Projects in Computing and Information Systems

CH1

Introduction

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Textbook : Projects in Computing and Information Systems A Student's Guide by Christian Dawson

Introduction

Aims:

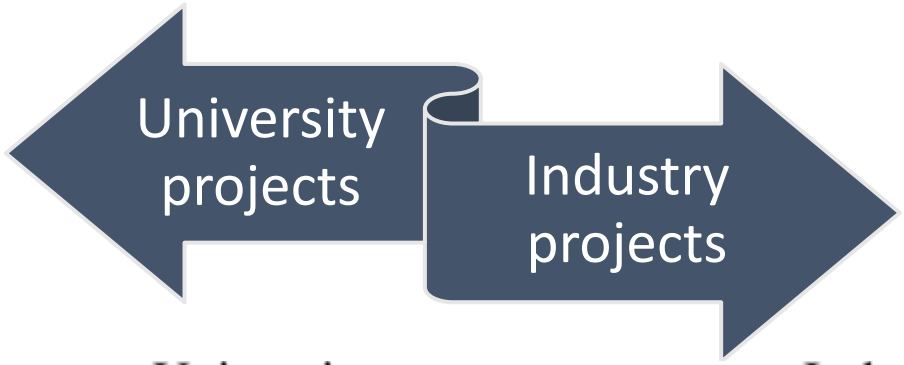
- To introduce academic computing projects.

Learning objectives:

When you have completed this chapter, you should be able to:

- Understand what projects are.
- Understand the different types of academic projects in computing and information sciences.
- Understand different degree structures and project requirements.
- Describe the roles different people have in academic projects.

Introduction



Typical aspects	University	Industry
Focus of the R&D	Basic research; curiosity-oriented	Applied research; exp. develop.
Basic rationale	Advance knowledge	Increase efficiency
Aim	New ideas	Profits
Characteristics	Idea-centered	Practical, product-centered
Framework	Open	Close, confidential
Evaluation	By peers	By the boss
Schedule	Open-ended	Tight, predetermined
Recognition	Scientific honors	Salary increases

Source: Vedovello(1998)

Introduction

Why universities include project work?

- Assessment across a number of disciplines simultaneously
- Allows you to develop new skills
- Work independently
- Make a contribution

What are (computing) projects?

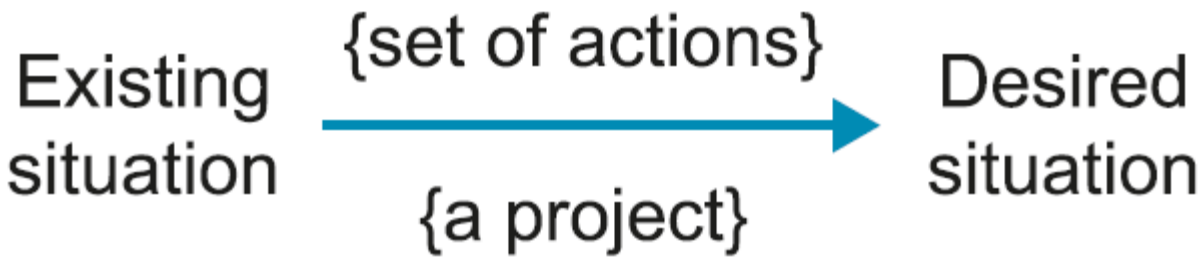
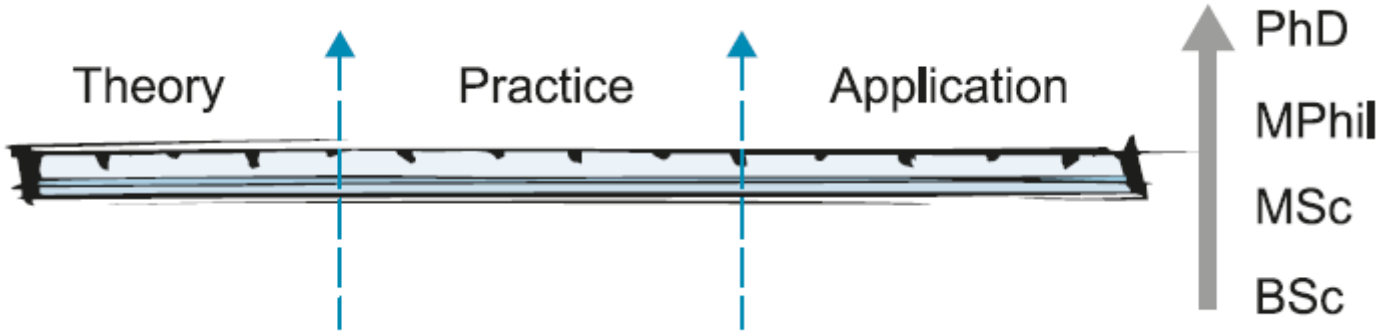


Figure 1.1 The Meliorist Model

Introduction

What are (computing) projects?



