple strategies to come out with novel ideas or a strategy to uncover something new. Innovation involves a different way of looking at problems and solving them. It also contributes to improve overall quality of education because it catalyses students to think out of the box, and helps to solve complex problems. The school environment must focus on giving space and encouragement for teachers to innovate. Increasingly, innovation in education at school is more than just a buzzword. It is fast becoming a way of learning and teaching for both students and teachers respectively. It is commendable that India is moving forward on Innovations.**

Keywords - **Pedagogical Innovations, Encouragement, Effective Learning, Holistic Development etc.**

INTRODUCTION

Pedagogical innovation is a concept broadly utilized in scholarly literature. Walder (2017 defines pedagogical innovation as "Any new teaching practice that differs from the traditional lecture, with the purpose of improving learning".

In teaching and learning new methods and technologies are adapting to bring change in existing system for fulfillment of predetermined educational objectives. Earlier books were only source of instruction, individualized learning and Individualized teaching. A new paradigm of teaching and learning is needed to increase the pupil's active participation, perception and cognitive development. The transfer of textual learning contents to visual learning content. This transition is more effective in the learning through innovative and effective teaching methods.

OBJECTIVES OF NEP -2020

1. To promote innovative and effective methods of teaching in classroom.
2. To promote best practices in teaching to students.
3. To explore use of technology in effective teaching learning process.
4. To accelerate teaching-learning process by way of promoting independent, critical and Creative thinking.
5. To enable the development of skills engaging latest technological devices as aids to teaching learning
6. To provide information about resources and events related to the enhancement of teaching and learning.
7. To explore methods of effective teaching learning at school and college level.
8. To share best teaching learning experiences by school, college and university teachers.
9. To make teaching and learning enjoyable and interesting for achieving free and compulsory right to education.

Innovative Teaching strategies for Effective Learning

Using innovative teaching strategies in the classroom can make learning easier and more effective. Experimenting with diverse strategies in the classroom is an iterative process that will assist teachers in promoting learning to encourage student growth.

Here are Different methods to integrate innovation into the daily curriculum.

1. Personalized Learning

Personalized learning customizes what, when, and how each student is taught. Rather than using a single approach or plan to teach the entire class, teachers adjust to the capabilities of each student to help them succeed.

Teacher can use personalized learning plans for their students, based on the teacher's unique knowledge of student learning styles and interests. Though each student's individualized learning journey is unique, the final aim is subject proficiency or achieving grade-level benchmarks.

This strategy includes:

- Blended learning: This teaching strategy gives the student more responsibility over their own learning, with the teacher functioning as a general guide and overseer over a more discovery-based learning environment. Students are allowed to choose how and at what pace they move through the content.

- Adaptive learning: Adaptive learning technology collects data from student responses to specific questions on a computer. Then the software uses that information to provide immediate feedback or adaptation for the student and notifies the teacher so they can change the lesson plan accordingly.

2.   Project-Based Learning

Project-based learning creates exercises that require students to identify a real-world problem and then devise a solution. Project-based learning is built on the development of specific, transferable skills such as research, critical thinking, problem-solving, and cooperation. It is an active form of learning in which students gain expertise via implementation of their knowledge rather than rote memorization.

Teaching with this method links students and schools to their communities and the outside world, demonstrating how all disciplines are interlinked and creating opportunities to experience learning facing real situations rather than contrived examples.

3.   Jigsaws

Any educator understands that being able to teach a concept to others successfully demonstrates true mastery. Jigsaws are a tried-and-true cooperative learning technique that capitalizes on this idea by having students teach other students. Students are split into groups, and each group is given distinct information that they must learn well enough to teach to another group.

When each group has learned their information, they are organized into new groups, each of which is made up of one member from each of the content groups, much like a jigsaw puzzle of various pieces coming together to create a whole picture. Each individual member then discusses what they have learned, bringing the teachings to life and allowing students to build their learning by interacting with one another and the content. As they teach others, students become the experts in what they have learned.

The only con to this method Is when the "expert" in a group misinterprets facts or is not able to teach others well.

4.   Asking Open-Ended Questions

Students often place too much reliance on finding the one right answer in their textbooks versus thinking outside the box. They may develop the belief that there are only right and wrong responses. However, most questions do not have single specific solutions.

To broaden student horizons, teachers should promote lively in-class discussions by asking open-ended questions – those which have multiple possible solutions. Students can put together cohesive elements based on their own knowledge as well as present information to piece together a solution, which they can then support using evidence. This can help the students not just to find their voice, but also to express themselves and support their reasoning.

