Chapter 3
The Emergent Learning Model

ABSTRACT

This chapter synthesises the earlier work on modelling learning and tries to create a design toolkit for anyone who wants to design for learning. However, the conceptual starting point for this chapter is the desire expressed in the EU Bologna Process to integrate "informal," "non-formal," and "formal" learning. The authors believe that the process the EU carried out, which led to the Horizon 2020 funding programme, was mistaken. The critical dimension of this lies in whether one examines these three dimensions of learning by starting with the existing formal structures of education or if one starts with the largely unexamined processes of learning. Education assumes that learning is an automatic by-product, an epiphenomenon, of the education system and so does not need to be defined separately. As has been seen in the chapters based on an ethnographic study of learning in digital environments and on learner-modelling (Chapters 1 and 2), learning has not been sufficiently discussed or described in much academic literature focused on education.

INTRODUCTION

As indicated in the previous chapter our work started diverging from mainstream educational thinking in research once we started paying attention to the learner and how they learn, just as A.S. Neill had done in 1913 (before going on to create the democratic school of Summerhill), and by building on our insights into learner modelling which we captured best in the "model of informal e-learning" (chapter 2). This thinking about the context of learning

was also developed further in the work presented to the Higher Education Academy (HEA) on "Context Modelling" in 2006.

However, we also started diverging from mainstream business technology systems development which, having started with user modelling as part of the early Systems Analysis approach to computer systems development (by which it learned from user behaviours and then modeled existing work processes BEFORE building computer systems) before moving to the simpler user testing, or acceptance testing, of new information systems. Once businesses became more standardized after all information systems flows had been computerized, perhaps following the global Stock Market "big bang" of 1986, but certainly once the business "e-maturity" model became standardized in the mid-1990s then using computerised technology in organizations in the e-mature globalised world of the 21 century meant that all business information systems had become standardized turnkey 'plug and play solutions which meant that user-modelling had become unnecessary. Users from then on would have to adapt to and be trained to use existing business information systems as they were presented.

However, our research, and others, had told us the exact opposite, namely that any future computerized education system would need to be adaptive to the learner and the interest-driven, goal-seeking, behaviours of self-determined learning (heutagogy) not to the standardized 900 year old model of education (pedagogy). Learner-modelling, which was based on informal, improvised learning behaviours, had led us to a position that was the exact opposite of Universities and their standardized formal education educational processes.

SYSTEMS DESIGN AND ORGANISATION STRUCTURES

When Fred taught Business Information Systems, he used his first lecture to look at the underpinning Systems Theory, before looking at businesses, information or computers in order to design and build computerized information systems. This underpinning aspect of Systems Theory was concerned with how we first identified real world activities (the 'prime system') of any kind, before moving on to modelling those same real world activities, usually of a business, with information (the 'model system'). The information system model of a business needed to capture the typical operational transactions of, stock control, production, distribution, sales, finance, and accounting (say)

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