Introduction

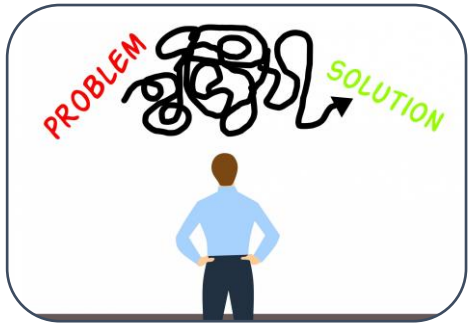
Computing project types

Research-based

Development

Evaluation

Industry-based



Problem solving

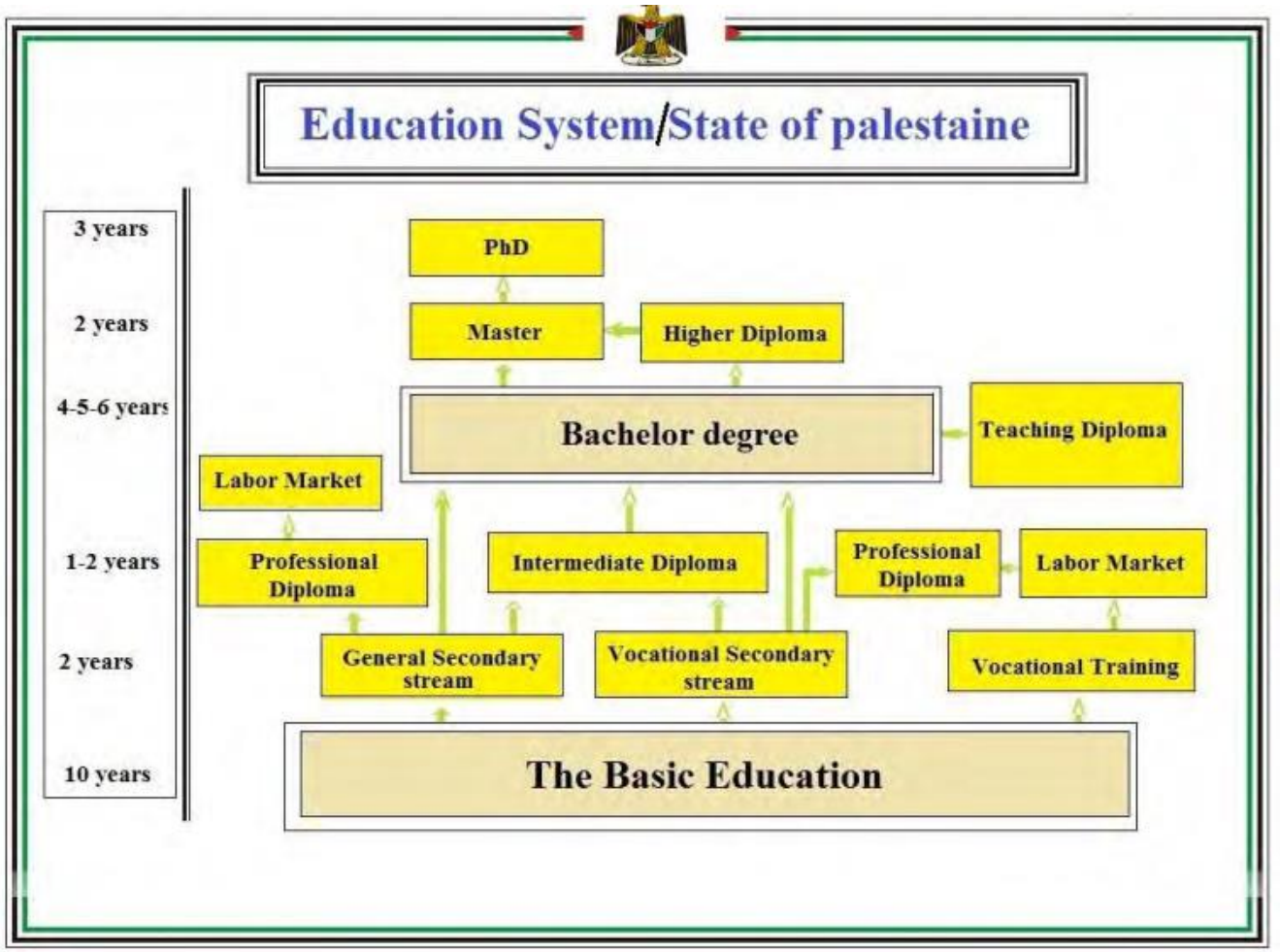
Introduction

Examples of projects in different areas of computing and information systems

Algorithms and data structures	Applied computer science	Artificial intelligence	Computer architectures and hardware	Databases	Formal methods
Graphics and visualization	Human–computer interaction	Image processing, vision, pattern recognition	Information systems	Networking	Security and cryptography
		Software engineering	Theoretical computer science		

Introduction

Degree requirements



Stakeholders

Stakeholders are individuals (anyone) who are involved with your project.

Summary

- The field of computing ranges from ‘hard’ theoretical computer science, through practical software implementation, to ‘softer’ areas of information systems that are concerned with the use and the effect of IT.
- Computing projects tend to fall into one of the following five categories: *research based, development projects, evaluation projects, industry based* or *problem solving.*
- Your project will have a number of *stakeholders,* the most important of which is **you.** Others include your supervisor(s), your client(s), user(s), examiner(s) and software testers and evaluators.

Thanks