Chapter IX

Real World Learning

Introduction

This chapter focuses on limitations in our knowledge of learning, learning design, and the design of information and computer technology (ICT)-based learning support systems. We need to overcome these limitations in order to enable us to improve our own learning, the design of other people's learning, and the design of learning support systems that will work effectively in the real world. The chapter starts by focusing on some of the problems besetting research into humans, and the need to recognise the serious limitations of knowledge derived from such research when it comes to practical application in real world teaching and learning.

It explores, as a mini case study, a notion that is central to much educational informatics research and development, namely personalisation, and within this, a construct that a number of researchers and developers have used and are using as a driver of adaptive behaviour—learning style. The chapter goes on to present another mini case study in which the applicability of a well established and influential theoretical

framework for learning design in higher education—Laurillard's *conversational framework*—is evaluated in a real world blended learning context.

There follows an examination of some key problems facing the development of educational informatics systems and the generation of knowledge of how best we might deploy such systems in a symbiotic relationship with learners. The chapter explores this relationship, assessing the extent to which computers are inherently limited in providing support for the relatively serendipitous, unpredictable, and unplannable mental activity that appears to underlie higher order critical and creative thinking. Helping learners to develop their own powers of metacognitive *learning to learn* knowledge and skills will be increasingly essential as we are faced with an increasing range of systems, tools, and facilities enabling us to access and confront ever vaster amounts of information.

As students, teachers, researchers, and system developers, we are all learners. As learners we must become practitioner-researchers engaging in self-organised learning, whether we are working in mediated or autonomous learning contexts. The chapter concludes by discussing how, within this role, we might generate new knowledge in order to help us make more informed choices and decisions concerning our own learning, designing the learning of others, and developing improved ICT-based support systems.

Theory and Practice

Learning Styles and Effects in Real World Teaching and Learning

As we have seen in the previous chapters of this book, considerable research effort within the field of educational informatics has been devoted to attempts to personalise the learning experience. Personalisation is also a key element of calls for funded research into technology-enhanced learning and of proclaimed educational policy of governments. The notion of learning styles seems a particularly attractive focus for the development of educational systems designed to adapt to individual learners' needs. From the range of learning styles studied, those identified by Pask are arguably particularly directly mappable onto the design and presentation of learning content and have the most extensive empirical support relating to complex learning—including direct empirical evidence of the learning effectiveness of taking style into account in teaching.

If some learners learn, say, by taking a holist route, and others a serialist route through the same subject matter, then we can use technology to provide these dif-