



TECHNOLOGY IN TEACHER EDUCATION

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Technology is a powerful tool for converting learning as per the trending educational system of the 21st century. Integration of technology in teacher education have had both successes and failures rate. Even during the COVID crisis which had increased the attention towards the education technology in many parts of the world and have an extended with effective reach and imparted big implications for educational inequality. Technology for Teachers can help them to be as effective like most other professionals. Also in addition to the textbooks, notes, worksheets, etc, the technology has helped the learners to understand better. Since these additional e-learning resources have increased the learners shall grasp the content easier and quicker. Technology is the solution with various technological tools can help teachers to improve their skills and shall use it most effectively to be accountable unlike books, classrooms and blackboards. The investment on technological tools by the educational management shall never be made on basis of evidence-free optimism but rather it shall be evidence-based realism in terms of systems and shall pertain the capacity to maintain the technology. Teacher's willingness to engage the technology with the students shall not be compared whether the technology shall execute better than the economical, equivalent alternative. A teacher plays a major role in defining how well the technologies have been used in the classroom and in turn the technology as to how have it improved the learner's performance.

Keywords: *Technology for Teacher, Technological Tools, Evidence-Based Realism, Integration of Technology.*



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1. INTRODUCTION

Technology in teacher education is a powerful tool for transforming the learning. It can help sustain and develop the relationships between educators and students, reinvent our approaches to learning and alliance, shrink long-standing equity and approachability gaps, and adapt learning experiences to meet the needs of all learners.

In developed educational institutions, are provided with hardware and software, which are allowed to connect with the internet and also supported by technology providing focused professional opportunities for teachers. The growths in the application and distribution of knowledge and information technology have been changing the demands in education. By applying different types of technology in the classroom which includes virtual classroom, also

makes the learners who are energetically engaged with learning objectives.

It is a common misconception that the integration of technology in the classroom can be a financial burden for educational institution, but learners do not necessarily need their own tablets or laptops to make it with technology. The use of

technology during class coaching can foster student engagement for auditory and visual learners. Integration of simple technologies Power Points, games, internet homework assignments, online grading system, are the difference makers for student's growth in the classroom.

