USING INTERNET-BASED SIMULATIONS IN HOSPITALITY EDUCATION: BRIDGING THE GAP

Alecia Douglas
University of Delaware
Delaware, USA

Brian Miller.
University of Delaware
Delaware, USA

and

Francis Kwansa.
University of Delaware
Delaware, USA

ABSTRACT

This paper explores the perceptions of instructors and students on the usefulness of an Internet-based hospitality simulation in connecting hospitality business theory with practice. This study hypothesized that instructors and students would have positive perceptions of the simulation’s usefulness in achieving this goal. Results of the study demonstrated that instructors’ (N=7) perceived the usefulness of the simulation was moderately positive while students’ (N=156) perceived the usefulness was only slightly positive. The findings from the current research provide evidence that the opportunity for students to manage a virtual hospitality business can bridge the gap between theory and the real world as long as the instructor is thoughtful in the development of pedagogical activities for the course.

Key Words: computer simulation, virtual business, management theory, Internet, hospitality

INTRODUCTION

Educators in post-secondary education are giving more attention to the use of computer technology to provide students with experiential learning activities through active learner roles facilitated by interactive learning module (Gredler, 1994; Martin & McEvoy, 2003). In an attempt to incorporate more innovative tools for delivering course material, educators are looking at computer technology for providing application software solutions. Increasingly it has become possible to simulate real world experiences through interactive software that are often missing in the traditional training modes of lecture and case study. Rieber (1998) and Tennyson (1994) describe these interactive learning modules as self-contained educational tools offering experiential learning opportunities. Incorporating interactive games, simulations, and drills that create an environment where users are more active in the learning process present an avenue for educators to explore.
To date, some post-secondary hospitality educators have used these applications, and in particular simulations, to enhance the learning experience for students. Computer-based simulations have been used in both the hospitality industry and in education since the late 1960s as an instructional tool to help reinforce hospitality concepts such as financial management, marketing, human resources, and the dynamics of interdepartmental relationships (Kluge, 1996; Martin & McEvoy, 2003; Miller & Petrillose, 1992). From a review of the literature, there has been a steady increase in the use of simulations in hospitality education (Russell & Russell, 1996) and some hospitality educators report that they are an effective learning tool (Feinstein & Parks, 2002).

While computer-based simulations have been credited with achieving a greater degree of realism by reproducing the attributes of a real-world system (Shannon, 1975), there appears to be a need for more empirical research to measure the usefulness of the technology as an instructional tool (Feinstein & Parks, 2002). Previous studies of simulations in hospitality have focused on: how hospitality principles are reinforced; students’ feelings towards simulations; how student learning was enhanced; and how it would prepare students for management positions in the industry (Martin & McEvoy, 2003; Russell & Russell, 1996; Curland & Fawcett, 2001; Pederson & Pederson, 1993). However, only one study, Martin and McEvoy (2003) was empirical. Additionally, these studies have not compared the perceived usefulness of simulations between students and their instructors. The current study, took a systematic approach to determine the usefulness of computer-based hospitality simulations existing in an Internet-based environment as a complement to traditional instruction in undergraduate education.

This paper explores the perceptions of instructors and students on the usefulness of an Internet-based hospitality simulation to develop competencies and improve course performance. The study hypothesized that instructors and students would have positive perceptions of the simulation’s usefulness.

**METHOD**

For this study, participants used an Internet-based real-time hospitality simulation, BYOB (BuildYourOwnBar™), which provided students the experience to plan, open, manage, and solve problems in a hospitality business setting. Students had the opportunity to improve core competencies in basic accounting, inventory management, human resources, hospitality marketing, and operations management, by conceptualizing and developing a virtual hospitality business. Among the possible interactions on the simulation, learners were able to develop a lodging or foodservice business depending on the course requirements. Communication between instructors and students were supported by email, message boards, and chat sticks.

