

Business Process Management in the Classroom

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ABSTRACT

Organizations are increasingly adopting Business Process Management (BPM) approaches growing the need for BPM expertise in the industry (Bandara et al., 2010). This has resulted in growing demand for college graduates who have a thorough knowledge of business processes (Lee, 2008). Hadidi (2014) pointed out that development of courses and programs in BPM area has received huge consideration in academia during recent times. This paper presents a classroom activities for teaching Business Process Management using a paper-based simulation game conducted as part of an undergraduate IS course. The paper discusses various class activities involved such as execution of the simulation game, creation of graphical representations of processes followed in the game, and creation of Business Process models using Microsoft Visio software. A post-test survey was conducted to evaluate the understanding of BPM concepts learned and analyze the effectiveness of the simulation game. The paper concludes with recommendations for future research.

KEYWORDS:

Business Process Models, Business Processes, Enterprise Resource Planning

INTRODUCTION

Organizations need to manage business processes in order to achieve their strategic goals and remain competitive (Bandara et al., 2010; Hadidi, 2014). This need has been further reinforced by the implementation of enterprise resources planning (ERP) systems (Lee, 2008). The number of ERP system integrations has increased rapidly over the last two decades (Ha and Ahn, 2014; Adelsberger et al., 1999). Lee (2008) explained that knowledge of business processes is essential for ERP systems development and the business operations supported by these information systems. Realizing the significance, organizations are increasingly willing to adopt and implement Business Process Management (BPM) approaches, but most lack the necessary capabilities to do so (Bandara et al., 2010). This has resulted in a high demand for knowledge of business processes in the industry (Lee, 2008; Cronan et al., 2011). Sammon and Adam (2008) identified that inadequate preparation and lack of understanding what ERP systems involved were the primary causes of failure in ERP implementation projects. In response to this growing demand for BPM expertise, many universities are incorporating BPM into their curriculum (Bandara et al., 2010; Hadidi, 2014; Lee, 2008; Cronan, et al., 2011). But traditional methods are not found to be suitable for teaching and learning ERP systems and their underlying business concepts (Seethamraju, 2008). Simulation games and case-based teaching have emerged to be effective pedagogical techniques to teach these concepts (Seethamraju, 2008; Bandara et al., 2010).

This paper presents ideas for incorporating BPM concepts into the college curriculum using a paper-based simulation game conducted as part of an undergraduate IS course at an accredited public liberal arts university in the U.S. The paper begins with an examination of literature on using simulation games in academia and teaching BPM. Next, a description of the paper game used in this study is provided and the various activities involved such as game execution, creation of graphical representations of processes followed in the game, creation of BP models using Visio software and a post-test survey conducted used to evaluate the understanding of BPM concepts and to analyze the student perceptions and effectiveness of the simulation game. The results of the survey are included and limitations in the study are identified. Finally, the paper concludes with recommendations for further research.

LITERATURE REVIEW

Teaching Business Process Management

Several authors have stressed the importance of teaching BPM in graduate business schools (Bandara et al., 2010; Hadidi, 2014; Lee, 2008; Hawking, McCarthy, & Stein, 2004) and the need to integrate business processes concepts and their task dependencies in ERP training (Pellerin & Hadaya, 2008; Kang & Santhanam, 2003; Shtub 2001). Léger (2006) pointed out that teaching the business concepts that are underlying ERP systems is difficult because many students lack experience to relate to these concepts. Since the academic world is more focused on functional expertise rather than an integrated multidisciplinary approach, it is difficult to structure a curriculum for the purpose of BPM (Bandara, et al., 2010). On the other hand, traditional methods are not found to be suitable for teaching and learning ERP systems and their underlying business processes (Adelsberger et al., 1999). Seethamraju (2008) found that students' ability to develop a deeper understanding of integrated business processes and utilize it in decision-making was limited when traditional teaching methods were used and argued that innovative models are necessary in order to improve effective learning of these concepts.

Simulation Games in Academia

Over the past decade, there has been a great deal of attention placed on active and experiential learning. Specifically, researchers have focused on the flipped classroom and the use of games and technology to facilitate learning (Sankey and Hunt, 2014). Several authors have identified the value of using games with and without technology in the classroom (Bowen, 2012; Sheldon, 2011). As part of this research stream, simulation games are considered to be an effective pedagogical technique (Lean, et al., 2006; Russ & Drury-Grogan, 2013; Newell, 2004; Auman, 2011; Léger et al., 2011; Gredler, 2004; Hough, 2012; Hays, 2008; Smith & Smith, 2008; Salas, Wildman, & Piccolo, 2009; Hartman et al., 2013; Vos, 2014). Léger (2006) stated "simulation games replicate, in a simplified manner, the complexity of a real-life environment, giving the participants experience with a particular phenomenon (p. 441)." Other authors agreed that a simulation is a form of experiential learning (Hough, 2012) which is used to imitate a system, entity, phenomenon, or process (Lean, Towler, & Abbey, 2006).

There are various types of simulation games and researchers have derived a typology of simulation types from the findings of previous studies (Lean et al., 2006). They classify simulation games into two categories: computer-based games and non-computer based games. The computer-based games include gaming simulations, training simulations and modeling simulations whereas non-computer based games are divided into two types: role-plays and educational games. The former is further divided into interactive and non-interactive, and the latter include field, paper-based, card and board games.

The use of simulation games in teaching is not a new phenomenon and can be traced back to the use of war games in the 1600s (Gredler, 2004) and their use in business, science and corporate training was introduced in the mid-1950s (Leemkuil, 2012). Recently, simulation games have been widely used in teaching different disciplines such as marketing (Vos, 2014), project management (Hartmen,

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