

# IT'S MORE THAN JUST A SIMULATION: DEEPENING AND BROADENING STUDENT LEARNING BY USING A BUSINESS ENTERPRISE SIMULATION AS A PLATFORM

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## ABSTRACT

*Much has been written about how 'learning by doing' increases the level of retention and indeed experiential learning is quite popular at business schools. Business enterprise simulations are a tool used to assimilate a business environment and allow students to apply what they learned in the classroom. Business enterprise simulations have been part of the business school landscape for decades. Simulations do a wonderful job helping students to learn and retain business acumen. This paper provides an overview of an approach used in an MBA Capstone course. The objective of the course is to provide a real-life assignment or internship experience to the students before they graduate so that they are better prepared for their careers. The MBA program uses an off-the-shelf simulation as a platform for the assignment. There are many unique features added to this capstone that provides a deeper and broader learning experience for the students.*

## INTRODUCTION

Today's students experience leisure and learning in a much different manner than did previous generations. For instance, a December, 2015 Pew Research Center study found that 77% of males and 57% of females ages 18 to 29 play video games. That penchant for interactivity with their environment extends to the manner in which students are learning various skills in their high school and collegiate classrooms. Increasing numbers of schools and universities are adopting a constructivist pedagogy in the design of course curriculum versus the more traditional behaviorism approach. As such, many students now learn by doing as they engage in business games and simulations in their classrooms rather than learning by listening as a professor guides them through material.

Faria, et. al. (2009) trace the history of business enterprise games and simulations to 1955 in North America when the RAND Corporation developed a simulation that placed participants in the role of inventory managers in a supply scenario. One year later, the American Management Association created "Top Management Decision Simulation" to use in its training seminars. Since then there has been a proliferation of business games developed for use in the classroom. And, they are being used, as Faria and Wellington report that 30.6% of professors contacted in a 2004 survey made use of the games to deliver their curriculum.

Business enterprise simulations are heavily focused on problem-based learning (PBL). Problem-based learning focuses

on "the discovery that students who did well on tests often could not apply concepts [when faced with real world situations]" (Brownell and Jameson, 2004). Further, David Kolb's (1984) model of experience-based learning suggests that to transform experience into knowledge, three key elements must be addressed in the business simulation:

- The involvement of the whole person – intellect, feelings and senses---in learning;
- The recognition and active use of relevant life and learning experience; and
- Continued reflection.

These elements are embedded in the authentic problems which are the center of each business simulation. Hence students learn by solving the problems presented them. Empirical studies indicate that active techniques such as problem solving increase learning (Hackathorn, et. al., 2011 and Michel, et. al., 2009). The nature of skills learned from these experiences tend to center on broad team building and leadership skills (Raelin, 2000; Gunasekara, 2003; and Keegan & Turner, 2001). As Mayer, Dale and Fox (2014) point out however, students not involved with their team may not garner the full spectrum of skill development offered by the business simulation. A fuller delineation of the range and depth of team-based, interpersonal and leadership skills integral to the business simulation may indicate areas where such disinterest in the experience can be addressed so that all students benefit from the opportunities offered in the class activity.

## COURSE STRUCTURE

The Katz MBA capstone course is called Management Simulation and has been a required capstone course since the 2013-2014 academic year. Over 200 students participate in the class each year. The Business Strategy Game (BSG) by McGraw Hill is used for the business enterprise simulation. BSG simulates an athletic footwear company in four global regions. The capstone course has a basic structure similar to most term-long simulation courses. There are nine decision rounds after two practice rounds. Each round represents one fiscal year. There are typically two distinct industries each term with six to nine teams per industry and six students per team.

In addition to this basic structure there are several unique features that enable deeper and broader learning opportunities.

- The terminology or language is critical to help create the

right mindset and paradigm. We use terms that promote a real life experience. For example we refer to the students as executives rather than students (See Table 1).

- The class is structured as an assignment or internship. This means that instead of ‘teaching’ about marketing or finance... the assumption is that students understand the business acumen they have learned throughout the program.
- There are only two classes where students meet in person. The rest of the information is provided by the simulation, weekly emails and videos produced by the instructor. The instructor uses class time to attend individual management team meetings as well as weekly meetings with the presidents.
- The Instructor role is more of a coach than a teacher. Since the experience is to represent real life the coach either identifies other resources or provides coaching.
- In lieu of structured classes there are videos that address the material the instructor wants to emphasize. There is also a workshop where students meet with other students assigned the same position as well as former students who provide some direction and insight. Most of the scheduled class time is used for management teams to meet with each other or for board meetings (more on this below).
- Management teams are larger than traditional simulation teams (typically 6 students per team). This provides additional opportunity for organizational and team dynamics issues.
- The teams form an organization with functional responsibilities and a president. The management team consists of President and Vice Presidents of Marketing (2), Strategy, Operations and Finance. Each has unique responsibilities with job descriptions.
- Students apply for positions by responding to a survey. They indicate preferences and provide supporting documentation. In addition to preferences, GPA, diversity and availability are also considered when assigning positions and teams. Since the president position is critical to the success of the management team, input is also sought from the MBA program office for students applying for the president position.
- Each executive is provided a starting annual salary and salary increases are administered by each president after the third and sixth fiscal years.
- The presidents also deliver a performance evaluation to