Communication and interaction among the student participants were facilitated through polling/voting on other portions of the simulation, reports from a bi-weekly newspaper (an e-publication reporting the happenings on Friday Islands as well as up-to-date hospitality trends and business developments around the world), and a consumer traffic meter.
In this virtual environment, the instructor acted as a facilitator as there was no requirement to set up, operate, or administer the simulation. Students’ progress was monitored with a built-in matrix grading system that generated a grading scorecard that evaluated performance in the domains of content, effort, management skills, marketing skills, and overall impression, business experience.

The population for the research study consisted of users of the Internet-based simulation, BYOB, as part of their hospitality course work. For the purposes of this research, a user is defined as an instructor using the simulation or those students enrolled in a university hospitality course using the simulation. The population sample consisted of both instructors and students representing different universities located in several countries. The users of the simulation were asked to respond to the questionnaire as individuals.

For this exploratory study, a survey-questionnaire research design was used. Due to the nature of the study, two questionnaires were developed. The first survey sought to obtain information from the instructors on their perceived usefulness of the simulation and asked the instructors to relate how they use the simulation in class. The second survey targeted students who were required to use the simulation as part of their coursework. Both surveys used a five-point Likert-type rating scale to assess different levels of the research variables.

The instructor survey consisted of 25 questions divided into five sections. Section A solicited background information asked of the instructors while Section B explored the instructors’ perceived usefulness of an Internet-based simulation using a five-point Likert-type scale to measure ten related single indicators. In Section C, instructors were asked to report how the simulation was being used in their classes in addition to responding to questions about their participation in the simulation in Section D. The final section, Section E assessed instructors’ level of satisfaction with the simulation.

The student survey was similarly divided into five sections with a total of 25 questions. Section A asked students to provide background information while in Section B, students were asked to report on their experience in the simulation using a five-point Likert-type scale measuring their level of agreement with the constructs of ‘reality reference’, ‘attitude’, ‘engagement’, and ‘appeal’. These items were used collectively to measure ‘students’ experience’. Students were then asked in Section C about their ‘perceived usefulness’ of the Internet-based simulation by indicating the level at which ten related descriptors were important on a five-point Likert-type scale.

In the survey instrument questions pertaining to perceived usefulness on both the instructor and student survey were obtained from three related studies on the usefulness of
simulations in education (Chang, Lee, Ng, and Moon, 2003; Stoel and Lee, 2003; and McGorry, 2003). Slight modifications were made to suit the purposes of this study.

RESULTS

Instructors’ Perceived Usefulness

The researchers found that instructors were adding the simulation as part of foodservice/restaurant, lodging, and general hospitality courses. Although most instructors indicated that they devoted some hours for general discussions regarding the use of the simulation in their classes with their students, only 74.1% (5/7) had dedicated tutorial times and used in conjunction with other learning activities. However, all indicated that student progress using the simulation was part of the class assessment. Additionally, all instructors indicated that concepts learned in the simulation were re-emphasized in class sessions.

Communication within the simulation platform was less likely to be used by the instructors. All instructors stated that they responded to student queries in a timely fashion but only four personalized their responses toward the student’s business such as student’s business by name or location. When asked if they engaged students in interactive discussions on the message board five instructors indicated that they did not. Only one instructor indicated using the email, message board, or chat sticks features within the simulation. While four instructors provided guidance to students while playing the simulation, most instructors saw themselves playing a supportive role and all agreed that student interaction in the class increased.

To test if the instructor’s overall perception was positive a mean score was compiled from instructor’s ten items. These items were: ‘planning skills’, ‘decision-making skills’, ‘hospitality business concepts’, ‘general management perspectives’, ‘financial data analysis’, ‘communication skills’, ‘problem identification and analytical skills’, ‘improve quality of course assignments’, ‘enhance effectiveness in course’, and ‘improve performance in course’. The items were measured on a five-point Likert-type scale from 1 to 5.

Using One-Sample t-test procedure, all ten items as well as “overall perception” were selected for analysis. Using a test value of 3.0 (the midpoint), the items were tested at a 95% confidence interval. It was felt that these items should be included in the t-test in order to determine if there were any outliers that influenced the mean score for “overall perception”. The results of the t-test were instructor’s perception was significantly different from 3.0 with a mean difference of 0.942 thus supporting that instructors’ perceived usefulness of an Internet-based simulation was moderately positive.

