

Business Management Simulations and Generative Learning: The Missing Link or Simply a Tool for Teaching Large Classes?

Introduction

The following proposal outlines a study of business games as a pedagogical tool in the teaching of strategic management and puts forward a number of important questions for discussion. Strategy is inherently about making decisions and the use of simulations addresses one of the great classroom difficulties with teaching strategy: How to create the environment where students can actually make decisions and experience the consequences of those decisions? A business game or simulation provides students with the opportunity to implement strategy at first hand, to make strategic and operational decisions and to manage the outcomes of those decisions. As members of a management team running a simulated company students gain real management skills as well as collateral skills such as teamwork, negotiation and persuasion. This study assesses the student's perspective on the use of a business simulation over a number of weeks in terms of a learning experience, an introduction to the real world of management, and the development of their management skills and competences.

Literature Review

Business games arrived in the late 1950s, instigated by the fusion of developments in war games, operations research, computer technology, and education theory. Armed with new theory of education that revolved around the learner instead of the instructor, the successes of war games and operations research techniques from World War II, and the development in computers, the gaming movement emerged in business schools and training programs. Because the roots of management games go back so far, and they are an amalgamation of different fields there is some confusion over what constitutes management games (Biggs, 2003). To clarify, management games are employed to create experiential environments within which learning and behavioural changes can occur and in which managerial behaviour and decision making can be observed (Wolfe, 1994). A business simulation in general is any artificial or synthetic environment that is created to manage an individual's or team's experiences. Simulation training is the systematic acquisition of attitudes, concepts, knowledge, rules or skills that should result in improved performance. Computer based

simulations involve some level of computer technology to create the environment (Salas et al., 2009).

From a pedagogical perspective the rise of experiential learning and behavioural change were major drivers of the business gaming movement. Business school pedagogical and training development methods have been greatly influenced by the group change theories of Lewin (1951), T-Group methods (Lippit, 1949, Schein and Bennis, 1965), and the sensitivity training and personal growth work accomplished at the national training libraries. The experiential learning methods create an environment that requires the participant to be involved in some type of personally meaningful activity. Such an environment allows the participant to apply knowledge of theory and principles while developing commitment to the exercise, and experience a real sense of personal accomplishment or failure for the results obtained (Walter and Marks, 1981). These developments led to the more recent arrival of business simulation.

Zantow et al (2005) propose the educational theory of generative learning as an appropriate framework for studying the impact of business simulations. Whitrock (1985) describes generative learning as a) the process of generating relationships, or a structure, among the components, or parts, of the information one is trying to comprehend, and b) the process of generating relationships between one's knowledge and the information one is trying to comprehend. Generative learning strategies promote durable learning by helping students develop connections between course content and student's experiences and knowledge (Wittrock, 1974, 1992, 1990, 1985). Jonassen (1988) provides the most direct framework for applying generative strategies, proposing four categories: recall, organisation, integration and elaboration. Zantow et al (2005) proposes that three of these elements are inherent to the simulation experience: organisation, integration and elaboration.

- Organisation generative strategies refer to student's efforts in imposing their own structure on content and material;
- Integration generative strategies allow student to connect with their existing thoughts, ideas, and experiences;
- Elaboration generative strategies are when learners draw their own conclusions, infer consequences, describe examples, or create analogies.

This overview of generative learning provides a framework for understanding an educational theory that can be applied to the study of students and their engagement with business simulations. Organisation, integration, and elaboration strategies create opportunities for students to develop connections between the material they are learning, their experience, and existing knowledge. Simulations offer a unique setting for the application of these strategies.

Research Methodology

This research took a quantitative approach. A survey was taken of approximately 1400 students who had undertaken the business simulation on the strategy management module in a major Irish university over the course of three years (2015 – 2017). A survey instrument was created and designed in order to measure the student learning experience. The survey instrument comprised 24 items measuring three basic constructs: strategy learning experience, real-world exposure, and management skills development.

Discussions

The motivation behind the research in this project was to assess, from a generative learning perspective, whether the students rated the experience favourably. There are many aspects which this research could focus on but for this specific project three areas were measured:

1. Learning

Initial analysis shows a positive response from the students in terms of the simulation as an important learning tool. Many of the students did feel that it was a better overall experience than a case study or an exam. However, the findings were not totally in favour of the simulation on its own as a learning tool giving weight to the argument that the simulation should only be used in conjunction with other more established learning approaches.

2. Real World Experience

Initial results highlight some very positive responses in this category. Some of the most positive findings were the results in relation to the engagement with ethics. Students found that their understanding of ethical dilemmas was greatly enhanced through being faced with ethical dilemmas in the simulation.

3. Management Skills

Initial findings also gave very positive results in terms of the student's development of management skills. The stand out findings were how highly the students rated their own learning in terms of decision making, working as a team and negotiating with others. These are all crucial business competencies required by graduates of management programmes.

Conclusion

This research project examines student learning of strategic management skills as a result of running a simulated firm over an academic semester. The research found that undergraduate students preferred simulation as a learning experience to case studies or exams but that simulations were not a sufficient learning tool by themselves and required academic scaffolding through lectures or other means. The key findings of the research proposes three important questions for discussion:

1. Are business simulations which promote generative learning the missing link in management education?
2. Can business simulations replace theory and case study teaching or are they complimentary teaching approaches?
3. Do online business simulations help in teaching large classes, or do they facilitate an approach to teaching large classes, which falls short of the pedagogical face to face approach used in traditional case study management teaching.

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