LEVERAGE OF TECHNO-PEDAGOGY IN THE ACQUISITION OF 21ST CENTURY SKILLS AMONG HIGH SCHOOL STUDENTS IN KERALA

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Abstract

Broad thinking around twenty-first century education acknowledges the need for new 'forms and functions' of learning to be added to worldwide education goals to boost the quality of learning. Reinvention of educational systems worldwide depends on transforming pedagogy and redesigning learning tasks. Promoting learner autonomy and creativity is part of the solution. Technologies can be used to support efforts to transform pedagogy, but it is essential to recognize that twenty-first century learning experiences must incorporate technology. The learning strategies for this century will not be limited to school, but will also encompass learning through peers, inter-generational partnerships, and community relationships, engaging with new gen tech Medias. Learning may take place outside of school in online libraries, websites, and communication platforms. Fostering such type of programmes with the appropriate mix of techno pedagogical approaches will help to cultivate 21st century skills among learners.

Key terms

Leverage, Techno-Pedagogy, 21st century skills, Life skills. Innovation Skills

Introduction

Education is the complete development of individuality of the child, so that he can make his original contribution to human life according to his best capacity. Techno pedagogy refers to the techniques of the craft of teaching into the learning environment itself. It requires conscious recognition of the mediated learning environment in order to maximize the ease and clarity in the transmission of information. The education system is now witnessing a paradigm shift from the traditional chalk-and-board teaching methodology to digitizing the pedagogical approach through technical devices. Educators opined that such a transformation would not only increase the capability of the teachers but would also widen the knowledge base and skill of students so as make them competitive in the international arena.

A 21st century classroom has a strong foundation in the core subjects. Exploring curriculum topics while authoring media-rich projects helps students develop knowledge that is rich, better connected, and more applicable to subsequent learning and events. In order for students to be prepared for a more complex life and work environment a 21st century classroom must promote creativity, critical thinking, communication, and collaboration. Technology tools that allow students to create with audio, text, and images provide an opportunity to build higher-order thinking skills. To be successful in the 21st century, students must be able to work without supervision, in diverse groups, and be productive members of society. Project learning with technology increases student's capacity for self-directed learning, collaboration, and social interaction. Collaborating on technology projects encourages students to become self-directed learners and builds leadership, responsibility, as well as social and cultural-awareness.

1

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TECHNO PEDAGOGY

Techno pedagogy is a dominant factor to elicit the innate abilities and for the all-round development of an individual. Literally 'pedagogy' refers to art, derived from the Latin texere [to weave or fabricate]. Here techno is a qualifier; it intersects or crosses the meaning of 'pedagogy' with its own. Techno pedagogy refers to the technique of creating a suitable learning environment by integrating technology and pedagogy. It requires conscious recognition of the mediated learning environment in order to maximize the ease and clarity in the transmission of information. Technology in the classroom is becoming more and more predominant. Students prefer technology because they believe that makes learning more interesting and fun.

A techno pedagogue can predict the design, production and even implementation of online environments, interfaces and tools that supports learning for the maximization of achievements. Teachers must understand their role in technologically-oriented classrooms. Today the techno-pedagogical competency is very much needed for teachers in teaching and learning process, to attain the learning objectives of students at higher level. In the 21st Century classroom the role teacher is scaffolding students as techno pedagogue, to bring out the maximum from them. If the curriculum designs appropriately and teachers uses the modern technological gadgets in the classroom, the development of 21st century skills is also possible.

Benefits of Techno Pedagogy

- Helps in developing higher order thinking
- It promotes Learning by doing
- It provides real & concrete experience
- Learner centred teaching & learning
- Both IQ & EQ of students develops
- Provides equal opportunity to all learners.
- Promotes Co- operative & Collaborative learning
- Helps to adopt Play-way method in class room.
- Creates and sustains interest in learning.
- Reduces the burden of teachers.
- Facilitating the acquisition of basic skills and life skills
- Promotes Creative Learning

21ST CENTURY SKILLS FOR STUDENTS

We hear a lot about how important it is for today's students to develop their **21st century skills**, in addition to what are often referred to as 'the basics'. These are the skills, dispositions and attitudes that our students will need to thrive in their future lives of work and play. To succeed in career and life in the 21st century, students must be supported in mastering both content and skills. It is important to note that no 21st century skills implementation can be successful without developing core academic subject knowledge and understanding among all students. Students who can think critically and communicate effectively must build on a base of core academic subject knowledge.