Students’ Perceived Usefulness

Students taking these courses fell mostly in the ‘19 – 21’ age group; there were just six students over the age of 24. The second highest frequency for age was 24 in the under 19 category while there were 15 students who fell in the ‘22 – 24’ age group.
There was almost a 2:1 female to male ratio in the sample as there were 75 females and only 38 males. Most students using the simulation were freshmen with those scores amounting to 69 while the least number of scores were sophomores with nine; three individuals identified themselves as ‘graduate student’, ‘transfer student’, and ‘returning student’ respectively.

To test students’ overall perception a mean score of all ten individual items measuring perceived usefulness was created. These ten items were: ‘planning skills’, ‘decision-making skills’, ‘hospitality business concepts’, ‘general management perspectives’, ‘financial data analysis’, ‘communication skills’, ‘problem identification and analytical skills’, ‘improve quality of course assignments’, ‘enhance effectiveness in course’, and ‘improve performance in course’. The items were measured on a five-point Likert-type scale from 1 to 5.

Using One-Sample t-test, all ten items as well as ‘overall perception’ was selected for analysis. Using a test value of 3.0 (the midpoint), the items were tested at a 95% confidence interval. These items were included in the t-test in order to determine if there were any outliers that influenced the mean score for ‘overall perception’. To accept H1 ‘overall perception’ must be significant thereby indicating the degree of positiveness of the mean score above the midpoint 3.0. The results were that ‘overall perception’ was significantly different from 3.0 with a mean difference of 0.349 thus supporting the hypothesis that instructors’ perceived usefulness of an Internet-based simulation was slightly positive.

**DISCUSSION AND CONCLUSION**

The findings from the current research provide evidence that student management of a virtual hospitality business can help to bridge the gap between theory and the real world. Students who actively engaged in the simulation reported a more positive experience toward their learning and a greater sense of ownership of their virtual business. Since the simulation was Internet-based, students were provided greater flexibility of access to the learning tool as well as the ability to interact with other peer virtual business owners in a real-time environment. Using Internet-based simulation games, hospitality educators can strengthen critical skills in students that will be required to successfully compete in a global business environment.

It is highly recommended that instructors actively participate with students in the simulation to maximize student-content interaction. The potential to increase student participation and learning in the simulated environment is stimulated as a result of instructor involvement. Experiences in the simulation must be connected to everyday real-world hospitality business activities in order to create an understanding of the complexities of conducting a business.
It is therefore recommended that instructors carefully consider how they will execute learning strategies that involve using a simulation in class instruction. For example, the instructor should devise a plan for addressing occurrences in the simulation as their students’ progress through the experience. This may potentially increase student participation in the class and the simulation as well as to decrease any reservations students may have about participating in the exercise. It can never be over emphasized that a connection must be made between student experiences in the simulation and the applicability of those experiences in the real world.

One way of increasing student engagement in the simulation as well as improving the student-content interaction is for instructors to personalize communications with their students by referring to the virtual business. Adding more defined tasks of students as owners through the presentation of a business progress report can also improve student understanding of key business concepts. For example, these reports could detail fluctuation in sales or marketing initiatives taken during the previous week. Such tasks will help students to connect the missing dots between theory and practice by using the simulation as a liaison between the two.

The simulation has shown to be a tool useful for the development of skills crucial to the hospitality business management. It therefore serves to give students a taste of owning a hospitality business and generally enhances their understanding of the complexity of managing a hotel or restaurant. Giving students the freedom to learn from and explore the success or failure of operating an ongoing hospitality business empowers them not only to participate in exploratory learning but more importantly, allows them to control the pace at which they learn, what they learn, and how learning occurs.

In using the results of this study, instructors using simulations should explore collaborative techniques to enhance the student-content interaction. If instructors value their teaching strategies, then it can be assumed that they would want students to respond favorably towards those strategies. The argument can be further supported by emphasizing that instructors could consider ownership as a qualitative approach to assessing how students are able to put theoretical concepts into practice as one way of grooming them for the hospitality working world.

REFERENCES


