EXPERIENTIAL LEARNING, SIMULATION AND STUDENT SATISFACTION

by Yujie Wei, The University of West Georgia

jwei@westga.edu
Extended Abstract
Simulations Track

ABSTRACT

Overview. This research examines student satisfaction with the simulation method in an MBA class.

Methods. Qualitative data was collected from 10 cohorts of an MBA course (216 students). The MarketPlace Simulation (Advanced Marketing Strategy-Bikes) was adopted to help students understand the marketing concepts and managerial implications.

Findings. The data demonstrate that three factors contribute to MBA students' satisfaction with the simulation. Satisfied students perceived the simulation as a productive tool for developing multiple learning outcomes and actively participated in the simulation activities. Those dissatisfied with the simulation had limited participation in the game decisions. Satisfied students worked closely with other team members and benefited significantly from collaborative learning. Satisfied students enjoyed the interactive games and found the learning process stimulating and inspiring, whereas dissatisfied students were more interested in the game results.

Discussion. This research provides three recommendations for instructors.

INTRODUCTION

The simulation methods, which provide that context by creating a complex decision-making setting in the classroom (Bartholomew, Newman, & Newman, 2021; Tate et al., 2009), help develop students' professional skills and competencies in marketing management (Johnston, 2019) through linking the academic and business environments (Brazhkin & Zimmerman, 2019; Lainema et al., 2021), and improve their learning outcomes (Sierra, 2020; Blackford & Shi, 2015). Researchers have also found that simulations effectively engage students in learning and improve their course performance (Wynn & Crawford, 1979; Woodham, 2019). Simulation bridges the gap between theory and practice (Bell & Loon, 2015; Faria, Hutchinson, & Wellington, 2009; Saxton, 2015; Wei et al., 2022). Simulation project can enhance students' critical thinking abilities (Bell & Loon, 2015; Deitz, Fox, & Fox, 2022) and build their ability to respond confidently to a complex decision situation and make sound business decisions (Larson, 2013; Rego & Regine, 2022; Scherpereel, 2015). Brooks, Burson, & Cox (2010) called for a research agenda to examine the relationships between student perceptions of learning and student satisfaction levels of a computer simulation project. However, there is a scarcity of research that has investigated the simulation's role in MBA students' learning (Gupta et al., 2015; Johnston, 2019; Larson, 2013), and little research has investigated students' satisfaction with the simulation regarding the intended learning outcomes. This exploratory study examines the relationship between simulation methods and student satisfaction, a special assessment of all disciplines related to the education field.

Experiential Learning

Kolb (1984) proposed four stages of learning that form a repetitive and continuous cycle of concrete experience, reflective observation, abstract conceptualization, and actual experimentation. The learning loop continues with more demanding learning in each subsequent cycle (Kolb, 2014). Simulation aligning with Kolb and Kolb's (2005) learning loop promotes deep-level learning among students as an experiential learning pedagogy in business courses. The simulation actively encourages students' learning and offers opportunities to introduce concrete experiences on which students can observe and reflect, leading to actual experimentation, new knowledge, and different learning experiences through cooperative learning (Halon, 2008; Saunders, 1997)). Collaborative and problem-based learning can replace the traditional lecture-based method that dominates marketing and business education (Gibbons, Fernando, & Spedding, 2022).

Student Satisfaction

Since most MBA students have well-defined learning goals and career paths, they expect to achieve their study mission more efficiently and are more critical of the learning environment. They expect to optimize the learning outcomes, and if what they receive is more remarkable than what they spend, their overall satisfaction with a course will be significantly improved (Zhai et al., 2017).

Brooks, Burson, & Cox (2010) suggested that students' perceived extent of learning from the simulation and any supplemental activities should determine their satisfaction with the simulation. Based on the literature, this research extends Books, Burson & Cox's (2010) work by proposing that students' perceived extent of learning is determined by how much they participate in the learning experience and how well the participation enhances their understanding of learning materials. This research contends that if students can participate in simulation activities and gain full new experiences by solving problems, they will be more satisfied with the simulation and course.

Methods

The research used a qualitative method to collect data from ten cohorts of an MBA course, the ten sections of the author's Strategic Marketing course from spring 2018 to spring 2022. A total of 216 students filled out the course evaluation upon the completion of the course anonymously.

The computer simulation described in this paper provides the students with the opportunity to deepen their understanding of the key marketing concepts and the importance of taking a comprehensive view when building a firm's marketing strategies. The simulation is Advanced Marketing -Bike, created by MarketPlace Simulations (https://www.marketplace-simulation.com/). This simulation is widely used in marketing courses as it captures the complexity of reality with its overlapping decisions, deadlines, and financial constraints. The simulation provides students with the closest experience to a real-life marketing manager's role (Cadotte, 1995). The eight-quarter games allow learners to explore how key marketing variables interact and affect performance.

