

The Computerised Beergame in Information Systems Teaching

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Presentation Summary

Presentation outline

In my presentation I will introduce the beer distribution game as a means to facilitate teaching in courses on Supply Chain Management and Business-to-business ecommerce, in both undergraduate, as well as executives and masters courses. In particular, I will introduce a software tool that was developed at the University of Muenster, which allows facilitating the beergame in an interactive way.

My aim is threefold: Firstly, I want to briefly introduce the beergame supply chain simulation as a useful role-play teaching tool. Secondly, I will show how with the beergame software we are not only able to enact the traditional beergame, but also demonstrate measures of information sharing, which allows students to experience first hand the benefits of supply chain initiatives. Demonstrating the shortcomings of traditional and the benefits of IS-enabled supply chains provides students with a more profound understanding of the reasons why information technologies are used in contemporary supply chains to exchange information and to facilitate collaboration. Finally, I want to share with the conference community my experiences in using the beergame (software) in various teaching contexts; in particular the benefits of simulation-based teaching.

Background: the Beergame

The beergame is a role-play simulation game in which students play a four-stage supply chain that produces and delivers a physical product (e.g. beer). In doing so, the aim of the players is rather simple: each of the four groups has to fulfil the incoming orders of beer by placing orders with the next upstream party. In the traditional beergame setup, communication and collaboration is not allowed between supply chain stages, so that the players invariably create the so-called bullwhip effect. This refers to the effect that the amount of periodical orders amplifies upstream in the supply chain towards the production end, thus causing a range of operational

problems. The bullwhip effect is a well-known phenomenon and a prominent symptom of coordination problems in supply chains.

In using the beergame to create the bullwhip effect students of eCommerce courses can experience first hand, the problems of lack of information sharing and collaboration in supply chains, and also the main causes for the creation of the bullwhip effect. By using the beergame software, in a second step we are then able to let the students play the same game again, but now experiencing the benefits of information sharing (POS data, inventory data, tracking and tracing information). By juxtaposing these two experiences, henceforth, students are much better able to relate to and understand the relevance and functioning of SCM and eCommerce measures when introducing them in the later sessions of the course.

Benefits of simulation-based teaching

Generally, all teaching should be relevant and interesting. In doing so, it should not only aim to provide students with knowledge of certain problems and (ICT) solutions. It is my belief that teaching in a University context, ultimately should aim at exposing the fundamental (world) problems and how IS can contribute in solving these problems in the most general ways. Teaching in this sense should be more than training; it should achieve true education and provide students with durable knowledge, which outlasts the fast moving technological development cycles. One way of achieving this is to provide students with both a rich experience of real world provide and to identify the fundamental IS issues and how these can be addressed.

Brief Biography

Dr. Kai Riemer holds a Diploma in Information Systems (Wirtschaftsinformatik) and a Ph.D. from Münster University, Germany. In his current position he works as an assistant professor at the Department of Information Systems in Münster and at the European Research Center for Information Systems (ERCIS). Dr. Riemer has worked with the University College Dublin as a researcher and as a post graduate lecturer in the Smurfit School of Business, and with the University of Melbourne in Australia as a lecturer and researcher. Dr. Riemer has participated in various European and National research projects. His publications and research interests cover the areas of e-Collaboration, inter-firm networking, virtual work, and E-Commerce. He currently chairs the Collaboration management and systems (e-Collaboration) research group at the European Research Centre for Information Systems (ERCIS) in Münster, where he focuses on the organisational and social impact of new, collaborative ICT.