

## Chapter VII

# Educational Informatics Systems: Individual Approaches

### Introduction

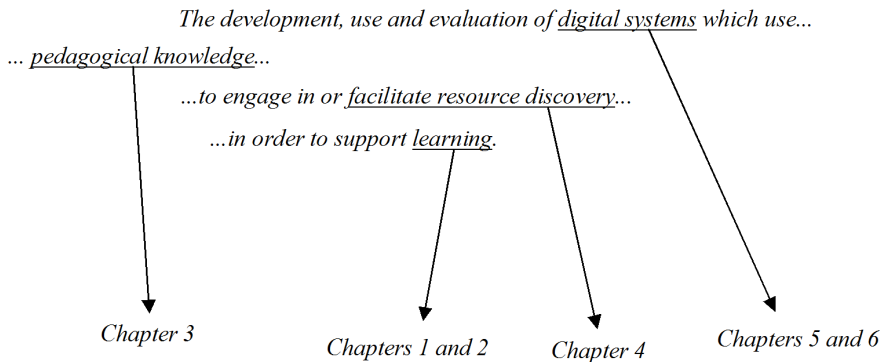
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Educational informatics is defined within this book as:

*The development, use, and evaluation of digital systems that use pedagogical knowledge to engage in or facilitate resource discovery in order to support learning.*

Figure 91 shows how the previous chapters of this book have focused on each of the pillars on which educational informatics is founded. The nature of *learning* was explored in Chapters I and II, before we moved on to focus on *pedagogical* matters in Chapter III and *resource discovery* in Chapter IV. Chapters V and VI focused on *digital systems*, concentrating on information and communication technology (ICT) aspects of pedagogy and resource discovery respectively. The reader is referred to the Preface for a more detailed explanation of this definition.

Figure 91. Definition of educational informatics and previous chapters



This and the following chapter present a selective review of recent developments in the development of educational informatics systems, which accord with the definition given previously. While Chapter VIII introduces a number of educational informatics systems that focus on social and collaborative aspects of learning, the present chapter focuses on the ways in which a number of educational informatics systems are being developed to offer a degree of personalisation of the learning experience to the individual learner, and on provision for learner control and the development of metacognition.

The simplest form of educational informatics system is a retrieval system that enables resource discovery via some pedagogic knowledge representation, for example, in the form of standard pedagogical metadata specifying, for example, educational level, pedagogical approach, and so forth. A number of educational repositories exist (Sampson & Karampiperis, 2006), which enable users to search for learning resources via the use of metadata that specifies various pedagogical features of those resources. Examples include ARIADNE (<http://www.ariadne-eu.org/>), CANCORE (<http://www.cancore.ca/en/>), EducaNext (<http://www.educanext.org/ubp>), the Educational Network Australia (EDNA) (<http://www.edna.edu.au/edna/go>), the Exploratorium Digital Library Learning Resources Collection (<http://www.exploratorium.edu/partner/nsdl/index.html>), the Gateway to Educational Materials (GEM) (<http://64.119.44.148/>), the Globewide Network Academy (GNA) (<http://www.gnacademy.org/>), the Health Education Assets Library (HEAL) ([www.healcentral.org](http://www.healcentral.org)), the LearnAlberta Portal (<http://www.learnalberta.ca/Main.aspx>), the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) (<http://www.merlot.org/merlot/index.htm>), the National Learning Network ([www.nln.ac.uk](http://www.nln.ac.uk)), the Science, Mathematics, Engineering and Technology Education Digital Library

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