5.   Flipping the Classroom

In this strategy, standard lectures are set aside in favor of class time spent on research, application, and assessment to better connect learners and their needs. Outside of class, students study topics by reading, watching short pre-recorded video lectures, or researching tasks. Class time is used to assist students in working through the content in groups or individually during active learning, emphasizing complex reasoning and problem-solving skills.

6.   QR Codes

QR (Quick Response) codes are simple to develop and have several applications in classrooms of all grade levels. QR codes can direct students to information simply by scanning the code with a digital device.

Students can utilize QR codes to:
- Examine their responses
- Cast votes for solutions to problems
- Extend the scope of material found in textbooks
- Obtain survey data for math units
- Take part in scavenger hunts
- Access video tutorials on a subject
- Connect to Google Maps for lessons where geography is important

Students can use QR codes to get material without leaving their seats. They can also design their own to share their knowledge with peers and parents.

7.   Inquiry-Based Learning

Inquiry-based learning entails more than simply asking a student what he or she wishes to learn. The main purpose is to generate curiosity to engage students in the material.

However, stimulating a student's curiosity is a far more essential and challenging task than simply delivering facts. Despite its complexities, this strategy of learning can be easier on instructors because it shifts some duties from teachers to students and gives students authority to engage with the material.

Students are given the freedom to form their own opinions on what they are studying, permitting them to develop a greater knowledge of a subject than through rote memorization and recalling data.

8.   Culturally Inclusive Teaching

Teaching can be difficult due to students coming from various cultural backgrounds with diverse needs. Students are unique and acquire educational knowledge differently. Culturally inclusive education connects the subject matter to the cultures of the students, establishing a personal connection. Teachers can get to know the students, their cultural backgrounds, and some basic cultural information, then use examples and exercises to connect their study topic to different cultures. Note that incorporating different cultures must be done delicately and in a manner that respects and promotes diversity in the classroom.

9. Flexible Learning Environments

Teachers should know how to use their classrooms for different instructional approaches. For example, when teachers are willing to change the furniture around in the classroom, they may discover that it is a critical variable for boosting student learning. As education has changed, the classroom space must allow opportunities for students to work alone, communicate with their peers, and collaborate.

10. Gamification of Learning

The gamification of learning is an educational approach to motivate students to learn by using video game design and game elements in learning environments. The goal is to maximize enjoyment and engagement through capturing the interest of learners and inspiring them to continue learning. Gamification, broadly defined, is the process of defining the elements which comprise games that make those games fun and motivate players to continue playing, and using those same elements in a non-game context to influence behaviour.

11. Computational Thinking

Computational thinking is a powerful approach to thinking and problem solving. It involves breaking large problems down into smaller ones (decomposition), recognizing how these relate to problems that have been solved in the past (pattern recognition), setting aside unimportant details (abstraction), identifying and developing the steps that will be necessary to reach a solution (algorithms) and refining these steps (debuggin.

12. Crossover Learning

Learning in informal settings, such as museums and after-school clubs, can link educational content with issues that matter to learners in their lives. These connections work in both directions. Learning in schools and colleges can be enriched by experiences from everyday life; informal learning can be deepened by adding questions and knowledge from the classroom. These connected experiences spark further interest and motivation to learn.

13. Learning Through Argumentation

Students can advance their understanding of science and mathematics by arguing in ways similar to professional scientists and mathematicians. Argumentation helps students attend to contrasting ideas, which can deepen their learning. It makes technical reasoning public, for all to learn. It also allows students to refine ideas with others.

- **Innovative Methods makes Education better:**
1. Improve ability to personalize learning
2. Potential for individual progress
3. Improve student engagement and motivation iv. Shift to online state tests starting 2015
4. Need to extend time and stretch resources
5. Potential to extend the reach of effective teachers
6. Ability to improve working conditions (presumably of educators)
7. Decrease device costs
8. Student and parent adoption of learning apps
9. Interest in narrowing the digital divide.

CONCLUSION

"I hear and I forget
I see and I believe
I do and I understand ".

Innovation in Teaching Methods is an effective approach to make positive change in students' behavior and attitude towards learning, to improve their motivation and engagement. The results of the change have bilateral nature – they can affect students' results and understanding of the educational content and create conditions for an effective learning process. Innovative teaching methodologies will lead to a learning society in which the creative and intellectual abilities of students will allow them to meet the goals of transformation and development.

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