

Report with Primary and Secondary Data  
Student Perceptions of a Capstone Business Simulation

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## Student Perceptions of a Capstone Business Simulation

### Section 1, The Study—An Overview

#### Background Information

Simulation has been an accepted form of experiential learning in business for well over half a century. Over 95% of the business schools accredited by the Association for the Advancement of Collegiate Business Schools, a major accreditation body, use simulations in their program (Wolfe & Luethge, 2003). As technology has evolved, so has simulation, and today's simulations are often sophisticated computer programs which require teams of students to make decisions about every aspect of running a business. Some of the commercial simulations include international leaderboards, which measure the success of simulation participants compared to other business schools. Schools use these results as an indicator of the quality of their instructional offerings (Chawkin, 2013).

What factors determine student satisfaction with these simulation exercises? There have been several studies done which have attempted to answer this question. Walters and Coalter (1997) found that student satisfaction is influenced by the simulation itself and by aspects of the administration of the simulation, but there are also intrinsic factors. Students who lacked the skills needed to perform in a team were less satisfied. They also noted the importance of satisfying students, as dissatisfaction has a negative impact on the potential of the simulation as a learning tool (Walters & Coalter, 1997).

Tompson and Tompson (1995) also studied student perceptions of simulation compared to other group projects. Students reported that they found the simulations interesting, motivating, and that they worked harder to complete them. They also noted a

strong preference of males for simulations, and proposed that males favored the competitive nature of the project (Tompson & Tompson, 1995).

Tunstall and Lynch (2010) noted that students found simulations to be more interesting than traditional case studies. They also reported that students who play computer games tend to have lower satisfaction with the simulations. At first glance, this would seem counter-intuitive. It is possible that students who identify as gamers look for a more sophisticated, immersive interface, rather than the dashboard-type interface in commercial simulations. Additional study is needed to investigate this finding.

Business simulations measure success by the profit earned by the simulated company over multiple years. Wolfe and Luethge (2003) found that engagement of students in the simulation leads to high profits. The authors noted that it is difficult for an unengaged, inactive team to fail, because automated assistance such as loans are applied by the system. However, over time, the effect of these random events is not enough to provide these marginally engaged teams with high profits (Wolfe & Luethge, 2003).

One of the reasons business schools have embraced simulation is to give their students a chance to develop real-world skills that will help them in their future employment. Avramenko (2011) reported that students were positive in their reaction to applying the knowledge they gained in theory classes in a simulated real-world situation, while acknowledging that the simulation was a simplified version of real life. The author surveyed the same students one year after graduation, and those alumni reported that employers looked favorably on the student's experiences with the simulation. They reported that interviewers felt that the simulation compensated for the applicant not

having any paid work experience. The alumni felt more confident that they could look at the “big picture” when starting out with a company (Avramenko, 2011).

### **Statement of Problem**

The objective of this study is to examine student perceptions of their experiences in a commercial business simulation. The simulation is part of an undergraduate capstone course in Business Policy, which is a requirement for all degrees in the School of Business.

### **Purpose**

The purpose of the study is to identify attitudes and gather feedback from students who are enrolled in the Business Policy course, and who have recently completed their capstone simulation. This feedback will be used to identify opportunities for improvement in the administration of the simulation. These improvements may take the form of increased instructor involvement or customized training for students prior to beginning the simulation.

### **Scope of Analysis**

The factors that will be studied include whether there is any correlation between student satisfaction with the simulation and performance on the exercise. The study will examine factors such as the number of group interactions and the perception of working with a group, as each relates to performance on the simulation. The study will determine if the satisfaction of the students with the simulation is related to the instructor who is guiding them through the exercise.

### **Definitions**

For the purpose of this study, the term *students* refers to undergraduate students

who are currently enrolled in the final course in their degree program, Business Policy, and who have completed or are in the process of completing a capstone business simulation activity. The term *faculty* refers to the instructors who are assigned to teach Business Policy in the current semester.

