INTERDISCIPLINARY IS COMPETENCE AT AN INDIVIDUAL LEVEL
A case study

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ABSTRACT

This paper outlines a case study of IS systems where IT competence is combined with telephony (call center) competence. The case study results in a tentative framework of concepts for discussing interdisciplinary IT/IS competence. This framework includes a tentative theoretical model for interdisciplinary IS competence at an individual level. Four research propositions from the case are presented and discussed.

Keywords: IT, IS, interdisciplinary competence, integrated competence, application domain competence, call center, symposium.

1. INTRODUCTION

1.1. Research Questions

In practice information systems (IS) competence often needs to be combined with competence in other professional domains, in order to do business within a sector. We want to gain more insight into how such an interdisciplinary competence is developed at an individual level. In general terms, what happens when an individual has to integrate competencies from two different domains, information technology (IT) and the application domain? In more specific terms: what happens when an individual needs to integrate IT competence with telephony (call center) competence, and this interdisciplinary competence is used in organizational contexts? This question raises a number of related issues:

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1. To what extent is previous knowledge of telephony and IT important?
2. How can the two competencies be integrated, to achieve more than two disjoint skills?
3. How can we move on from a combined IT competence to a combined IS competence (where IT is used in an organizational context)?
4. How close is the interdisciplinary competence to each of the related disciplines?

In this paper we will approach these issues by doing a case study of a domain where the competencies are relatively task specific. The competence domains are IT and telephony, combined in a relatively new type of call center systems.

1.2. Motivation for the Topic

We consider these questions important for the following reason. In order for IS to contribute to a competitive edge in business, competence is crucial. This includes competence both within IS and within the domain where business is done. Information systems are developed and used within an application domain, so systems development and use is by nature an interdisciplinary effort. Thus it is desirable to develop such an interdisciplinary competence as effectively as possible.

We assume that doing research on practice will be an appropriate starting point for studying interdisciplinary IS competencies. We also assume that a case study from one application domain will contribute by focusing important issues in such a competence development. The intention is that this case study may act as a preliminary for further exploration in order to theorize on interdisciplinary IS competence at an individual level.

The industry tends to demand that IS competence is combined with competence in other disciplines. We have so far found hardly any professional literature nor research literature addressing these issues from an IT or IS point of view. A lot appears to have been said about interdisciplinarity in groups, where different individuals represent different domains of knowledge. But we cannot see that the issue of interdisciplinary IS competence at an individual level has been given much attention.

2. INTERDISCIPLINARITY AND COMPETENCE

To define the notion of an “Interdisciplinary IS Competence” we need to describe the component parts separately. Interdisciplinarity is a concept not easily defined, but it may be seen as bringing together distinctive components of two or more disciplines (Nissani, 1997). The term interdisciplinary implies a synthesis or integration, so we may also use the term integrated competence. This is different from the term multidisciplinary, which only implies an additive or juxtaposition of disciplines (Klein, 1990).

Interdisciplinarity is treated at a general level by several authors, e.g. (Kockelmans, 1979; Klein, 1990; Nissani, 1997), and from the viewpoint of certain professions. One example is engineering, where interdisciplinary education apparently will be emphasized in the future (Costlow, 2001). By nature the IS profession is interdisciplinary, demanding knowledge and skills in technology, management and interpersonal relations. This requires cooperative efforts and multidisciplinary approaches to IS education (Lee and Trauth, 1995). Of course case studies and systems development projects imply