Using a Business Simulation to Enhance Accounting Education

ABSTRACT

This paper presents a learning strategy that demonstrates how integrated business simulations can be used to enhance accounting education. The Pathways Commission report takes a broad view of the accountant's role in society and argues that accountants serve in a variety of capacities including advising businesses, assisting management in understanding and monitoring operations, and facilitating the efficient and effective deployment of resources, among others. With experience, accountants have a competitive advantage over many business professionals because they embrace numbers and develop solutions to difficult problems for the benefit of their clients and businesses they serve. Business simulations help accounting students refine that competence by leveraging their affinity for financial and non-financial numbers as well as their willingness to analyze problems in a structured fashion. Simulations also challenge students to work in unstructured situations, developing their tolerance for and appreciation of ambiguity. The learning strategy further demonstrates how the activities described can be used for course-embedded assessment. Student performance is documented by the business simulation and instructor via objective measures as well as rubrics, examples of which are included herein. The compiled data provide within-course and programmatic feedback that can be used to improve teaching and learning outcomes.

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INTRODUCTION

The purpose of this paper is to describe the role that business simulations can play to enhance accounting education as well as its role in the assessment of student, course and programmatic outcomes. Incorporation of business simulations in accounting curricula helps achieve objectives outlined in The Pathways Commission report (2012) as well as those described in the American Institute of Certified Public Accountants' (AICPA) Core Competencies (2000). Properly documented, assessments of these objectives may also serve to meet assurance of learning (AOL) needs, such as those prescribed by the Association to Advance Collegiate Schools of Business (AACSB).

The business simulation example is presented as a learning strategy by a flagship state university that incorporates a large-scale integrative business simulation (LSIBS) in its accounting masters program. The deployment of the business simulation also includes several value-added activities that further contribute to desired learning outcomes and assessment of same. Value-added assignments and simulation add-ons include periodic communications in the form of executive briefings with the instructor, the rotation of team leadership, and a formal business plan and final report, both of which are communicated to and judged by practicing professionals external to the university.

The simulation and add-on activities represent an important enhancement to the typical accounting program. Their relevance is grounded in the Pathway Commission's challenge to impart a deeper understanding of dynamic business processes to our accounting students. To this end, the results presented herein demonstrate that the LSIBS experience refines the decision-making skills of accounting students, better enabling them to fulfill their future role as business

leaders. In terms of details, the students manage a fully-functioning enterprise in a dynamic, highly competitive environment over an extended period of time. Throughout, the accounting instructor challenges accounting students to leverage their affinity for numbers and their willingness to approach decisions in an organized, disciplined manner. Further, the uncertainty associated with changing market conditions and contemporaneous competitor moves presents challenges for students to develop unstructured problem-solving skills and a tolerance for and appreciation of ambiguity. Furthermore, students practice developing, presenting, and defending a business plan with independent judges who question the students and challenge the perceived shortfalls in their work.

Throughout the activity, accounting students must generate defendable decisions by grounding them in financial and non-financial numbers, thoroughly analyzed and properly interpreted. The simulation experience seamlessly aligns accounting and related financial data with business processes and performance outcomes so that students are able to observe and ultimately exploit the value of the relevant accounting information for better decision making. As a result, students gain confidence in their abilities to monitor performance, skillfully adjust strategies and tactical decisions, project plausible outcomes and manage scarce resources. In total, these activities reinforce and enhance the core business skills typically developed in the broader business curriculum. To provide student feedback and document the extent of learning, the authors have developed a series of assessment tools at the individual and team level. These tools include objective measures of student knowledge and overall simulation activity as well as qualitative instruments in the form of rubrics.