### **Delimitations**

The participants in this study will all be currently enrolled at a single, urban, regional state university. The study participants will all be enrolled in the Business Policy course during the current fall semester, either in a traditional classroom or in online format.

### **Limitations**

As the study will only be undertaken for one semester, it will not be possible to capture feedback from students who completed the simulation in past or subsequent semesters. The researcher has not identified any reason to expect that those students would have materially different reactions to the simulation. The same faculty members are not necessarily assigned to teach the Business Policy course each semester. It is highly likely that some or all of the faculty will be different in subsequent semesters.

### **Leadership Aspects**

At the conclusion of the study, the resulting data will be analyzed. A meeting with the researcher and the faculty who taught Business Policy in the target semester will be convened. The purpose of this meeting will be to present and review the results of the study and discuss best practices and possible improvements to the simulation experience. Following this meeting, a document will be produced and made available to future

instructors of this course, to share evidence-based best practices gleaned during this research process.

## **Section 2, Data Collection**

### **Methodology**

This study will be based on primary data gathered by a questionnaire completed by students currently enrolled in the Business Policy course. All course sections will be included in the sample. All students currently enrolled in this course will be invited to participate. The questions on the questionnaire will be qualitative in nature, as the student's perception of the simulation experience is being captured.

In addition, team result data will be obtained from the faculty involved in each of the sections of the Business Policy course. This data is calculated by the vendor, and is available through the instructor's dashboard within the simulation.

Secondary data will be requested from the vendor, to determine the target university's performance compared to the other groups which completed the simulation during the same period.

### **Data Collection**

The researcher will request permission from the Business Policy faculty, and will personally visit each section to distribute questionnaires. The students will be told about the study, and asked to assist by providing their feedback. An informed consent document will be provided (Appendix A), and once that is returned, the student will be given a questionnaire (Appendix B). A follow-up visit the next week will be scheduled if needed to provide questionnaires to students who were absent at the first visit. In the event that there are sections of Business Policy which meet solely online, the informed

consent and questionnaire will be made available to those students via an e-mail invitation. In that case, the survey will be administered electronically via SurveyMonkey.

After the conclusion of the simulation portion of the Business Policy course, the researcher will request that the faculty share the results for their section or sections.

After the conclusion of the simulation portion of the Business Policy course, the vendor of the simulation will be contacted to provide the comparative results of the target university against the population of colleges and universities which participated in the simulation during the same semester.

### **Data Analysis**

The researcher will code all data collected, and enter it into a statistical program for analysis. Statistics will be calculated, and the results will be interpreted. A summary of the results will be prepared to be shared with the faculty and with any study participant on request. The analysis method will vary with the type of question, but at this time, it is expected that most of the statistical analysis will involve the correlation between sets of variables.

### **Time Required**

The following schedule is proposed for the completion of this study:

Table 1:

## Student Perceptions of a Capstone Business Simulation

## Proposed Study Timeline

Date	Activity
August 1	Design and test questionnaire; revise as indicated by test results
September 1	Submit questionnaire to IRB for approval
October 1	Make necessary revisions and resubmit questionnaire to IRB
October 15	Contact faculty to introduce study and arrange for class visits
November 15	Visit classes to introduce study, request student participation, and distribute and collect questionnaires
November 30	Follow-up visits to classes to contact students who were absent for previous visit, if any
December 1	Begin coding of data, and begin data entry
December 5	Contact faculty to request team performance reports
December 15	Begin analysis of data



January 5	Contact vendor to request data comparing target university to other simulation participants
January 15	Draft report for faculty
February 1	Meet with faculty to share results and develop best practices
February 15	Prepare best practices document and distribute to faculty

### **Resources Needed**

The researcher is a doctoral student, and will not be compensated in any way for completing this study. All expenses for the study, including printing of the questionnaires, will be borne by the researcher.

### **Presentation of Results**

The researcher will present the results of the analysis to the faculty by April 30. The meeting will be scheduled after faculty assignments for the spring semester have been finalized. To the extent possible, the data will be presented in table format, and on bar charts where appropriate.