each executive on their management team two times during the term. The evaluation is based on anonymous peer-peer evaluations, input from the instructor and observations by the president.

- The nine-year assignment is divided into 3 three year periods. Executives are eligible for a bonus each three year period. There are three corporate goals that every executive has and an individual goal tied to their role.
- The instructor administers salary increases and performance evaluations for the presidents. The salary increases, bonuses and performance evaluations are all administered outside the simulation.
- Networking is an important resource in real life and it is encouraged in this course. A roster listing names of each executive, their role and email address is provided. In addition, contact information for former executives who agreed to be available as a resource is also provided.
- Finally, each management team reports to their own board of directors. Each board has four or five members and is led by a board chair. The boards are comprised of local business leaders most of whom are alumni of the business school. The board approves major decisions (i.e. dividend payouts), approves bonuses and provides graded evaluations. They ask questions and occasionally request additional information in order to endorse the proposed company strategy. They meet four times during the assignment and during the last meeting the executives review their nine year performance and recommend a going forward strategy.

In short we make the class experience as realistic as possible. This is done by introducing the unique features listed above and treating the students as if they really were working at specific assignments. This allows the MBA students to experience the feelings executives actually experience in real life.

## DEEPENING THE LEARNING

Simulations do a great job allowing students to practice what they learned by making decisions and analyzing results in a simulated environment. The unique features outlined above create an environment for deeper learning. This is learning that goes beyond the traditional learning from business enterprise simulations. The primary feature that enables this deeper learning is the introduction of a real board of directors.

**TABLE 1**  
**KATZ CAPSTONE COURSE TERMINOLOGY**

<b>Traditional Term</b>	<b>Term Used in Katz Capstone</b>
Student	Executive
Instructor	Coach
Team	Executive Team or Company
Presentation	Board Meeting
Game or Simulation	Industry
Course	Assignment
Alumni	Former Executives

Educational Science confirms that the more the class learning reflects the ultimate application; the stronger and deeper is the learning. This experience authenticates the learning and contextualizes it in a way that students can relate to and retain the material. Without a 'boss' students would make decisions without having to convince another party. The preparation to convince and the anticipation to respond to a 'boss' adds another level of learning.

We created this environment by recruiting, orienting, observing, informing and listening to a group of dedicated volunteers who enjoy seeing MBA students improve throughout the term. The capstone started in 2013 and is relatively new. Most board members anxiously return each term. We typically use about 64 in each term and there are about 50 who have participated in more than 6 terms. New board members receive training and are assigned to a board with an experienced board chair. This environment brings consistency and insight to the learning. Below is a little more detail of the ways the board relationship deepens the learning.

When students in a traditional class want to make a critical decision in a simulation, they may have to convince teammates that it is a good idea. With a board formal approval is required and this necessitates another level of analysis and preparation. Two great examples of this are dividend reduction and new plant construction. Students without any additional layer of approval would often eliminate the dividend just to free up cash to spend. The board represents the shareholders and would require proof that a dividend reduction would add value equal to or better than the dividend payout. Likewise, new plant construction requires a funding plan, payback period and an NPV analysis before approval is granted.

While boards do not approve specific decisions each round, it is necessary for the board to buy-in to the high-level strategy that is going to be executed over the next three years. Frequently boards will question the validity of a proposed strategy particularly if it is not supported by analysis. This requires executives to better prepare or to defend their proposed strategy. Appendix A provides some typical board challenges to a strategy or approval request.

Just as in real life there are times that the executive team understands the industry or company operations more than the board of directors. This requires the executive team to explain or educate the board on a variety of issues where they may have a question. One example witnessed at a board meeting was a question about exchange rate impacts and possible currency hedging opportunities. Having to explain this deepens the understanding for students beyond just making a decision in the simulation.

