Technology of Teaching

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Abstract

With the use of technology tools, traditional teacher-centered instruction is giving way to student-centered instruction in this age of digital learning. It necessitates knowledge of the pedagogical concepts unique to the application of technology in educational settings. The practise of "designing educational experiences that make the acquisition of knowledge and skill more efficient, effective, and appealing" is known as instructional design. The teaching-learning process that takes place in a unit of learning is described by the learning design. Regardless of the goal or platform, creating any kind of human experience is primarily concerned with achieving the desired result. To meet the challenges of modern living, most people in this rapidly evolving technology era must constantly update their knowledge and abilities. ICT could assist in demystifying scientists and their work if it were utilised to connect students and teachers with scientists conducting research at universities and educational institutions. Each and every teacher should be knowledgeable about how to properly use technology, pedagogy, and subject matter or topic in their daily instructional tactics if they want to adopt and integrate it into classroom teaching. It is obvious that just integrating technology into the teaching and learning process is insufficient. The first demand is for technology to be properly integrated into the educational process because technology cannot bring about change on its own.

Keywords: *Digital learning, Technology, Education, Teaching, Learning, Instructional design.*

Introduction

Since the world that teachers are educating students for is changing so quickly and the teaching techniques that are needed are also growing, no first course of teacher education can adequately educate a teacher for a career of 30 or 40 years. Teachers, like other professions, reflect on their competencies, keep them current, and further develop them through a process called continuous professional development. The utilisation of technological tools is enabling a change from traditional teacher-centered instruction to student-centered instruction as we enter the Age of Digital Learning. It necessitates knowledge of the pedagogical concepts unique to the application of technology in educational settings.

To help teachers understand how such a relationship affects a pedagogical enquiry, the relationship between instructional technology and pedagogical notions is examined. Technology integration is a complicated process made up of connected actions.

Technology of Teaching

The term "teaching technology" refers to educational strategies that are extremely methodically created and used in very specific ways. These strategies typically involve the use of clearly defined objectives, exact instructional procedures based on the tasks that students must learn, small instructional units that are carefully sequenced, a high level of teacher activity, a high level of student involvement, liberal use of reinforcement, and careful monitoring of student performance.

Instructional Technology

Based on research in human learning and communication, instructional technology is a systematic approach to designing, implementing, and evaluating the entire process of learning and teaching in terms of specific objectives. It combines human and nonhuman resources to create more effective instruction.

Teaching is not "instruction," yet it is a type of "instruction." Learning is induced by methodical behaviours during instruction. In order to accomplish specified learning goals, instructional technology means the application of scientific knowledge and psychological concepts to training. The premise behind instructional technology is that students can learn well without teachers being there in person. A student can learn at their own pace and in accordance with their needs. A student can learn at their own pace and in accordance with their needs. The many parts of the aforementioned description should be noted, and it's crucial to understand that technology is actually a tool for the transmission of education. This conception views technology innovations as tools, not as ends in and of themselves. Technology cannot make up for poorly thought out or executed instruction.

Main features of Instructional Technology:

1. Individual variances are taken into account with this technology, giving the learner the chance to proceed at his own pace.
2. Learners' appropriate responses are continually reinforced.
3. The ideas and theories of psychology are applied in instructional technology.
4. Learning material is broken up into manageable pieces, and each piece is presented on its own.

Instructional Design

The process of developing "instructional experiences which make the acquisition of knowledge and skill more efficient, effective, and appealing" is known as instructional design (sometimes known as instructional systems design, or ISD). The process entails identifying the learner's needs and existing situation, deciding on the purpose of education, and developing a "intervention" to help with the changeover. The ideal process is underpinned by andragogically (adult learning) and pedagogically (teaching process) validated theories of learning and may be conducted in teacher-led, student-only, or community-based settings. The result of this training may be clearly perceptible and measurable scientifically, or it may be entirely concealed and assumed. There are several models for instructional design, but the ADDIE model, which consists of the five phases analysis, design, development, implementation, and evaluation, is the foundation for many of them. Although Constructivism (learning theory) has lately affected thinking in the discipline, instructional design is historically and traditionally anchored in cognitive and behavioural psychology.

Learning Design

During the late 1990s and the beginning of the 2000s, the idea of learning design first appeared in the literature on the use of technology in education, with the premise that "designers and instructors need to choose for themselves the best mixture of behaviourist and constructivist learning experiences for their online courses." However, the idea behind learning design is likely as old as the idea behind teaching. The phrase "description of the teaching-learning process that takes place in a unit of learning" (e.g., a course, a lesson, or any other designed learning event) could be used to describe learning design.

Elements of Learning Experience Design

No matter the goal or platform, the process of designing any kind of human experience is based on achieving the desired result, ideally with as little hassle and as much delight as possible. Whether it's buying an airline ticket on a tablet for a trip, taking in a musical performance in a theatre, or learning to code in a classroom, the objective of an experience and the platform on which it takes place will vary. The factors that should be taken into consideration throughout the design process are largely the same, despite the fact that each of these experiences calls for its own distinct approaches and frameworks. Traditionally, developing adult learning experiences that take place online or in a classroom has involved designing a curriculum. Most often, the process of developing curricula is referred to as instructional design. True learning experience design, however, takes much more than curriculum, much like user experience design requires far more than determining what information should put on a website.

Strategy Plane

The aim of almost every learning experience is to develop the new abilities, information, inspiration, and/or confidence to alter or develop behaviour. In the end, adult learners and their companies anticipate that learning experiences will create behaviours that improve the effectiveness and efficiency of their personal and professional lives. This entails determining the learner's goals, or what they want to achieve by doing things differently, as well as their needs, which include the additional knowledge and abilities needed to do something differently. Finding the organization's needs and objectives is crucial. Regardless matter how diverse they may be, both objectives must be addressed for a learning experience to be successful. In the end, adult learners and their companies anticipate that learning experiences will create behaviours that improve the effectiveness and efficiency of their personal and professional lives. Once the gaps that cause learners to struggle have been discovered, a solution should then be designed to remedy those gaps.

Conclusion

To meet the challenges of modern living, most people in this rapidly evolving technology era must constantly update their knowledge and abilities. This relevance of digitization is well reflected in the National Curriculum Framework (2005), which states that "ICT, if used to connect students and teachers with scientists undertaking research in universities and educational institutions, would also help in demystifying scientists and their work." Each and every teacher should be knowledgeable about how to properly use technology, pedagogy, and subject matter or topic in their daily instructional tactics if they want to adopt and integrate it into classroom teaching. It is obvious that just integrating technology into the teaching and learning process is insufficient. The first demand is for technology to be properly integrated into the educational process because technology cannot bring about change on its own. It has been stated quite well that the

usage of high capacity communication systems cannot significantly improve learning outcomes without good pedagogy. The pedagogy, not only the hardware or software, is what facilitates learning. The pedagogical concepts that guide the integration of technology into teaching and learning must be understood by teachers.

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