The discussions and findings examined in the manuscript have broad applicability for accounting instructors who often use smaller scale activities that bear some resemblance to

integrative business simulations (e.g., Jervis et al, 2005; Lavoie and Rosman, 2007; Arel et al., 2011; and Zamora, 2012). For example, auditing instructors sometimes use projects where students interview clients, perform analytical review procedures and conduct other audit tasks. Tax instructors may similarly assign tax consulting projects where students interview clients, research tax law, balancing sometimes conflicting tax and non-tax client goals. The learning objectives for traditional accounting cases and projects are often similar to those for simulations, e.g., development of analytical, unstructured problem-solving, teamwork, leadership and communication skills and a tolerance for working in uncertain environments plagued with ambiguity.

To achieve our primary purposes, we briefly describe the typical integrative simulation's progression and explain how simulations inherently contribute to important learning goals. Next, we introduce several value-added activities that were overlaid on a LSIBS. We then describe how the simulation and the value-added activities can help achieve a broad set of assessment objectives. At the same time, we review rubrics and other assessment tools for refining student effort, instructor course management, and curriculum design. We then offer examples of course and programmatic improvement and offer concluding remarks.

LARGE-SCALE, INTEGRATIVE BUSINESS SIMULATIONS

LSIBSs provide students with the opportunity to manage a complex organization over an extended time in the face of great uncertainty. Students are required to apply their knowledge by thinking and acting in an integrative manner as they adapt to changing business conditions. As noted by Springer and Borthick (2004), Duffy and Jonassen (1992) and Fosnot (1996), rather than inheriting a teacher's words, simulations require learners to construct their own

understanding, raise questions, generate and explore their own models and build representations that organize their experiences. Several LSIBSs fit this description and are summarized in Table 1.

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Insert Table 1 about here

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Specific to LSIBSs, to help the reader envision the totality of the learning experience, a timeline is used to depict the typical progression through a simulation. Springer and Borthick (2004) refer to this progression as a "scaffold for staging higher-level thinking." See Figure 1.

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Insert Figure 1 about here

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As shown in Figure 1, a Startup Phase usually occurs during which students organize themselves and learn the rules for the simulation. Specifically, the start-up phase normally includes the following:

- Organize team management, identify leadership and begin to work as a team.
- Survey and analyze the market opportunity.
- Develop an initial business strategy and execute related tactical and operational decisions.

As students refine their understanding of the assignment, they develop a comprehensive strategy to carry them through the end of the exercise. We call this second phase, the Transition Phase. During the transition phase, students normally focus on the following tasks:

- Develop SWOT (strengths, weaknesses, opportunities and threats) and other formal market and competitive analyses.
- Attempt early skillful adjustments to market and competitive conditions.
- Consolidate strategy to establish profitable operations.

- Formally capture operational goals and objectives in a business plan.

The third phase, Growth, usually arrives as students deploy their efforts to execute skillful adjustments, responding to unfolding market and competitive conditions. This is a phase of organizational growth within the simulation exercise but often also entails intellectual growth for students as they develop and refine skills and abilities to manage complex problems. The tasks associated with this phase include the following:

- Continual strategy evaluation and fine-tuning.
- Continual analysis and assessment of tactical decisions using the tools of management, especially accounting and financial reports.
- Skillful adjustment to address:
    - Strengths and opportunities.
    - Weaknesses and threats.

Finally, most simulations conclude with an Accountability Phase during which student teams report on the results of their work including:

- Assess overall simulation performance.
- Compare actual decisions and performance results to their business plan.
- Outline strategies for moving forward.
- Assess resources and the team's ability to move forward effectively and efficiently.

The timing of these phases will depend upon the simulation selected, but they occur in most LSIBSs.

