Chapter X

Case Study of Software Reviews

Abstract

The aim of this chapter is to identify the key software review inputs that significantly affect review performance in practice. A case study research method is employed. Five companies are volunteers participating in the study. In-depth semi-structured interview approach is used for data collection. From the results, the typical issues for conducting software review include 1) selecting right reviewers to perform a defect detection task, 2) the limitation of time and resources for organizing and conducting software review, and 3) no standard and specific guideline to measure an effective review for different types of software artefacts (i.e., requirement, design, code, and test cases). Thus the result shows that the experience (i.e., knowledge and skills) of reviewers is the most significant input influencing software review performance.
Case Study Research

The proposed EIIO model has been empirically validated using questionnaire surveys. However, some important limitations of cross-sectional designs must be recognized, such as internal validity issues in the use of survey results (Ackoff, 1953; Babbie, 2000; De Vaus, 2001). This chapter discusses the case study that was used to further investigate the survey results.

Case Study: In-Depth Interviews

The research method was used in the case study is in-depth interview. The in-depth interview research method is a useful tool in qualitative research methodology. One of the key advantages of in-depth interviews is that they balance a purely quantitative method by allowing for integration of researchers’ and practitioners’ perspectives for cross validation in a cost-effective way (Creswell, 1994; Kraemer, 1991; Marriam, 1988). Another advantage of in-depth interviews is that they collect information without losing any significant details (Crabtree, Yanoshi, Miller, & O’Connor, 1993; Fink, 1995; Frey & Fontana, 1993; Light, 1971). As well, in-depth interviews are extremely important to capture rich information, to develop and confirm the context for the theoretical model (Ericsson & Simon, 1980; Marriam, 1988; Zikmund, 2000) and to enhance the validity of a quantitative questionnaire survey method. By combining both qualitative results from the in-depth interviews and quantitative results from the questionnaire survey, a higher quality of findings that reflect the state of software review in practice can be achieved (Malhotra, Hall, Shaw, & Crisp, 1996; Morgan, 1998; Zikmund, 2000).

In this research, several strategies were used to ensure the in-depth interviews addressed the limitations of the questionnaire survey. An experienced interviewer was employed and this enabled a high reliability to be attained. Detailed notes were taken during the interviews and tape recordings and transcripts of each interview were made.

The convergence and divergence in the issues was raised, enabling the constructs of interest to evolve throughout the interview process. The interview process requires openness to new ideas as well as ensuring that all factors are captured (Frey & Fontana, 1993). Data collection provides data useful for generating or confirming theoretical models (Hammersley, 1992; Neuman, 2000). Details of the methodology will be discussed in the following sections.
Evaluation Methods for E-Learning Applications in Terms of User Satisfaction and Interface Usability
www.igi-global.com/chapter/evaluation-methods-for-e-learning-applications-in-terms-of-user-satisfaction-and-interface-usability/188233?camid=4v1a