The author offered pre-simulation debriefing, feedback for each quarter game, and post-simulation assignments to measure students' learning outcomes. Post-simulation assignments comprise two sessions (end-game summary and final exam for assessment). The end-game summary helped students draw conclusions from their performance, reflect on their learning, and link their experience gained from a simulation with a real-life situation. As reflection is part of experiential learning, the students were required to share their experiences with the MarketPlace simulation in their end-game summaries.

Findings

Most students were satisfied or very satisfied with the simulation and reported that the simulation assignment was helpful or extremely helpful to their learning. They used many positive words to describe the simulation: Enlightening, powerful, unique, amazing, exciting and challenging, valuable, practical, beneficial, etc. However, about one-third of students were dissatisfied with the simulation and reported it as a negative learning experience. The findings are discussed in four areas:

First, satisfied students perceived the simulation as a productive tool for developing multiple learning outcomes because they extensively participated in the simulation activities. They considered it particularly useful for improving their knowledge acquisition, problem-solving, critical thinking, and interpersonal skills. In contrast, those dissatisfied with the simulation had limited participation in the game decisions. Due to a lack of ample participation, they missed many meaningful opportunities to connect the games with marketing concepts. Consequently, in their learning experience, simulation and theories were barely connected but remained separate.

Second, satisfied students found the simulation helpful in experiencing collaborative learning. They enjoyed the multi-round team-based project because they worked closely with other team members. They believed that simulation promotes collaborative learning, and they could dive deeper into learning. This finding confirms the previous research (e.g., Johnson, Top, & Yukselturk, 2011). For example, Ku, Tseng, & Akarasriworn (2013) found that simulation benefited students by adding interaction and active learning to the online learning environment. Deitz, Fox, & Fox (2022) found that much simulation learning comes from working in teams as students solve problems and defend their ideas. In contrast, dissatisfied players chose to go through the journey alone and had little interaction with others. Consequently, these students complained that the simulation was confusing and unreliable because they believed they had made good decisions, but the results were disappointing. This distrust of the simulation affected their learning experience.

Third, compared with game results, satisfied students always enjoyed the simulations because they liked the process and found the learning process stimulating and inspiring, which is consistent with previous research regarding simulation (e.g., Brazhkin & Zimmerman, 2019; Hughes & Scholtz, 2015). In contrast, dissatisfied students seemed to be more interested in the game results, and they associated the success of the simulation with the scores they received. Therefore, they complained about the simulation algorithm and grading criteria.

Finally, satisfied students evaluated the course more positively because of their positive learning experience and satisfaction with the simulation. These students enjoyed the class and gave the instructor more positive comments. In contrast, dissatisfied

students with the simulation complained that the simulation had wasted their time and should only take up a few portions of the course grade. They believed the simulation was unreal and thus provided little value in learning.

Discussion

The findings from this paper suggest that simulation in MBA education offers students the opportunity of learning by providing students with the concrete experience they need to observe, reflect and experiment. Simulation has allowed students to participate in multi-faceted and challenging activities that require them to understand and apply their subject knowledge. The students' satisfaction with the simulation is determined by how they participate in experiential learning and how well their participation enhances their understanding of the course materials. Also, an exciting learning experience is related to team collaboration, and collaborative learning optimizes individual learning outcomes. The findings provide three implications for instructors.

First, the instructor should offer more opportunities for students to **interact** with their team members and build trust among them so that they can set up a collaborative learning team. The instructor should attend the first team meeting to promote teamwork and increase student engagement in collaborative learning. The instructor's early intervention can help increase student satisfaction.

Second, the instructor should use **a pre-simulation** plan to help students organize their learning and prepare them for the simulation project. The instructor should provide a pre-simulation lecture on how to connect simulation games with underlying subject principles and concepts. This re-simulation plan will help students participate in the learning process and enhance their cognitive learning of students. When the pre-simulation plan helps improve students' learning effectiveness, they will become more satisfied with the simulation.

Third, the instructor should place more weight on grading the pre-simulation plan and end-game summary to draw students' attention to the learning process. To ensure that students will focus on the learning process and not the game results, the instructor should put more weight on the students' reflections that were being assessed instead of their simulation performance. This strategy will impact students learning in two ways. First, students will spend more time on pre-simulation planning and end-game summaries, which will optimize their learning outcomes. Second, the reflection in the course **assessment will reinforce** marketing when students prepare for the pre-simulation plan and reflection report. When students pay more attention to the learning process and benefit from it, they will become more satisfied with the simulation.

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