MOTIVATING LSIBSs IN ACCOUNTING CURRICULA

Accounting professionals have called for learning strategies that develop students' critical thinking and problem-solving skills since at least the 1990s (e.g., Accounting Education Change Commission (AECC) 1990). More recently, the Pathways Commission of Accounting Higher Education was created by the American Accounting Association (AAA) and the AICPA to study the structure of higher education for the accounting profession and develop recommendations for educational pathways to engage and retain the strongest possible community of students,

academics, practitioners and other knowledgeable leaders in the practice and study of accounting. In chapter 2 of the Pathways Commission report (2012), Role of Accounting in Society, the report states that "the definition of any profession begins with a commitment to provide a benefit to the public" and goes on further to state, "in accounting, this commitment requires members of the profession to consistently provide accurate and reliable information to members of the public, which enables them to make sound investment decisions, and to managers to facilitate the efficient and productive use of resources. For accounting education, this commitment requires the preparation of accountants to encompass not just technical accounting knowledge, effective thinking and problem solving and professional practice skills, but also a deep understanding of the accountant's public role. Accounting information is central to the functioning of international capital markets and to managing small businesses, conducting effective government, understanding business processes and raising and addressing questions about how economic decisions are made (p. 21)."

The report goes on to say that accountants hold a variety of positions of trust within organizations. Some serve as advisors to businesses, to all levels of government and to society at large….Accountants may use their skills and talents to assist management in understanding and monitoring the operations of businesses and other organizations and in facilitating the efficient and effective deployment of resources….They are not just scorekeepers, monitors or bean counters. Accounting information is how businesses communicate, attract resources, and decide how to reconfigure themselves in a world where technology continually accelerates the pace of change (p. 24). The observations in the Pathways Commission Report are consistent with the AICPA's CPA Vision Project (2000) that outlined the Core Competencies of accountants to include: (a) communications and leadership skills, (b) strategic and critical thinking skills, (c)

focus on the customer, client and market, (d) interpretation of converging information and (e) technologically adept.

To illustrate the benefits of business simulations as a formative tool for future accountants, we focus on a LSIBS used as a capstone activity in the accountancy masters program (included in the department of accounting's separate AACSB accreditation) at a flagship university. Like Ammons and Mills (2005), the use of LSIBS highlights the benefit of cross-functional academic training for accounting and business students. Many accounting programs choose to rely on the core business curriculum to ensure that graduating accountants have the broader business skills outlined by the profession. At this university, the decision was made to allocate one course in the accounting masters program to the further refinement of general business skills by building on the foundations developed in the broad curriculum.

Generally, program leadership believed that accounting instructors would be able to leverage, communicate and refine the accountants' unique role as business advisors through the use of a course devoted to comprehensive and complex business problems. The course was designed to emphasize the use of financial and non-financial numbers, disciplined analysis using the tools of business, and the accountants' unique abilities to analyze numbers for enhanced decision making and problem solving. Accountants have a competitive advantage over other business professionals because they are able to embrace and leverage their affinity for numbers and their willingness to examine problems in a disciplined manner. The complex and comprehensive business simulation seemed to offer an exceptional environment to enhance the accountant's skillset by exploiting their competitive advantage which includes their acceptance of numbers, methodological analysis and relentless problem solving. During the business simulation, the tools of management, including accounting and financial data are in continual use. SWOT and

other analyses followed by decisions to achieve skillful adjustment to market and competitive conditions are driven by the availability and interpretation of numerical information. Accounting information is seamlessly incorporated into and inseparable from the business outcomes and decision making required by the simulation. A more complete description of the course learning objectives and means by which the business simulation helps accomplish them are described in Table 2. In addition, the course facilitates the consideration of ethical issues, interaction with business professionals (independent judges) and oral and written communications. One additional consideration with regard to learning objectives of the course and the business simulation is that they are also consistent with example goals outlined by the AACSB for the broader business curriculum.[1]

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Insert Table 2 about here

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SIMULATION ADD-ON ACTIVITIES AND RELATED ASSESSMENT

The value-added activities described below were initially developed informally, grounded in a need to assist the students as they dealt with the uncertainty and complexity of problems faced during the LSIBS. As time progressed, the activities were organized more formally to ensure systematic, consistent interaction with all students. Finally, the authors came to realize the value of the feedback for course and programmatic change. They further recognized that, when combined with more formal assurance of learning documentation requirements of accrediting bodies such as the AACSB, they could formally document the entire process from student interaction and feedback to course and programmatic change.

