

## ANDRAGOGICAL PRACTICES IN HIGHER EDUCATION EXPLORING INNOVATIVE WAYS, MASTERING LEARNING SKILLS

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### Abstract:

Adults only learn efficiently when intrinsically motivated to master a specific skill or body of knowledge. They have a pragmatic learning approach and want to know how it will suit their present and future requirements. The learning objectives, learning style, and learning application are unparalleled. Adult learning enhances a dynamic and collaborative interface of reconstructed information that concurrently interfaces with internalizing external imprints of knowledge captured by various means. Stimulators of knowledge are faced with the Herculean challenge of conditioning the adult learners' minds since they must simultaneously foster a desire to study and augment the adults' knowledge base with innovative and novel techniques. The unidirectional knowledge flow that characterized conventional classroom teaching methods has already been challenged and overturned. Presently, lecture halls are furnished with technological tools to assist lecturers, whose clever approach and use of the tools bring out the learner's potential and promote interactive learning in lecture halls. With an andragogical approach, students are expected to make more in-depth connections between the supplied theory and the real-world situation. Innovative teaching methods encourage students to broaden their horizons beyond the expected job path and investigate the many avenues open to them. The paper presents innovative approaches to andragogy in contemporary higher education, especially engineering education.

**Key words:** NEP, Higher Education, Adult Learning, Andragogical Practices, Engineering Education

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### Introduction:

It is hoped that the National Education Policy (NEP-2020) can transform the way education is delivered in India and restore the lustre of the country's traditional educational institutions, notably those that existed during the Nalanda and Takshashila periods. The vision makes it abundantly evident that there is a pressing need to establish an educational system that is "globally relevant" and "India-centric" and that would provide an education that is not just high in quality but also sustainable, equitable, and dynamic. If we look at the policy's guiding principles, we can see that it emphasizes multidisciplinary and holistic education. This type of education emphasizes conceptual understanding, creativity, and critical thinking, promoting lifelong learning, communication, cooperation, and teamwork among the students. The landscape of education in the country can undergo significant change, and the result can be that our educational system can be on par with the most effective education systems in the world. This calls for a transformational leadership style.

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#### **NEP and Engineering Pedagogy [1]**

- Teaching and learning processes in professional education generally encounter extraordinary obstacles because these fields are neither whole knowledge-based nor skillbased. Instead, they are a combination of the two. They need originality on the part of both the instructors and the students, as well as the application of prior knowledge and acquired expertise. The dearth of sufficient reference materials across various academic fields worsens the situation. In most cases, the level of student success is substantially determined by the calibre of the educational institutions attended and the instructors at such institutions. As a result, the curricula for all fields of study should be updated, infused with carefully chosen content from other fields of study, integrate theory and practice, collaborate with industry, and provide possibilities for various internships. The delivery of the curriculum should centre on providing students with the opportunity and confidence to apply their knowledge and abilities in various contexts and instilling in them the professional attitudes and ethics necessary for the field.
- The new National Education Strategy (NEP) 2020 is an essential transformational reform policy affecting school and higher education in India. Many documents, conversations, debates, and programmes have been undertaken by eminent figures from numerous sectors and organizations. This brief article focused on the reforms in higher education. The essence of the policy is to give a comprehensive education that enables students to gain not only knowledge but also the necessary skills through an approach that exposes them to becoming self-reliant and confident. Additionally, to bring this forward to the workplace, they would be entering.
- This gradual transition toward an approach that is more student-centric than teachercentric. Curriculum development, pedagogy, and evaluation must be outcome-based. Using a student-centred learning approach, Outcome-based Education offers students many opportunities in all three areas (curriculum, pedagogy, and evaluation). Its objective is to positively affect their lives by committing to excellence and innovation via a quality assurance strategy. The faculty's role is to facilitate and engage students through innovative activities to achieve the desired outcome. Teachers must determine the skills necessary to master a subject and build the programme accordingly.
- Through well-defined/designed learning activities and several other improvements in teaching and learning methodologies, outcome-based education assures the evaluation of each student. Since the past two to three

years, accreditation of institutions has been mandatory, and UGC/AICTE has implemented various systemic changes in authorizing new programmes that require the institution to be accredited to receive the required upgrade.

- Through field experiences, empirical research, stakeholder feedback, and lessons learned from best practices, the National Education Policy seek to enable an inclusive, participative, and comprehensive approach. It's a step in the right direction as education becomes more data-driven. The planned layout can facilitate the child's cognitive, social, and physical growth. If carried out in its intended manner, the new structure has the potential to elevate India to the ranks of the world's leading nations.
- It needs to adapt the YTM Philosophy which has its roots in Indian culture. YTM stands for Yantra, Tantra and Mantra.