Executive teams submit a bonus proposal at the beginning of each three year cycle. The board approves the targets, weightings and the specific metrics. At the end of the three year period the actual results will determine the bonus payout for each executive. This holds the executive accountable for his performance. In addition, the executive team provides his board a flash report at the end of each fiscal year. This is another opportunity to hold the executive team accountable. The level of performance and understanding increases when the executive team knows they are being held accountable by others.

Similarly, performance and learning are increased when the board sets high expectations. If left on their own, many executive teams would only do what is necessary and nothing more. This is particularly true with the target level of the goals contributing to bonuses. Executive teams often want their goal target lower thus making it easier to achieve their bonus. The boards do a nice job making sure goals are challenging enough.

All of us learn through our failures. We understand what we did wrong and will make sure we don't make the same mistake again. This is one of the most sustainable ways we learn as we can easily visualize the error, but can also identify with the actions that led to the mistake. Sometimes it is hard for us to recognize the mistake because we are clouded by our own biases. Introducing an external board of directors creates the opportunity for an outsider to observe and point out the mistakes made by the executives.

Most of the executive teams spend significant time and effort anticipating the types of questions they will receive from their board at one of the four board meetings. They want to be able to convince the board (their boss) that they know what they are doing and earn their trust. No matter how hard they try to anticipate questions, the executives inevitably receive questions that surprise them. Over the term executives get better at thinking on their feet. This is a skill that will serve them well in their careers.

One downside of any simulation is that students can tend to only think of profits for the shareholder. Most results are expressed in that fashion and this can allow students to forget about stakeholders like employees and the community. A live board can ask students if they considered the impact of their decisions on these stakeholders and the ensuing discussion can provide a deep awareness and understanding that wouldn't have been able to be achieved without the board of directors.

The four live board meetings throughout the term provide an opportunity for an unplanned event. This can be something outside the simulation and does not even have to relate to the products being sold in the simulation. For example, when the executives arrived at one board meeting, the board chair announced that one of the executives had an emergency and had to leave the meeting (this, of course, was not real and the executive did remain quietly at the meeting to observe). In this unplanned event the board selected the executive they felt the executive team relied upon too much. This demonstrated the importance of being prepared, expecting the unexpected and making sure executives had an understanding of multiple functions.

The very last board meeting in the term provides a unique opportunity for learning. As you would expect the executive team reviews their accomplishments over the nine year assignment and summarizes the lessons learned. In addition, we ask the executive team to present a recommended strategy for the next three years. This strategy should be aligned with the status of the company (strong balance sheet, market success...), but is not limited by the structure of the simulation. For example, executive teams can recommend a merger or introducing a new product. This exercise allows them to be creative and to observe if their recommendation was strong enough to be adopted by the board.

At the end of the term students provide anonymous feedback to the boards to help them improve their effectiveness. In addition, the boards provide feedback to the instructor and the program to identify ways to better prepare future students for the class. Incorporating the board feedback into the curriculum and professional development activities, eliminates the need for additional perspectives.

The board relationship has been the most challenging and complex aspect to the capstone class. With that said it has also been the most unique and effective feature of the class.

## **BROADENING THE LEARNING**

Business enterprise simulation research highlights team,

leadership and interpersonal skills as outcomes of the activities. While these categories are viable, they warrant a more detailed analysis to fully demonstrate the high level learning options afforded by the simulation activity.

For instance, the simulation offers the student a working laboratory to experiment with a variety of approaches to problem solving in teams while interacting with various stakeholders in the scenario including a boss or board. Focusing on the problem solving aspect initially, the student must learn to deal with volumes of data which is interpreted in ways unique to those involved. Thus students are given the opportunity to learn about the complexity of problems and the necessity of discerning a unified approach to addressing those issues. Along the way, students realize the importance of planning and organization. Further they see the need to negotiate with one another to move to resolution of that problem. These skills warrant further attention.

While negotiation skills are taught from a theory perspective in the Organizational Behavior course at the University of Pittsburgh Katz Graduate School of Business and are honed from an application perspective in a separate Negotiation course, the Capstone class goes further. Negotiation skills become a means of navigating a political context established in the simulation. Students need to understand and engage in activities that allow them to successfully manage issues in an upward context. Suddenly the term “political” is not one they must just define, but one they must use to move forward and resolve their issues.

Similarly, while influence tactics are defined and examined in core courses of the business curriculum, in the Capstone course the student must employ a host of techniques to work with team members. Challenging others’ opinions to ensure that groupthink does not occur and then offering sound rationale to gain consensus are key skills to hone for the course as well as beyond.

