Monitoring User Involvement and Participation in ERP Implementation Projects

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ABSTRACT

ERP implementation success is influenced by a large number of factors, which most of the time are difficult to measure objectively. User involvement and participation is one of the most cited critical success factors in ERP implementation projects, and one of the most critical ones for their satisfactory outcome. This study attempts to define a set of metrics for monitoring user involvement and participation within ERP implementation projects by using the goals/questions/metrics method. The results of this work are threefold. First, a literature review is presented on the user involvement and participation topic as related to ERP implementation projects. Second, a framework for monitoring user involvement and participation in ERP implementation projects is proposed. And third, a goals/questions/metrics preliminary plan is proposed to monitor and control user involvement and participation within ERP implementation projects.

Keywords: ERP implementation; goals/questions/metrics; metrics; user involvement and participation

INTRODUCTION

ERP (enterprise resource planning) project success is influenced by a large number of factors, and most of the time it is difficult to measure them objectively. Usually, the metrics proposed within ERP implementation methodologies are related to milestones and costs aspects. This is particularly due to the fact that these methodologies follow the common definition of project success: basically, to have full functionality delivered on time and on budget. User involvement and participation is one of the most cited critical success factors (CSFs) in ERP implementation projects.
(e.g., Bancroft, Seip, & Sprengel, 1998; Bingi, Sharma, & Godla, 1999; Esteves & Pastor, 2000; Kale, 2000; Kawalek & Wood-Harper, 2002; Nah, Lau, & Kuang, 2001). User involvement and participation results in a better fit of user requirements, achieving better system quality, use, and acceptance (Esteves & Pastor, 2000). The terms user involvement and user participation have been commonly used interchangeably in the IS literature (Barki & Hartwick, 1994), but they are not the same and here we attempt to clarify both concepts. Kappelman and McLean (1991) hypothesized that IS success is indirectly influenced by user participation and mediated by user involvement. The most accepted model of user involvement, user participation, and system use was developed and tested by Barki and Hartwick (1994, 2001). This study attempts to provide a set of metrics to help control and monitor user involvement and participation in ERP implementation projects in order to help managers achieve success in their projects. The derived set of metrics is the initial one from which a particular ERP implementation may start its own specialized set. According to Jurison (1999, p. 28), the purpose of project control is “to keep the project on course and as close to the plan as possible, to identify problems before they happen, and implement recovery plans before unrecoverable damage is done.” We noted that extensive literature on user involvement and participation is related to software development. Thus, there is the need to adapt previous works to ERP implementation projects that have their own characteristics and life cycles. As a result of this study, we are interested in a combined set of metrics to help managers understand the situation of the ERP implementation project. We have used the goals/questions/metrics (GQM) method to develop this set of metrics. The result of the application of this method is a GQM plan. The GQM plan is a document that contains the goals, questions, and metrics for a measurement program (Solingen & Berghout 1999), in this case, an ERP implementation project. The first phase of the study focuses on the definition of a set of metrics for user involvement and participation. The article proceeds as follows. First, we present the research methodology used. Next, we present a background in user involvement and participation, and the GQM method. Then, we present the GQM plan proposed. Finally, we present some conclusions and further work.

**RESEARCH APPROACH**

As we have mentioned, we used the GQM method to develop a metrics plan. The steps of our research study were the following:

- Literature review related to the user involvement and participation topic;
- Definition of goals related to user involvement and participation in ERP implementation projects;
- Definition of questions associated with each goal;
- Definition of metrics associated with each question; and
- Definition of the preliminary GQM plan.

A literature review of the user involvement and participation topic and ERP implementations was made in order to acquire knowledge related with this CSF. The information provided by the literature review was our main source of knowledge. We used the concept of the preliminary GQM plan due to the fact that any final GQM plan must be specific to the given real situation and thus must be validated by
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