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Introduction to Educational Technology

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1 Introduction

This course unit aims to provide an introduction to the field of educational technology.

Educational technology can be defined as a **design science** or as a **collection of different research interests** addressing fundamental issues of learning, teaching, and social organization. Educational technology as a design science relies on and influences other academic disciplines; in particular the so-called **learning sciences** and **instructional design theory** (didactics).

Learning goals

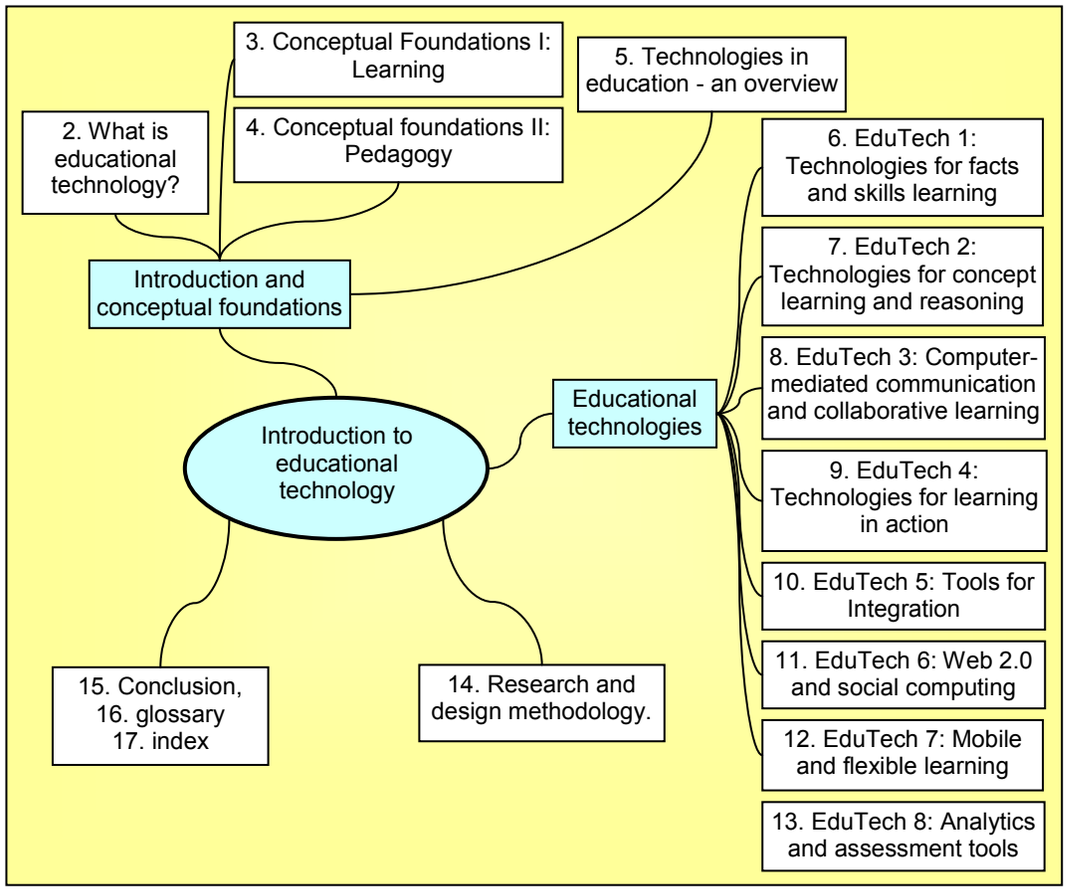
- Understand some conceptual foundations, in particular some principles from learning theory and instructional design and how they interact with educational technology
- Gain a global picture of the field
- Understand various strands of development, research and practice
- Be able to describe major educational technologies and the contexts in which they are being used
- Be able to map technologies to instructional design goals

1.1 Architecture of the unit and its chapters

This learning unit contains four parts

1. **Introduction and conceptual foundations**: We start with an introductory chapter that aims to define the field of **educational technology**, followed by two chapters on conceptual foundations (learning theory and pedagogy) and an introductory chapter on technology in education.
2. **Educational technologies**: Educational technologies will be introduced through several chapters. Each chapter refers to a major pedagogical approach that in turn relates to a given learning type.
3. **Research and organizational issues:** We shortly will discuss research and development methodology as well as some change management issues.
4. **Conclusion, glossary, and index:** The glossary includes definitions of some important terms. The index will help you find concepts and major authors.

The following mind map summarizes this organization:



1.2 Chapter architecture

Most chapters have a similar organization and we use some "boxes" to highlight important elements.

We start a chapter with a short introduction and preview.

Introduction and preview

The introduction introduces the purpose of the chapter and includes a short preview.

I also will include a little mind map outlining the section structure.

The introduction is followed by an identification of the learning goals.

Learning goals

These goals should help you understand what you will learn and sometimes why.

Chapters are structured in several sections. These sections may include taxonomies, examples and case problems or summary information:

Some boxes are used to highlight information, e.g. taxonomies, examples, or case problems.

Some boxes may include intermediate summary information or important taxonomies.

At the end of the chapter, we will present a short conclusion.

Conclusion

The conclusion recalls the most important concepts. It also may be followed by some summary tables or other additional text.

We may then present some review questions.

Review questions

Review questions are meant to help you go over the text and consolidate learning goals.

1.3 Keywords

Educational Technology, educational technologies, instructional technology, technologies, learning theory, pedagogical theory, instructional design