Focusing on just these two concepts, “upward political management” and “persuasion”, it quickly becomes obvious that the Simulation is an opportunity for high level interpersonal skills to be practiced and when attempted, the Simulation also offers a “cocoon” wherein mistakes can be made that do not prove fatal to a career. More directly, a student may engage in a persuasive action which he feels will best resolve an issue in a given scenario only to realize after such engagement that he misread the power base and his action garners strong negative repercussions for both him and the team. While the “boss” may reprimand the student, the lesson is learned and the student begins to build his competency of “managing upward” in a very realistic manner.

The board concept in the business simulation affords further opportunity for broadening learning. Regular team interactions both virtually and face to face necessitate a clear understanding of personality type and emotional intelligence. Again the Organizational Behavior curriculum in the MBA program builds a skill set that facilitates the identification of individual group members’ personality types and aspects of emotional intelligence. The simulation however provides extensive application opportunities as to how identified personalities interact with one another and allows students to “try out” various strategies for navigating the positive and negative aspects of each. Similarly, students can learn about how their personal level of emotional intelligence impacts and is impacted by that of others. Once more, the opportunity to learn from an interpersonal communication strategy that fails due to a misunderstanding of the social awareness and

management aspects of emotional intelligence cannot be underestimated. Failure in a safe haven is a sound learning technique.

Providing performance evaluations and accompanying salary increases offers another platform for enhancing the students’ skill set. Research suggests that one of the most difficult and disliked aspects of a manager’s job (particularly a first time manager’s job) is giving feedback. On the other side of the desk, research also verifies how difficult it is for employees to receive feedback. The simulation once more affords a practice setting for prospective managers to set goals with or for employees, measure the achievement of those goals and then provide detailed feedback on the nature of goal achievement. This interpersonal communication scenario also draws on knowledge of personalities, skill set and motivation and serves to build strong capabilities in assessment design and delivery.

From a skill development standpoint, one of the most unique aspects of the Katz Capstone class is the opportunity to interact with the board. Executive presentation skills are distinct as they emphasize conciseness and precision with a clear purpose guiding the content and chosen delivery style in a situation where information is presented to superiors. That situation is more stress-laden and higher stakes than in a more general meeting with fellow employees from a mix of departments and organization levels. Informational presentations to the board must adopt a tone that suggests information sharing, not an “expert-directed lesson” on relevant material. Persuasive presentations must be substantiated throughout with data with which many of the executives are already familiar but delivered using appropriate influence tactics in such a status-laden situation. Either type of executive presentation requires a nuanced understanding of content and delivery that is best enhanced by the practice this simulation element provides.

As these examples suggest, it is the interpersonal skill competencies gained from engaging in the Capstone course that provide the most value to students. Experiences gained in the course prepare students for employment opportunities later. Since they have gone through situations they will encounter on the job, students, as new employees, will not make “rookie mistakes”. It is these competencies that students can highlight when applying for jobs.

When they arrive on the job, students who complete the Capstone course will be more adept at working with their colleagues, networking and dealing with the boss. They will have experience in setting goals and being held accountable for the results, adapting to the design of the organization including any misaligned skills or interests and giving and getting feedback as well as making the necessary adaptations to address any barriers to overall effectiveness.

A Harvard Business study (Groysberg, 2014) indicated that there are seven skills needed for success in the executive suite including leadership, strategic thinking, technical skills, team skills, communication skills, change management skills and integrity. Students who have completed the Capstone course possess these skills and can begin to follow their own path to upper level management. It is said that technical skills assist students in obtaining their initial job, and organizational skills such as planning and attention to detail open the door to managerial positions. However, it is the interpersonal skills that get individuals into the executive suite.

The unique features of the class provide learning opportunities to develop or enhance the interpersonal skills

necessary to have a successful career. But the exposure to the opportunities is not enough. There has to be someone looking for these teachable moments and then taking the time to coach. This is the role of the instructor. Since it is assumed that the students have been taught all the functional or hard skills before taking the capstone class, the instructor is free to act as a coach. Each situation or opportunity is different but they generally are related to one of these themes:

- Board Communications – ‘Managing your boss’ is a valuable, transferable skill. Many students need help understanding how to deal with unresponsive or unreasonable ‘bosses’.
- Goal Settings – The coaching with goal setting is critical. It works best when they set bonus goals that for a variety of reasons didn’t work out as well as they intended. The learning through failing is powerful and it creates an opportunity to coach about the wording of the goals and target levels.
- Team Communications – Keeping everyone on the same page is a challenge. Particularly when schedules are jammed, colleagues are traveling and there are different functional responsibilities. Presidents often resort to their instinct rather than developing a systematic and structured communications channel.
- Behavior – When there are high stakes, time constraints and complex, behavioral issues are common. Coaching students to deal with the behavior issues without ‘discounting’ their colleagues is an important skill for their career.

