Chapter 2

Human-Centred Methods in Information Systems: Boundary Setting and Methodological Choice

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This paper is about determining the context and scope of an information systems study and choosing an intervention strategy based on the findings. At the core of this is a process of boundary setting, for which an approach which enables boundaries to be determined through critical participant analysis is recommended and described. Alternative potential intervention strategies are then discussed, and a description of how the choice of strategy was informed within a recent intervention is given.

The paper concludes with a discussion of the findings, and a summary and critique, both theoretical and practical, of the approaches available to enhance such studies in the future.

INTRODUCTION

It could be argued that the scope of information systems (IS) analysis is often seen to be problematic: IS “problems” are “solved” by redefining organisational and human issues in technical terms and developing the necessary technical solution. Studies on which this paper are based have raised significant questions regarding such approaches, exposing many IS developments as not susceptible to a technical solution but exhibiting complexities stemming from high levels of human
activity. A clue to how such complex, human-centred issues may be dealt with is to be found in the scoping of these studies which, in systems terms, implies a need to assess the **system boundary**. Within this paper we describe an approach to such boundary setting and the way in which this may be used to inform choice of intervention strategy. To set this in context we begin below by describing the context of one such IS development.

### THE INTERVENTION PROBLEM CONTEXT AND TERMS OF REFERENCE

Between the end of the 1980s and the present, the University of Luton in the U.K. has grown from around 2,000 students to over 14,000. This growth has been accompanied by extensive change, primary in which has been the change to a modular scheme within a semester-based year, whereby each module is now studied over fifteen weeks rather than the previous thirty-six, with the attendant alterations to teaching and assessment strategies.

One of the key elements of this change was the development, beginning in 1992/3, of a centralised management information system (MIS) for student records. The University of Luton Higher Education Management Information System (HEMIS) is computer software designed to maintain student records under a modular framework and provide management information from those records. Implementation was completed for the academic year 93/94, so that it is now in its seventh full year of operation. The system supports student recording across four faculties (Business; Science, Technology and Design; Health Care and Social Studies; and Humanities) and provides information to management for internal and external reporting.

To help facilitate this development, an investigation into user issues was commissioned, facilitated by the authors, the terms of reference for which were very broad. The primary objective of the intervention was stated as “greater faculty access to the student record management information systems.” Faculty access was not, at this point, clearly defined, but it was accepted that it implied an investigation of “user needs.” This required a change from the present development path, where concentration had been on a centralised information system aiming to provide accurate management information, focusing on structured, project management techniques. What was unclear in all this was the scope of the project. Should we look at user attitudes to HEMIS? Should personal information systems be included? The question to be answered was: “where should the boundary of the system of concern be drawn?”
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