

Chapter 13

Using Grounded Theory Coding Mechanisms to Analyze Case Study and Focus Group Data in the Context of Software Process Research

Rory V. O'Connor
Dublin City University, Ireland

ABSTRACT

The primary aim of this chapter is to outline a potentially powerful framework for the combination of research approaches utilizing the Grounded Theory coding mechanism for Case Study, and Focus Groups data analysis. A secondary aim of this chapter is to provide a roadmap for such a usage by way of an example research project. The context for this project is the need to study and evaluate the actual practice of software development processes in real world commercial settings of software companies, which utilized both case study and focus group techniques. This research found that grounded theory coding strategies are a suitable and powerful data analysis mechanism to explore case study and focus group data.

INTRODUCTION

While both the case study and focus group methods have become widely accepted in information systems (IS) research over the last two decades, Grounded Theory research is still a distinct minor-

ity method for IS research. Grounded theory has been used by IS researchers since the mid-1990s (Orlikowski 1993; Hansen & Kautz 2005; Coleman & O'Connor 2007). It is becoming increasingly popular in IS research, as there is a widely held belief that it is a reliable method for investigating social and organisational phenomena.

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The general goal of grounded theory is to generate theories derived from data in order to understand the social context. It is a “qualitative research method that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon” (Strauss 1990, p.24). Hekkala (2007) indicates that grounded theory has been used in IS research as a method (by, among others, Urquhart 2002; Jones and Hughes 2004) but that it has also been sometimes used as a methodology (by researchers including Orlikowski 1993; Goulding 2002; Goede and de Villiers 2003). Hekkala (2007) states that those who use it either as method or as a methodology do not soundly and logically demonstrate and justify their use of this theory for either of those purposes.

A methodology refers to the entire research process, from the identification of one or more research questions and the selection of a research strategy through to the formulation of the findings and results, in which the entire process is based on philosophical assumptions (ontology and epistemology). This view of the two terms coincides with Avison and Fitzgerald’s (1995) definitions: a methodology is a collection of procedures, techniques, tools and documentation which is based on some philosophical view; otherwise it is merely a method, like a recipe. A case study strategy which includes grounded theory analysis under interpretative assumptions would therefore be classed as a methodology. The aim of this chapter is to argue that grounded theory can be combined with case study and focus groups to construct a compatible research methodology.

CASE STUDY

According to Yin (2003) case study is “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clear” (p. 23). Case study is usually seen

as a specific research strategy (Eisenhardt, 1989; Yin, 2003). The underlying idea for case research is said to be the many-sided view it can provide of a situation in its context. “The intense observation made in case studies gives opportunities to study different aspects and put these in relation to each other, to put objects in relation to the environment where they operate” (Halinen and Törnroos, 2005). Instead of statistical representativeness, case studies offer depth and comprehensiveness for understanding the specific phenomenon (Easton, 1995, p. 475). They give a possibility to be close to the studied objects (firms), enabling inductive and rich description. Case research is particularly welcome in new situations where only little is known about the phenomenon and in situations where current theories seem inadequate (Eisenhardt, 1989; Yin, 2003). It is also a strong method in the study of change processes as it allows the study of contextual factors and process elements in the same real-life situation.

Case studies can be used to accomplish various aims. Yin (1989, p. 16) separates exploratory, descriptive and explanatory cases. Eisenhardt (1989, p. 535) acknowledges description but stresses the role of cases in generating and, also, testing a theory. Stake (1994) defends the value of intrinsic cases, where a rich description of a single case, in all its particularity and ordinarieness, is seen valuable as such. In the management and marketing literature, theory generation from case study evidence has been the most discussed type of case research. Its basis can be found from Glaser and Strauss (1967) and the ideas of later writers (e.g., Eisenhardt, 1989; Yin, 1989; Miles and Huberman, 1994).

Feagin et al., (1991) pointed out that case studies are multi-perspective analyses. This means that the researcher considers not just the voice and perspective of the actors, but also of the relevant groups of actors and the interaction between them. This aspect is a salient point in the characteristic that case studies possess. They also added that case study is also known as a

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