- Performance – Performance problems are different than behavior issues and also pose a challenge for presidents. Finding the root cause of the problem and developing a plan to improve the performance is a not a skill that comes naturally to MBA students.
- Role Overlap – Just like in real life, students tend to get involved in issues that aren’t their responsibility. This causes turf battles and inefficiencies. In addition, there are natural tensions that occur when you have functional responsibilities. These are organizational challenges that require coaching.

## CONCLUSION

The capstone class provides a unique learning experience for the MBA students and helps prepare them for their careers by creating a very realistic work environment and enhancing the essential interpersonal skills. This is done by introducing a board of directors that deepens the learning and by providing features that broaden the learning beyond just business acumen. Feedback on surveys (What did you like best about the course?") suggests that students recognize the breadth (Appendix B) and depth (Appendix C) of skills they are taking from the Capstone course and how those skills will assist them in making immediate contributions to their firms.

There are many positive and unique features to the capstone, but the key to its success is the coaching and execution. The capstone class’ long term success is going to be based on continuously monitoring and improving the design and execution of the class.

## REFERENCES

- Brownell, J. & Jameson, D. (2004). Problem-based Learning in Graduate Management Education: An Integrative Model and Interdisciplinary Application. *Journal of Management Education*, 28(5), 558-577.
- Faria, A.J., Hutchinson, D., Wellington, W.J., & Gold, S. (2009). Developments in Business Gaming. *Simulation & Gaming*, 40:4 (August), 464-487.
- Faria, A.J. & Wellington, W.J. (2004). A Survey of Simulation Game Users, Former Users, And Never Users. *Simulation & Gaming*, 35, 178-207.
- Groysberg, B. (2014). The Seven Skills You Need to Thrive in the C-Suite. *Harvard Business Review*. Retrieved from <https://hbr.org/2014/03/the-seven-skills-you-need-to-thrive-in-the-c-suite>. Accessed 27 July 2016.
- Gunasekara, C. (2003). Project-based Workplace Learning: A Case Study. *SAM Advanced Management Journal*, 68(1), 37.
- Hackathorn, J., Solomon, E., Blankmeyer, K.L., Tennial, R.E., & Garczynski, A. (2011). Learning by Doing: An Empirical Study of Active Teaching Techniques. *Journal of Effective Teaching*, 11(2), 40-54.
- Keegan, A. & Turner, J.R. (2001). Quantity versus Quality in Project-Based Learning Practices. *Management Learning*, 32(1), 77-98.
- Kolb, D.A. (1984). *Experiential Learning: Experience at the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice Hall.
- Mayer, B., Dale, K. & Fox, M. (2014). Designing the Business Strategy Game to Promote Strategic Thinking and Student Engagement: An Application of the Four Disciplines of Execution. *Business Education Innovation Journal*, 6:2 (December), 86-92.
- Michel, N, Cater, J.J., & Varela, O. (2009). Active versus Passive Teaching Styles: An Empirical Study of Student Learning Outcomes. *Human Resource Development Quarterly*, 20(4), 397-418.
- Pew Research Study, (2015). Retrieved from <http://www.pewinternet.org/2015/12/15/who-plays-video-games-and-identifies-as-a-gamer>. Accessed 27 July 2016.
- Raelin, J.A. *Work-Based Learning: The New Frontier of Management Development*. Boston, MA: Addison Wesley.

## APPENDIX A KATZ CAPSTONE TYPICAL BOARD CHALLENGES TO STRATEGY

### Examples of Board Feedback and Challenges

The fact that your Executive Team is saving money by using the 10 year loan at a lower interest rate just seems like the Team is missing the bigger picture here. If it's understood correctly, the Team made some apparently incorrect or maybe risky or aggressive assumptions that they got caught on. Taking a \$19MM term loan over 10 years to cover your excess inventory and some expenses was maybe not your best move here and the bigger question the group needs to ask itself (and the point Rex was trying to hammer home to you) is what does a company use an installment loan for and then when is a line of credit more appropriate? Strictly for learning purposes for the Executive Team, please explain to the Board the Executive Team's understanding of cash and debt management, in terms of, when an installment loan makes sense vs. when is it more appropriate to use a line of credit? I will provide a hint to point you in the right direction (specific to the point at hand) as what type asset is inventory on the balance sheet?

Why do you feel you have been unable to accurately forecast demand? What steps are you taking to improve forecast accuracy?

This is a very good presentation. You have separately provided the operational savings and likely revenue increases based on increased models that are not offset with a decreased capacity. Your actual rWACC is probably higher than the 10% discount factor used. Subject to other Board member comments, I approve the investment.