### **Instructional Strategies That Foster the Development of Creative and Innovative Education [2]**

The research showed that the best methods for fostering the expansion of creative and innovative pedagogy focus on systematic improvement. Innovating education may benefit from project-based learning, problem-based learning, research-based learning, creative thinking, problem-solving, design-based learning, or an innovative teaching approach that gives rise to these pedagogical practices. Applying these strategies is another area of education that needs to be considered.

### **The Shared Components and Procedures of These Instructional Strategies[2]**

- The research showed commonalities across the educational approaches, including identifying problems and their solutions, using assessment and evaluation, and using similar methods to determine effectiveness. In addition to improving brainstorming, encouraging learners to develop new ideas can be facilitated by providing them with various fascinating ideas for identifying potential solutions to difficulties.
- The findings also showed that engaging students in learning activities and encouraging the creation of novel education methods could be achieved through instructional strategies, including questions, classroom discussion, independent study, inductive and deductive reasoning, or media. Furthermore, approaches implemented to increase creative and innovative learning should emphasize collaborative and place-based learning.

### **Methodologies Employed for Instructional Strategies [2]**

The studies revealed the following tactics employed for instructional strategies:

- 1) Critical thinking can be stimulated by brainstorming, collaboration, discussion, team/group work, project-based learning, or anything else, such as the question technique and the six thinking hats of Edward de Bono, etc. Instructors should provide regular feedback to students.
- 2) Technique of thinking outside the box. Questions encourage learners to generate novel concepts. Learners may consider alternatives, new ideas, outside-the-box thinking, the six thinking hats, and brainstorming approaches. There are various techniques for leveraging questions and media to generate creativity.
- 3) Method of offering hard questions to stimulate creative thought.
- 4) Technique for providing feedback or reinforcement. Rather than providing items as positive reinforcement, awards should be awarded. It should be gamification or games with challenging, entertaining, and

contemporary awards. It should increase levels of difficulty and challenge, and incentives should be distributed frequently. Moreover, the activities must be learner-focused.

- 5) Technique utilized in a game show or competition-related activities.
- 6) Instructional strategies employing the following techniques, 6.1) Instruction through lectures should not be utilized excessively. 6.2) Instruction through demonstration 6.3) To instruct utilizing small-group discussion. 6.4) Instruction utilizing simulations 6.5) Utilizing field trips as an instructional method. 6.6) Instruction using induction. 6.7) To instruct using deduction.
- 7) Instruction that motivates students according to the ARCS Model, including 7.1) attention, 7.2) relevance, 7.3) confidence, and 7.4) learner satisfaction.
- 8) Utilizing modern technologies to create teaching activities. Instructional strategies and elements should act as a guide to contribute to an instructional process for accomplishing intended learning objectives to inspire learners to create creatively. Regarding instructional measurement and evaluation, teachers must design instructional strategies that are appropriate for 1) learner characteristics and potential, 2) learner learning styles, 3) subject matter, 4) learning activities, 5) university contexts, 6) environments, and 7) the availability of technology.

#### **Discussion:**

- In these courses, design-based learning, issue solving, creative problem solving, creative thinking, research-based learning, problem-based learning, project-based learning, science, or novel teaching processes may lead to creative and innovative education. Student-centred, active learning strategies for developing student characteristics that match learning outcomes yielded similar results. Active learning methods included case study, problem-based, and project-based. Role model and service learning dominated education. These methods were recommended for classroom instruction.
- Learners can innovate creatively if they employ the appropriate educational strategies. The instructional strategies involve three essential instructional components: instructional preparation, evaluation, and the attainment of learning objectives. Developing instructional methods necessitates the analysis of numerous instructional components, including learners, learning objectives, materials, learning context, overall context, conditions, lecturers' skills in selecting learning principles, and approaches for achieving learning objectives. The design of instructional techniques relies on the lecturers' teaching abilities and the student's learning styles.

#### **Conclusion:**

Instructional practices that encourage innovation in learning seek to foster a creative thought process, particularly the ability to think of something new and distinctive. Innovative educational tactics for students should originate from groups or teams, shared knowledge, collaborative solutions, and consensus ideas. Additionally, there are two components to teaching. Students are assigned both theories and practice to complete tasks. Instructional tactics should prioritize student learning and be progressively adopted throughout courses, particularly when consulting specialists. Lastly, students can be instructed at all levels to produce innovation in learning creatively. The difficulty of the concepts could vary based on the contexts, and instructional designs teachers employ.

Although fostering creativity and innovation in school is difficult, it is crucial and necessary to assist students in acquiring these skills, which prepare them for future success in complicated work situations.

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