[1] See the AACSB's *Eligibility Procedures and Accreditation Standards for Business Accreditation* (2011) and *AACSB Assurance of Learning Standards: An Interpretation* (2007).

The following features were added to the simulation learning experience:

- Executive briefings
- Formal business plan and communication of same to prospective investors
- Report to the board (final presentation)
- Rotation of team leadership

Educators can use LSIBSs and the courses in which they are conducted as platforms, not only for the delivery of curriculum-relevant learning, but also for the assessment of learning associated with that course and the assessment of learning related to the broader curriculum. Towards these ends, a number of course-embedded assessment tools have been developed and tested for LSIBSs. In general, assessment methods fall into two categories: team- and individual-based tools. Our findings suggest that team-based assessments are useful for overall curriculum outcomes. However, the AACSB has indicated that team-based assessments are not sufficient for assessing individual student outcomes. Either way, LSIBSs lend themselves to team and individual assessments and tools for both were developed. Team assessment tools include:

1) a rubric to evaluate each team's business acumen as evidenced during periodic Executive Briefings with the instructor (Table 3).
2) a rubric to evaluate the Business Plan that teams present to independent judges midway through the exercise (Table 4).
3) a rubric to evaluate the team's communication skills in its presentation of the Business Plan to independent judges (Table 5).
4) a rubric to evaluate the Stockholders' Report that teams present to the same independent judges at the end of the exercise (Table 5).
5) a balanced scorecard to evaluate a team's simulation performance.

Individual student assessment tools include[2]:

[2] Marketplace ® Business Simulation also offers an objective test, Customized Objective Learning Assessment (COLA), to assess individual students relative to their attainment of the learning goals. The assessment incorporates a tool to test the students' higher order cognitive processing (Krathwohl 2002) including the ability to: 1) apply business concepts, principles, and tools; 2) comprehend the information and decisions within the functional areas of business; and 3) develop an integrative perspective on business.

1) a rubric to evaluate each student's business acumen as evidenced during periodic Executive Briefings with the instructor (Table 3).
2) a rubric to evaluate each individual's communication skills during the presentation of the Business Plan to independent judges (Table 5).
3) a peer evaluation assessing each student's (Table 6):
    a. workload
    b. teamwork
    c. leadership
    d. professionalism
4) a peer evaluation for leadership rotation.

Note that individual level assessments are generally more beneficial for student grading but can be used to identify systematic deficiencies where an unexpected number of students appear to need additional development regarding particular skills or abilities. Although not favored by AACSB, our findings suggest that team-based assessments can provide very useful information at the course and curriculum level.

As with most case studies and complex problems, LSIBSs lend themselves to objective measurement of performance. In short, there is a "right answer" or more accurately stated, some answers are better than others. In the next section, we discuss the objective measures for the LSIBS used in our example. The remainder of this section is devoted to the value-added activities and related assessment, generally qualitative in nature and captured through the development, use and refinement of rubrics. The characteristics of effective rubrics have been discussed extensively in the education literature (Hafner and Hafner (2003), Mertler (2001), Nitko (2001), and Swan, Shen and Hiltz (2006)). Drawing upon these sources, rubrics were created for the LSIBS to assess the following: 1) the executive briefing, 2) the business plan, and 3) the final report (Tables 3-5). Peer evaluations of teamwork and leadership were also obtained (Table 6).

Executive Briefings

Just before teams complete their work for each decision period (e.g., quarter or year), they conduct an executive briefing with the instructor. The instructor acts in a capacity similar to that of the chairperson of the board and tends to play the role of *devil's advocate*. In the context of the LSIBS, the teams review their 1) financial and market performance during the most recent reporting period, including overall profitability and financial condition, product line profits, gross profits, gross margin, etc., 2) SWOT and numerically-grounded analyses of market and competitive conditions, 3) strategy for the current and future periods that emerges from the students' analytical work, 4) new or revised tactical decisions, and 5) pro forma financial projections for the next period of play. Team meetings are relatively brief (10-15 minutes, based on time allowed) with an agenda developed in advance so that students can prepare to address specific issues and the meeting time can be both effective and efficient. Students are expected to offer analysis of results and the basis for competitive and market responses that are formally documented and grounded in financial and non-financial data provided by the simulation. One of the instructor's goals is to ensure that students are disciplined in their approach to decision making.