I am supportive of the dividend decrease. That being said, I noted that you did not mention the plant build. Are you still contemplating and if so when? Have you given thought of buying capacity in lieu of plant build if extra capacity becomes available?

I did have one question as your Plant and Equipment shows a decrease. I can only assume your template only has limited slots available and this has something to do with accumulated depreciation being net within and I cannot even find depreciation on the income statement or cash flows to tie back to the number to avoid the question. There is also no indication assets were sold as gains and losses, so for the Board's benefit please just confirm for us that this decrease relates solely to depreciation and accumulated depreciation.

Thank you for the report. Based on a quick review, there appears to be a problem with the statement of cash flows. At the very least I would expect the year 10 ending cash balance to be reflected as the year 11 beginning balance, and, year 11 doesn't appear to add up correctly, please review and let me know. Also, the balance sheet is not included, please provide.

Also, wondering what their WACC/discount rate would be pro forma for the \$25MM of debt they want to incur. 5.1% seems low to begin with? While they're reviewing the PF's, you may want to note that their BS doesn't balance and there's a ghost \$1MM in the cash flow statements for years 12 and 13 in Investing.

## **APPENDIX B BREADTH OF KATZ CAPSTONE COURSE**

### **WHAT ASPECTS OF THIS COURSE WERE MOST BENEFICIAL TO YOU?**

Understanding the challenges facing Presidents and CEOs of companies and how to deal with them.

Getting to interact with different personalities and working through differences.

Having to work with a group to make decisions – especially working with other people who were often stubborn with their opinions. I had to learn how to navigate working with people who are very different from me. Same applies for the board. I felt like the board was "out to prove us wrong" because we did not choose to listen to one of their recommendations in an early meeting. It was difficult for me to take the board's opinions seriously because we were performing very well with respect to investor expectations, but the board was giving us very low marks.

I learned how to work with other people even when we have very different opinions.

It makes you have to deal with different personalities and come together for the greater good of success.

I like the fact of working with a cross-section of the class. I think the randomly assigned team is a terrific concept.

Very good simulation of the organization structure of a company.

Working with an often adversarial group of managers with varying information needs was beneficial.

Communicating with a team to make decisions and construct presentations was the most beneficial part of the class.

I think it's critical that a capstone course is involved that utilizes everyone's entire skill set. You are forced to work with people you may have never worked with before and then you have a board made of local executives to guide you through the process. This was great. Honestly, the best part was interacting with the boards and getting to know them.

Meeting with executives to see how they think and attack problems is some of the best learning an MBA student can experience.

The course was extremely challenging - by far the most challenging course that I've taken at (the school). As difficult as it was at times, it was extremely helpful to work with a team and make all aspects of a business work. The simulation helped me get a better idea of what real world scenarios could come up.

Being forced to work with a random team was helpful for dealing with frustrating people.

This course was incredibly difficult for a part-time MBA student who is also working a full-time job. Despite that, there is virtually no way you could go through this class without learning how to apply what we have learned in our other classes at (the school) to real-life experiences.

I think it was beneficial to interact with the board and have formal meetings outside of our classmates and normal work environment.

The ability to test strategy against competition that was unknown and to react to market forces. This was the first (and perhaps) only time that we were able to develop strategies and react to market forces to exercise the teachings from the MBA program. I wish there were similar courses as part of the curriculum or simulations were integrated into other classes to reinforce what is being taught.

The course illustrated the importance of teamwork and cohesiveness between all areas of the business, as one decision impacts several other steps along the way.

The simulation was an interesting and educational exercise and helped me to understand how a company might operate in a holistic sense.

Gaining experience in a division outside of my concentration and working with team members of various concentrations, cultures, etc.

I learned a lot about myself but also it was very interesting insight of what it entails for each position of the team. It was also great to have a real-life board instead of a simulated one!

Team meetings. Arguing back and forth before coming to consensus.

Teamwork elements and understanding how changes in one area affect other divisions.

Understanding the challenges facing Presidents and CEOs of companies and how to deal with them.

Forced practice with an incompetent boss and also broadened knowledge and skills in many areas where I was not particularly strong.

I think being exposed to different topics of business was very helpful in seeing the relevance of all areas and how they work together.

Learning how to balance speaking up in the group vs. when to just listen and reflect on others suggestions.

The class really helped improve my knowledge of key business concepts. I learned more than I expected about the finances of running a global business.

The degree to which it mimics the real world, which is exactly what a simulation is supposed to do. The myriad decision entries and coordination of different schedules, ideas and agendas made it more real.

The fact that it provides a great understanding of how a company operates and the integration of different departments for the company's success.