The 21st century skills include;

Critical thinking: Finding solutions to problems
Creativity: Thinking outside the box
Collaboration: Working with others
Communication: Talking to others
Information literacy: Understanding facts, figures, statistics, and data
Media literacy: Understanding the methods and outlets in which information is published
Technology literacy: Understanding the machines that make the Information Age possible
Flexibility: Deviating from plans as needed
Leadership: Motivating a team to accomplish a goal
Initiative: Starting projects, strategies, and plans on one's own
Productivity: Maintaining efficiency in an age of distractions
Social skills: Meeting and networking with others for mutual benefit

TWENTY-FIRST CENTURY PEDAGOGY

Today's students are active learners rather than spectators. They view themselves as participants in creating information and new skills. Accordingly, twenty-first century instruction is based on three pedagogical principles – personalization, participation and productivity. This framework allows learning through authentic real-world contexts, carrying out projects from beginning to end, and solving problems as they arise, all of which constitute powerful learning strategies. Forming working relationships with teachers and partners in the community, and working collaboratively with peers will also contribute to productive learning experiences for learners worldwide. Some important suggestions that can be taken into consideration for developing 21st century skills are the following;

- Rearrange the focus of education from quantity to quality
- Foster maximum learner participation in the learning process
- Adopt Personalized and customized learning
- Provide maximum Emphasize on project and problem-based learning
- Encourage collaboration and communication in achieving instructional objectives.
- Engage learner oriented tasks and motivate learners to complete the task successfully.
- Cultivate creativity and innovation through dynamic learning processes.
- Employ appropriate digital metacognitive skills
- Promote learning without borders
- Encourage lifelong learning
- Recognize learning through open education
- Assess everything for deeper understanding and competency
- learning tools
- Plan and design relevant and real-world learning activities
- Design classroom activities to develop
- Redefine teacher roles and functions as per needs of 21st century.

ROLE OF TECHNO PEDAGOGY IN THE ACQUISITION OF 21ST CENTURY SKILLS

Rethinking pedagogy for the twenty-first century is as crucial as identifying the new competencies that today's learners need to develop. Traditional approaches emphasizing memorization or the application of simple procedures will not advance learners' critical thinking skills or autonomy. To develop the higher-order skills they now need, individuals must engage in meaningful enquiry-based learning that has genuine value and relevance for them personally and their communities.

Real-world experiences merged with sustained engagement and collaboration offer opportunities for learners to construct and organize knowledge; engage in detailed research, enquiry, writing and analysis; and communicate effectively to audiences.

Leverage of techno-pedagogy in the usual classroom practice enables to increase the learning achievements of students. Like the same in the case of acquisition of skills, technology mixed pedagogy plays a dominant role. Appropriate mix of the digital tools in and outside the four walls enables to develop 21st century skills also. Integrating digital gadgets is essential to give not only theoretical awareness but also for the development of practical abilities. Due consideration should be given for techno-pedagogy while designing the curriculum. Following are the some activities that can be given for learners in the acquisition of 21st century skills with the support of techno pedagogy.

List Of Techno Pedagogic Programmes For 21st Century Skill	
21st Century Skills	**Programmes for learner**
LEARNING AND INNOVATION SKILLS	
Critical thinking	Connect students with real world scenarios and ask them to identify possible issues or problems through social Medias, e-surveys and virtual field trips.
Creativity	Encourage creative expressions of learners in different digital format like poems, stories, conversation, images, logos, cartoons, documentaries in the form of digital magazines, blogs, videos, etc.
Collaboration	Provide opportunities for students to work on collaborative projects where each student takes responsibility for an aspect of a larger group project (Provide directions on the various sources available in the form of web portals and digital tools).
Communication	Use of Web conferencing tools, online and offline platforms, Tutorial CD-ROMs for developing communication skills
INFORMATION, MEDIA AND TECHNOLOGY SKILLS	
Information Literacy	Show examples of trustworthy and untrustworthy sources of information from different electronic formats and guide students to collect information from trustworthy sources.
Media Literacy	Help learners to identify the most visual, most useful, and most natural methods of sharing a given media, and analyse the strengths and weaknesses of each. Also direct students to use different educational channels available in Television and in Internet.
ICT Literacy	Provide maximum opportunity to get hands on experience to use the modern technical gadgets. And provide tasks to identify modern technical inventions related to their field of study.
LIFE AND CAREER SKILLS	
Flexibility & Adaptability	Use of presentations that shows importance of developing life and career skills in the form of documentaries, videos, expert talk through web conferencing, etc.
Initiative & Self Direction	Provide projects to collect details regarding importance of developing life and career skills from websites, blogs, online magazines and e books.
Social & Cross-Cultural Skills	Provide tasks to create short films and documentaries showing importance of developing life and career skills
Productivity & Accountability	
Leadership & Responsibility	

Conclusion

Learning and developing 21st century skills along with the support of techno pedagogy will be much beneficial for setting up a good starting point for the career growth of learners. Learning all these skills will help to chase their dreams easily, will solve complex problems that face in future, will develop all the skills needs for a better employment, will develop all job skills, and learning such skills will change students as a good citizen who will contribute much for the growth of our nation.

5

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