### **Conclusion**

Simulation is an important part of most business students' educational journey. With today's advances in technology, the simulations can come close to approximating

the many important decisions made by managers every day. The simulations are also an excellent way to break down the barriers between the academic disciplines of management, marketing, finance and economics, and show how every decision causes a ripple effect throughout the corporation.

One of the goals of business education is to prepare students to succeed, not only in the classroom, but in the world of business after graduation. Simulation offers an opportunity to experiment in a low-risk environment, and to synthesize the knowledge attained in all of the courses throughout the undergraduate program. However, the research shows that the impact of the activity depends on several factors outside the technology of the simulation. Among these factors are the attitudes and experiences of the students, the expertise of the instructor in guiding students through the simulation, and the technology infrastructure to support this effort.

The goal of this study is to understand all of the variables which will impact the effectiveness of the capstone simulation as an educational experience. The first step will be to bring the results to the faculty who facilitate these simulations each semester. The ultimate goal is to assist faculty to develop best practices, which will help them present this capstone simulation activity in a way that maximizes student satisfaction and prepares them for success in the future.

## References

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- Tompson, G. H., & Tompson, H. B. (1995). Using computer simulations for group projects in business. *Journal of Education for Business, 71*(2), 97.
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## Appendix A

## SAMPLE INFORMED CONSENT FORM

I agree to participate in a study entitled “Student Perceptions of a Capstone Business Simulation”, which is being conducted by Veronica O’Neill, a doctoral student in the Education Technology Department, New Jersey City University. The purpose of this study is to evaluate the effectiveness of the Capstone Business Simulation that is completed during the Business Policy course. The data collected in this study will be submitted as part of a doctoral dissertation, which will be published, and may be considered for a publication in a research journal.

I understand that I will be asked to respond to a written questionnaire. My participation in the study should not exceed 30 minutes.

I understand that my responses will be anonymous and that all the data gathered will be confidential. I understand that the individual responses will not be shared with my instructor, but a report of the aggregated results will be presented to my instructor. I agree that any information obtained from this study may be used in any way thought best for publication or education provided that I am in no way identified and my name is not used. I understand that I may obtain a copy of the report at no charge on request.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply employment with the State of New Jersey, New Jersey City University, the principal investigator, or any other project facilitator.

If I have any questions or problems concerning my participation in this study I may contact Veronica O’Neill at 201-555-1234, or email [voneill@njcu.edu](mailto:voneill@njcu.edu), or Dr. Beimnet Teclezghi, Chair of NJCU Institutional Review Board, at 201-200-3139 or email [bteclezghi@njcu.edu](mailto:bteclezghi@njcu.edu).

_____	_____
Signature of Participant	Date
_____	_____
Signature of Principal Investigator	Date

Appendix B  
QUESTIONNAIRE

STUDENT PERCEPTIONS OF A CAPSTONE BUSINESS SIMULATION

Thank you for agreeing to participate in this study. Please answer the questions below, which are designed to obtain your feedback and suggestions with respect to the Capstone Business Simulation activity which you participated in this semester.

	Strongly Agree	Agree	Disagree	Strongly Disagree	N/A
The simulation was a valuable experience.					
The simulation will help me in my future career.					
My team worked well together.					
Everyone on my team did their fair share of the work.					
My instructor was knowledgeable about the simulation.					
The simulation support line was helpful when we had questions.					
The online instructions for the simulation were clear.					
In my leisure time, I like to play computer games.					

Outside class, my team communicated about the simulation (please select all that apply):

- In person
- Via group chat (Skype, Google Hangout, etc.)
- Via e-mail
- Via telephone
- Via text message
- Other (please describe) \_\_\_\_\_

	Never	Less than once per week	Once per week	More than once per week
My team had a physical meeting outside class:				

Which company/team were you a part of? \_\_\_\_\_

In a previous course, I completed the Foundation Simulation activity.

- Yes
- No

The thing I liked best about the simulation was:

The thing I liked least about the simulation was:

If I could change one thing about the simulation, it would be:

THANK YOU! Your responses will help improve the capstone experience for future classes!