



# Study Of Educational Technology

Meenu

## 1 Introduction

Educational technology, sometimes shortened to EduTech or EdTech, is a wide field. Therefore, one can find many definitions, some of which are conflicting. Educational technology as an academic field can be considered either as a design science or as a collection of different research interests addressing fundamental issues of learning, teaching and social organization. Educational technology as practice refers to any form of teaching and learning that makes use of technology. Nevertheless, there are a few features on which most researchers and practitioners might agree:

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Use of technology is principled: Technology means the systematic application of scientific knowledge to practical tasks. Therefore, educational technology is based on theoretical knowledge drawn from different disciplines (communication, education, psychology, sociology, philosophy, artificial intelligence, computer science, etc.) plus experiential knowledge drawn from educational practice.

Educational technology aims to improve education. Technology should facilitate learning processes and increase performance of the educational system(s) as it regards to effectiveness and/or efficiency.

In this short introduction we will try to give a preliminary definition of the field.

### 1.1 Other definitions

Educational technology is a very wide field. Therefore one can find many definitions, some of which are conflicting.

Technology means the systematic application of scientific or other organized knowledge to practical task. Therefore, educational technology is based on theoretical knowledge from different disciplines (communication, psychology, sociology, philosophy, artificial intelligence, computer science, etc.) plus experiential knowledge from educational practise (Natalie Descryver)

Educational technology is the use of technology to improve education. It is a systematic, iterative process for designing instruction or training used to improve performance. Educational technology is sometimes also known as instructional technology or learning technology.

Educational technology research always had an ambitious agenda. Sometimes it only aims at increased efficiency or effectiveness of current practise, but frequently it aims at pedagogical



change. While it can be considered as a design science it also addresses fundamental issues of learning, teaching and social organization and therefore makes use of the full range of modern social science and life sciences methodology.

"Technology provides us with powerful tools to try out different designs, so that instead of theories of education, we may begin to develop a science of education. But it cannot be an analytic science like physics or psychology; rather it must be a design science more like aeronautics or artificial intelligence. For example, in aeronautics the goal is to elucidate how different designs contribute to lift, drag maneuverability, etc. Similarly, a design science of education must determine how different designs of learning environments contribute to learning, cooperation, motivation, etc." (Collins, 1992:24).

Technology is therefore both a tool and a catalyzer and it can become a medium through which change can happen.

Educational technologists would not therefore consider the computer as just another piece of equipment. If educational technology is concerned with thinking carefully about teaching and learning, then a computer has a contribution to make irrespective of its use as a means of implementation, for the design of computer-based learning environments gives us a new perspective on the nature of teaching and learning and indeed on general educational objectives.

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