

Using Business Simulations and Game-Based Learning for Enterprise Resource Planning Implementation Training

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Abstract : An Enterprise Resource Planning (ERP) system is an integrated information system that supports the seamless integration of all the business processes of a company. Implementing an ERP system can increase efficiencies and decrease the costs while helping improve productivity. Many organizations including large, medium and small-sized companies have already adopted an ERP system for decades. Although ERP system can bring competitive advantages to organizations, the lack of proper training approach in ERP implementation is still a major concern. Organizations understand the importance of ERP training to adequately prepare managers and users. The low return on investment, however, for the ERP training makes the training difficult for knowledgeable workers to transfer what is learned in training to the jobs at workplace. Inadequate and inefficient ERP training limits the value realization and success of an ERP system. That is the need to call for a profound change and innovation for ERP training in both workplace at industry and the Information Systems (IS) education in academia. The innovated ERP training approach can improve the users' knowledge in business processes and hands-on skills in mastering ERP system. It also can be instructed as educational material for IS students in universities. The purpose of the study is to examine the use of ERP simulation games via the ERPsim system to train the IS students in learning ERP implementation. The ERPsim is the business simulation game developed by ERPsim Lab at HEC Montréal, and the game is a real-life SAP (Systems Applications and Products) ERP system. The training uses the ERPsim system as the tool for the Internet-based simulation games and is designed as online student competitions during the class. The competitions involve student teams with the facilitation of instructor and put the students' business skills to the test via intensive simulation games on a real-world SAP ERP system. The teams run the full business cycle of a manufacturing company while interacting with suppliers, vendors, and customers through sending and receiving orders, delivering products and completing the entire cash-to-cash cycle. To learn a range of business skills, student needs to adopt individual business role and make business decisions around the products and business processes. Based on the training experiences learned from rounds of business simulations, the findings show that learners have reduced risk in making mistakes that help learners build self-confidence in problem-solving. In addition, the learners' reflections from their mistakes can speculate the root causes of the problems and further improve the efficiency of the training. ERP instructors teaching with the innovative approach report significant improvements in student evaluation, learner motivation, attendance, engagement as well as increased learner technology competency. The findings of the study can provide ERP instructors with guidelines to create an effective learning environment and can be transferred to a variety of other educational fields in which trainers are migrating towards a more active learning approach.

Keywords : business simulations, ERP implementation training, ERPsim, game-based learning, instructional strategy, training innovation

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