The group work with required roles was very helpful. The hands-on demonstration of a relationship between a company's board of directors and the executives was also very helpful - many ideas are best learned through experience and I think this is a very clever way to setup the class. Also, hands-on experience presenting analysis to convince someone of something - this was so helpful to me. Both having to convince the board of directors and even more so, my own team - in an environment where we had roles (thus limiting the amount of group norming/storming bullshit that usually goes on) well, this was just a great experience....it really forces you to be economical with your analysis, explanations and arguments.

The real-life experiential learning aspect was by far the most valuable. I had never taken part in a simulation quite like this and have enjoyed it immensely. The job of a president was very different from the other executives.

All aspects outside of the simulation itself.

Challenging and really made you collaborate with your team.

I liked this course--it felt like getting some more real world experience before graduating.

Learning all the roles of an executive team and figuring out how they work together to make important decisions to a company.

Placing 5-6 team members in an ambiguous situation and testing their resolve. Having to utilize many different connections to build a team/company identity.

Simulating running a Finance department and managing financial statements.

The course was very representative of real world situations dealing with ambiguity and decision making with little to no information at times.

Working with a group of individuals, identifying strengths and weaknesses and how to best organize as a group was an added dynamic that most classes do not offer.

The difference between the "group" work we've done in every other class compared to being organized as executives.

This class overall was a learning experience, and is much different than the other classes I have taken, so all in all I recommend it.

The Experienced based learning is most beneficial. I enjoyed the course very much. Thank you professor for guidance and help throughout the course.

Working with my team and seeing how different functional areas combined to make decisions.

I enjoyed working within the framework of a highly functioning team and the interactions necessary among the team members. This was not so much different from many other group projects however the biggest difference was counting upon each member for their own area of work.

I refined my leadership skills and learned an immense amount about running a company and managing different personalities. It presented real business situations and problems you are faced with.

Shows how separate pieces of company fit together.

The organizational behavior aspect was extremely challenging and interesting.

The experience of being the head of a company, the camaraderie, and the learning experiences I shared with my team.



Learning to work with other functions to make decisions that are in the best interest of the company. I learned a lot about compensation and how to tie rewards to performance metrics that drive the strategy.

Team work, working in crunch time.

The best part of this course was the fact that it put most of the learnings from our core courses to the simulation.

Learning to be adaptable.

Learning to "back-up" decisions.

Being in charge/responsible for my department was beneficial to me. In the beginning, it was difficult but I found myself trying to please other team members that wanted me to make different decisions. Once I became comfortable with taking the lead, we had constructive debates and I took their feedback into consideration but ultimately made my department's decisions according to my opinion.

By far the most stimulating and fun class I have taken at (the school). This class forces you to work closely with your team and operate together at a very high level. The simulation is really difficult and yet enjoyable at the same time.

I liked that the course was applicable and similar to challenges that we face in our jobs.

I thought that the learning environment and having to work well in teams. All of the work really helped show me the different ways that each department affects each other and how the decisions in one department would mean modifications in another.

Really having to collaborate with classmates to run a company for an entire semester - it was difficult at times but overall a great learning experience.

Team work, correspondence and presentation to the board. Justifying actions to board members.

The compressed schedule, deadlines, and the ability to run a business in a safe environment was very beneficial.

This class was a real life simulation of running a company. It provided insight to how each department runs within a company and the communication needed.

This course really stressed my quantitative skills. I feel like my ability to manage large amounts of data improved.

Working with people in other disciplines to form a strategy for the whole company.

Working in uncertainty, which is most like a real life situation.

Being a role player as CFO helped me a lot in understanding finance.

Learning how to effectively structure meetings from the perspective of multiple stakeholders was the most challenging but rewarding experience.

Proximity to real situations in the workplace.

Transforming abstract data into meaningful information. Using those information to drive strategies. The course was a culmination of all my MBA learning.

## APPENDIX C DEPTH OF KATZ CAPSTONE COURSE

### What aspects of this course were most beneficial to you? – Referencing Board

Being forced to craft a meaningful story and message for the board.

The board presentations alone were very beneficial and was where I probably got the most out of the course that I can realistically translate into the real world.

I enjoyed the board meetings which taught me a lot about what is usually expected in a company. I also found the simulation itself to be very educational.

The board meetings are terrific. That's a great aspect of the course.

The board meetings were the biggest learning experience - keep presentations short and to the point to engage executives and convince them of ideas is challenging.

The feedback from the Board and the process of preparing for the board meeting.

Sometimes, it wasn't about what we achieved. It was more about how we tell people what we achieved.