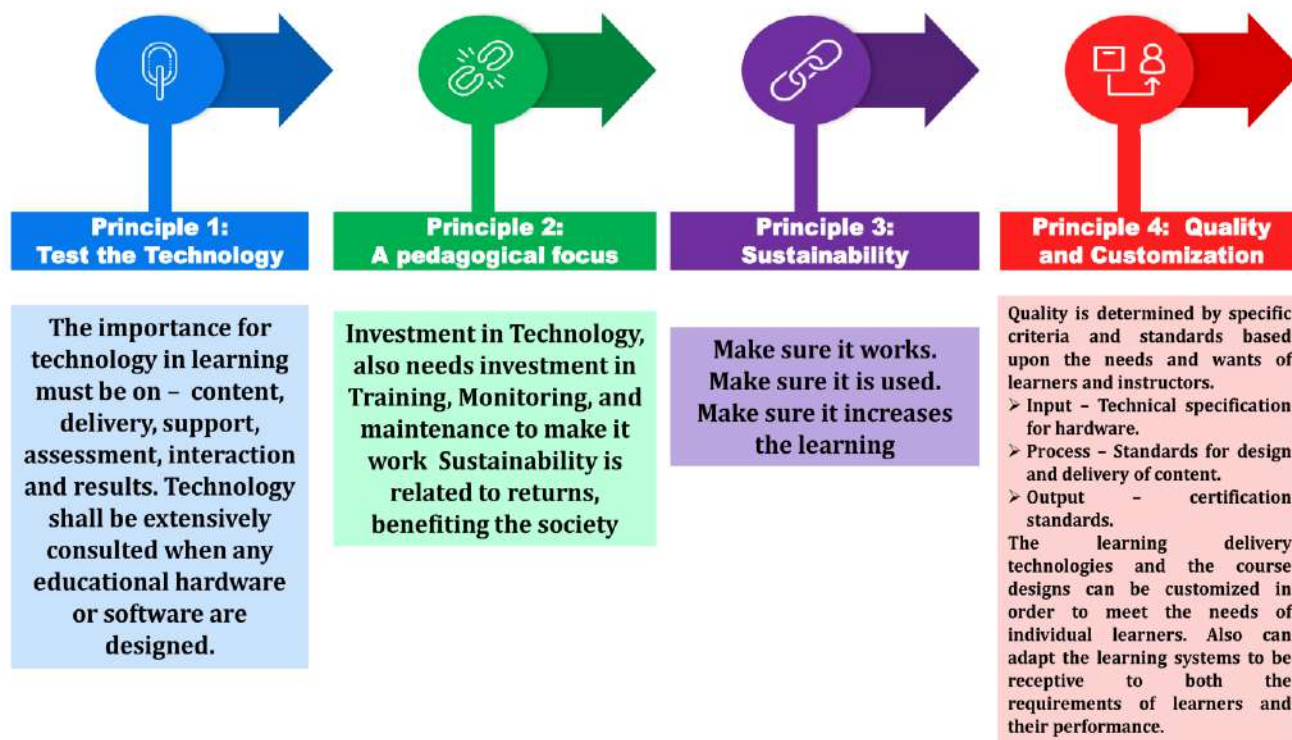


Figure-1: Four Principles to Investments in Technology

2. TEACHING AND LEARNING PROCESS

Teaching and learning are actions essential to accomplish a goal in Teacher education. Teaching is the dedicated application of knowledge, skills and characteristics designed to provide exclusive provision to meet the educational needs of the individual and the society. Teaching is an art deep-rooted in practical, applied and behavioral disciplines.

Good teaching is a well-planned and activity that are interconnected with the knowledge and skills. It delivers learning experiences or situations that will ensure understanding, application and critical thinking based on the theories of learning. Effective teaching is one that will convey about the proposed educational outcomes, generating a condition or selecting life – similarly, situation to improve learning and communicating knowledge

and competencies requires mastering a subject matter.

Learning is the act of obtaining new, or adapting and reinforcing the existing knowledge, behaviours, skills, values, or the preferences and may involve creating different types of information.

The introduction of technology in teacher education has modernized the teaching-learning climate of the educational institutes. The learners are exposed to professionally designed programmes on video or computers.

3. ROLE OF EDUCATIONAL TECHNOLOGY IN THE TEACHING-LEARNING PROCESS

- Educational technology has transformed a passive classroom to an active and interactive classroom, with audio-visuals, charts and models, smart classrooms and

e-learning room which has drastically motivated and increased the attention level of the students.

- The introduction of educational technology has modernized the teaching-learning environment of the educational institutions.
- Educational technology has helped and enhanced the teachers in their instructional programmes through the structured lessons for remedial, improvement or drill purposes.
- Through a systematic organization of content and instructional materials, educational technology has provided well-integrated structured materials for teachers thus saving a lot of their time which in turn may be utilized for creative work and quality improvement.
- The training and use of educational technology contributes towards the professional growth of teachers. It equips them in the use of scientific methods for solving educational and administrative problems. It adds to the teaching competence of teachers and inculcates a scientific outlook and scientific temper in teachers and students.
- Educational technology has improved the teaching-learning process and made it more effective and process oriented
- Educational technology has not only maintained the standards of education but also improved the ways of teaching by giving it Teaching Aids and Programmed Instructional Material.
- Mechanism of feedback devices for modification of teaching-learning behaviours have produced effective teachers in the teacher-training institutes.
- Students who appear for higher or competitive examinations have been benefitted by educational programmes on Internet.
- Educational technology has opened up new fields of educational researches in the field of examination process, evaluation and classroom-teaching.
- Educational technology has provided practices and strategies that help teachers to teach according to individual differences of learners.

- Educational technology has provided scientific foundation to education through the theories of learning and intelligence.

4. SIGNIFICANCE OF INTEGRATING TECHNOLOGY IN TEACHER EDUCATION

Teachers and prospective teachers need to constantly improve their skills as per the trend of today's educational level of the students, especially in the area of technology.

Integration of Technology should be emphasized at each level of education, such as:

- School education
- College education
- Continuing education for current teachers
- Professional development of the current teachers

It is discovered furthermore, the Norwegian SMILE report found that the uneven pedagogical use of technology in the classroom revolves around a number of factors, but the most important finding is that the level of a teacher's digital competence directly correlates with students' learning outcomes when technology is used. Strong Pedagogical techniques should accompany technology use for the most effective educational experiences.

