## Chapter 2 Learner-Modelling

#### **ABSTRACT**

This chapter focuses on the Open Context Model of Learning, namely that of a Community Development Model of Learning. However, this sector-based model of learning emerged from research carried out in 2002 into how people learned in UK online centres, which were the first wholly digital learning environments, developed in the UK. This chapter goes beyond examining digitally enabled learning within a single context by asking, "How do people learn?" especially as the original research had started with the question "How do people learn in UK online centres?" The chapter also asks, "How do we model learning?" The education system itself has never "modelled learning" it offers content-based courses. The design of large-scale computerisation technology projects has been based on a systems analysis approach that includes the concept of "user-modelling." The chapter shows how this can be done from the research conceptualisation of these processes from three perspectives: 1) learner (interest-driven learning), 2) learning location (lifecycles), 3) large-scale (context-responsive) system.

#### INTRODUCTION

#### **Learner-Modelling (in Education Systems)**

Part of Fred's experience as a lecturer and senior lecturer in Information Systems in the 1990s was in Systems Analysis and Design. His Master's degree was in Information Systems and Technology with a thesis on the environmental

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impact of computing entitled "Is there a Green IT strategy?" A large part of his master's education concerned user-centered design in large systems, especially using Peter Checkland's work on "Soft Systems Analysis." Checkland was concerned with the role of people in organisations and how the design of new information systems could capture the social processes and values of a workplace and incorporate them into the computerisation of information systems. You could describe his work as being about contextualising new information systems in ways that take the most account of the users of the system, as well as being responsive to the purposes of the organization. Given that he was writing in the UK at the peak of the Welfare State it could perhaps be described as a Systems Analysis for a social democratic society.

Fred was also very lucky that a few years after completing this period of study and research he was part of a very large EU Information Systems and Technology 5th framework project called GALA, which stood for "Global Access to Local Applications" running from 1997 to 1999. This was a pre-smartphone project of designing online access for people anywhere in Europe to various applications that had been created elsewhere in Europe and which contained useful local information; bus timetables, healthcare advice, and other blocks of information that had been captured by local authorities in previously "locked-down" internal information systems. It was the first XML-based public project in Europe, which enabled the transfer of local information across distributed platforms and was, perhaps, an attempt to create "citizen-centric" public Information Systems in a post-Maastricht Treaty world/European Union (EU) where a citizen had a status that needed to be reflected in the design of public information systems. This kind of anywhere, anytime access is something that we take now for granted in our 21st century smart phone world, however the technical problems of universal citizen access to corporate and governmental information systems was still being worked out back then.

Fortunately, Fred was the lead on User Accessibility and Testing for this project and had to work with selected groups of users to find out how they used, interpreted and valued the resources we were providing them with. This was fairly standard large-scale System Analysis User Testing which was particularly important in this case as we were taking computerised information systems used by professionals that required training in order to access them (as they had been developed by local authorities in Bologna, Koln, Gothenburg, Paris and London) and making them available to local citizens

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