Board member feedback, opportunity to present and articulate thoughts/ideas concretely alongside a team, be challenged and have to defend a position.

Simulation of a board meeting I think will be quite valuable in the sense that we learn what not to do in those types of scenarios.

Honestly, the best part was interacting with the boards and getting to know them.

The teams work to prepare for the first and final board meetings were beneficial. The board meetings were a useful learning experience.

The Board Meetings allowed us to refine our presentation skills in a setting that is more practical than a regular class room, and provided some real world experience. This also prevents students from "gaming" the game and not running the team like an actual company.

I think it was beneficial to interact with the board and have formal meetings outside of our classmates and normal work environment.

The meetings with the board were the most beneficial.

The game, however much it may try to simulate real life, is still just a game. The most learning occurred in the board meetings when I'd learn how the executives thought through the questions they had.

Having to work with a board provides expectations to each of the VPs. More importantly, the board challenged our strategy and gave crucial feedback to our plans.

Understanding how to work with a Board of Directors, effectively manage professional relationships and manage expectations; developing concise goals and strategic documents; and utilizing financial documents to make decisions.

The board meetings, while challenging and at times nerve-racking, were very beneficial in understanding what a board of directors looks for and how to act during a board meeting. Went beyond the simulation to real world scenarios.

The group work with required roles was very helpful. The hands-on demonstration of a relationship between a company's board of directors and the executives was also very helpful - many ideas are best learned through experience and I think this is a very clever way to setup the class. Also, hands on experience presenting analysis to convince someone of something - this was so helpful to me. Both having to convince the board of directors and even more so, my own team - in an environment where we had roles (thus limiting the amount of group norming/storming bullshit that usually goes on) well, this was just a great experience....it really forces you to be economical with your analysis, explanations and arguments.

Enhancing public speaking/soft skills through board presentations and dealing with board & related challenges.

Course allowed to pull up all (school) materials to meet Board deliverables. Created a challenging environment to interact with different peers.

Working as an executive team and reporting to a BOD definitely had some value.

The board room structure gives another aspect that the simulation cannot provide. The additional feedback from board members or just the practice of justifying your position is extremely valuable.

This course was extremely thorough and provided students with an ability to mimic the experiences of real life executives using a computer simulation. The interactions and learning that took place during the meetings with our "Board" consisting of real-life executives provided us with hands-on experience in interactions with owners of the corporation and greatly enhanced my presentation skills and challenged me by forcing me to "think on my feet".

Great experience! Really loved the board aspect of the course because they were extremely challenging but pushed us to grow as individuals. The overall course was a wonderful learning opportunity.

I learned what to expect from a meeting with the board of a company.

Real world competitive dynamics, board meetings, team meetings, presentations.

The ability to coordinate a group of individuals toward an ambiguous goal, and the experience of having an extremely challenging board.

The class was interesting and I did learn a lot about finance and the complications of a board meeting. Our board was difficult, which made it an interesting experience. I will discuss the limitations of this in the improvement section, but the benefit was I feel better prepared for the real world of business.

Delivering effective presentations

I really liked the opportunity to interact with the Board members on an on-going basis. Our board had a very diverse background, so having discussions with them and getting an idea of how their different functions and backgrounds think was really beneficial for me

Receiving Board feedback during and after the presentations, understanding how to present information in a manner that benefited a board member.

Being able to present to a board a few times helped presentation confidence.

Interactions with the board were nice. It taught us how to prepare professional presentations and convey lots of information in a condensed but informative format.

Preparing for presentations to a real board of executives and having the opportunity to receive their feedback and refine our approach for each meeting was the most valuable part of this course.

Learning how to deal with board members.

Learning to "back-up" decisions.

Getting to hear from the board: how they do things, how the real world handles things, specific industry tools, overall excellent learning experience.

Presenting to board of directors. Working in a team with other professionals. I was surprised by how much I was able to put my skills with respect to marketing, accounting, and financial analysis into practice.

Presenting to the board and discussions with them.

Team work, correspondence and presentation to the board. Justifying actions to board members.

Making networking connections through the "board members" and my class mates.

The board meetings are good learning opportunities. Practicing making decisions in complex environment with multiple stakeholders is naturally a good idea.

Interacting with the board was a valuable presentation experience.

Learned how to manage a small business. What are the dynamics of a real corporate (how to manage the perspective of Marketing, Operations and Finance; how to deal with expectations of the board; how to write effective reports; how to make a presentation, etc).

Simulating the actual board meetings. The Board members were much more critical than any classmate or professor would be so I was actually able to improve my presentation skills.

The immersive nature of the course was challenging. Presenting our information in front of a board of directors really gave us a real-world experience before graduation.