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Chapter X

Users as Developers — Conditions and Effects of User Systems Development

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ABSTRACT

This chapter presents conditions and effects of User Systems Development using a Spreadsheet Program. It argues that User Systems Development using a Spreadsheet Program is characterized by integration, interactivity and capacity of questioning, which make it possible to control continuous changes in the environment of an organization. Three empirical studies have been carried out using a Grounded Theory influenced approach. The results are presented with the use of the model of generic practice (the ToP model), in order to systemize empirical findings and related theory. The model is used to specify the conditions and results of a specific practice, e.g., a controller practice or an information technology (IT) specialist practice.

INTRODUCTION

In the early days of computers, expertise was needed in order to use computers. As IT tools have become more powerful and user friendly, more and more people have been able to use computers and programs as tools when carrying out working

tasks. Nowadays, it is even possible for people without special IT training to construct information systems (IS) that only IT specialists could have done some years ago.

In this chapter the conditions and effects of User Systems Development (USD) using a spreadsheet program (SP) are discussed. USD is performed by a user-developer (UD), a person who acts both as a user and a systems developer. A typical feature of a UD is he/she has a good knowledge of the business and the work related to the IS in question, which is called the user developed application (UDA).

In Figure 1, the difference between Traditional Systems Development (TSD) (1) and USD (2) is outlined in order to demonstrate the nature of USD in contrast to TSD since TSD is familiar to the IS community. To the IT-specialist, knowledge about IS development tools (e.g., methods, program languages) (1a) is in primary focus when developing Tradition Information Systems (TISs) (1c). This is the core of his/her professional knowledge. Knowledge about business (1b) is of course essential but not primary. To the UD knowledge about business (2a) is in primary focus and knowledge about IS development tools (2b) is just a means to accomplish business-oriented tasks, eventually by developing UDAs (2c). The IT-specialist has access to knowledge about IS development tools that is hard to access for non-professionals. Some business knowledge is hard to access to the IT-specialist, since this knowledge is not in the professional knowledge domain of the IT-specialist. The UD on the other hand is the expert on business knowledge. His professionalism depends on his knowledge about business. No one can replace him in this matter. In order to perform USD the UD needs some knowledge about IS development tools. It is not possible though to have access to as much knowledge about IS development tools as the IT-specialist has.

Figure 1: The Relation Between Knowledge and Development