Society is being upgrading with the usage of technology, the education shall also use it effectively.

Teachers are preparing the students for a technologically competent world. The essential roles of technology in education is that teachers can serve all study materials so that students can understand the topics better and resolve the queries easier.

Indisputably, from the time when technology is introduced in the classroom, it encourages the overall growth of students. Technology is a robust process to promote a fit educational system universally. The significant roles of technology in education makes learning more available, exciting and entertaining. The development of technological progressions in education leads to improve knowledge and skills of learners. We all know that the presence of technology has enhanced communication and collaboration to a improved level

Educational technology enhanced communication and collaboration between teachers and students and students/ parents, teachers/parents, and peers. Educational

technology offers teachers plenty of technological tools like Gamification, AR / VR, smartboards etc. Through modern technology of education, teachers can use numerous digital tools to increase learning chances for students.

5. PERSONALIZED LEARNING OPPORTUNITIES

The significance of Technology in Education is not restricted to efficient learning, but students can also have their custom-made learning opportunities. Obtainability of more resources/material 24/7 to students permits them to personalize learning improved. Not every student has the similar learning frequency, so personalized learning is considered. Personalize learning is also called as self-paced learning, which can help personalities enhance the quantity of material according to their competence.

Educational technology practice is broadly categorized as:

1. Technology as a tutor
2. Technology as a Teaching tool
3. Technology as a learning tool

Teacher Educators have used computers and other data technologies as tools to rise student learning. Some of the procedures discussed briefly.

6. E-LEARNING:

E-learning is the use of electronic educational tool in learning and teaching. information and communication technology in teaching, hypermedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), flexible learning, web-based training (WBT), online education, virtual education, virtual learning environments (VLE), m-learning, and digital education. In use, all of these term seems in articles and reviews; the term "e-learning" is used repeatedly. These alternative terms are all linguistically more restraining than "educational technology" in that they refer to the use of modern tools, such as computers, digital technology, electronic media, networked digital devices and related software and courseware with educational scenarios, worksheets and interactive exercises that facilitate learning.

7. MOBILE LEARNING

Mobile learning is defined as "learning across numerous contexts, through social and content communications, using individual electronic devices." A method of e-learning, distant learning, mob-learners can use mobile device, educational technology in many places at their time and convenience. Mobile learning is the distribution of learning, education or learning provision on mobile phones, tablets etc., M-learning technologies comprises of handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning emphasizes on the flexibility of the learner, interacting with portable technologies. Using mobile tools for generating education aids and resources becomes a significant part of informal learning.

8. MOBILE CLASSROOM PRACTICES

Mobile devices (such as a Pocket PC) in the classroom can be used to enhance group collaboration amongst learners over communication applications, communicating displays, and video features.

- Present mobile technology can swap resources such as manuals, books, visual aids, and demonstration technology.
- Communicating and multi-mode technology permits learners to involve and manipulate information.
- Mobile Device features with WIFI abilities allows for on-demand access to data.
- Access to classroom events and information on mobile devices offers a scale for learning inside and outside the classroom.

The mobile phone (through text SMS notices) can be used particularly for distant education or with students whose courses need them to be extremely mobile and in specific to communicate information concerning availability of assignment results, venue changes and cancellations, etc.

9. VIDEO CONFERENCING

Videoconferencing (VC) a set of telecommunication technologies which allow two or more places to communicate at the same time by two-way video and audio transmissions. It has also been called 'visual collaboration' and is a sort of groupware.

- Video conferencing can be used in teacher training by involving various powerful and

purposeful effective training institutes so that the efficiency may be transformed.

- Globalization is an extraordinary and remarkable trend today. The successful preparation of teacher training material anywhere in the world can be transformed to any institutions through video conferencing.

10. BENEFITS OF TECHNOLOGY IN TEACHER EDUCATION

- It provides a larger choice of material that can be accessed easily.
- It helps to improve learner's communication skills and presentation.
- It provides an exciting and engaging learning experience for the learners.
- It allows the learners to access the study material provided over the internet from anyplace at any time.
- It helps the learners to learn new skills and obtain new knowledge.
- It helps learners stay updated with new technological advancements.
- It motivates personal learning and prepares the learners for the future.

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