The executive briefings also provide opportunities for the instructor to coach students in a meaningful context at a time when students are receptive to this coaching. The instructor's role during these meetings is to challenge the students' thinking and analyses by looking for inconsistencies and holes in logic, incompatibilities across functions, and various other problems and/or opportunities that the students might have overlooked. The instructor never indicates a "right decision," but ensures that students have considered the relevant issues, options and tradeoffs related to their strategic and tactical decisions and that their work is grounded in the tools of management (e.g., accounting reports, product gross margin and profitability, etc.). If

students do not understand a certain point, the instructor gives a mini-lecture explaining the relevant issues and options. Ultimately, the instructor should help teams frame the problem so that they understand how to properly think about their choices, while emphasizing that the choices are still the team's to make and the outcomes are the team's responsibility.

The **executive briefing rubric** presented in Table 3 focuses on the student's and team's ability to thoughtfully present tactical decisions based on a concise analysis of relevant market, operational, and/or financial accounting data as well as a consideration of how the decisions generated from these analyses will impact the firm's overall strategy, other functional areas, costs, revenues, and the firm's future capabilities. The instructor also determines if the student can think on his/her feet in a thoughtful, confident manner by responding to questions and instructor challenges.

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Insert Table 3 about here

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The executive briefing rubric is used to set the standards for the students where instructor assessment is completed on an exceptions basis (students and student teams that are noted as being better than expected or weaker than expected are tracked). As such, exceptional executive briefings, those exceeding or falling short of expectations, are noted as well as the reasons for the evaluation. In the prior three offerings, 161 team meeting assessments were documented. During that period, approximately 33% or 53 of those assessments were judged as at least somewhat deficient. In contrast, 12% or 19 team meeting assessments were considered very strong and exceeded expectations. The data suggest that the weaker executive briefings tend to occur near the beginning of the exercise. Those weaker executive briefings that were noted near

the completion of the exercise were in teams at the lower end of the performance spectrum who were unable to thoroughly analyze their situation and develop an effective response to challenging competitive situations. The team meetings that exceeded expectations were sprinkled throughout the exercise. Successful teams arrived at meetings prepared with good assessment of the competition as well as a logical, thorough and numbers-driven plan for the next competitive period.

Comprehensive Business Plan

The value of incorporating business plans in business education has been extensively documented (e.g., Amatucci and Grimm [2011]; Srianta and Trisnawati [2010]; Vincett and Farlow [2008]; Kelmar [1992]). At the midpoint of the exercise in the later part of the transition phase (Figure 1), teams are required to prepare a business plan and present it to a group of independent judges, who serve in this LSIBS setup as venture capitalists. The judges are drawn from program alumni, the business community, and/or faculty. For this challenging assignment, the students must analyze extensive amounts of data and demonstrate the ability to execute their formal strategy and think through tactical details, cash flows and reporting requirements. This work must then be translated into a cogent and formal (business) plan of action. The business plan not only captures key strategic and tactical decisions, but also reflects the impact of pricing, quantities and projects into the accounting financial statements (e.g., estimated units sold times expected sales price generates the revenue financial statement line item). The financial statements, primarily the statement of cash flows, are used to formally estimate the valuation of their business.

Regarding the presentation of the business plan, the team is expected to be "professional," using an assortment of visual aids. Moreover, the details of the market analyses, strategy, tactical plans, and pro forma financial statements must be carefully explained in appropriate handouts. Finally, the students are expected to defend their plan as they respond to an assortment of far-ranging questions from the independent judges.

Two **business-plan rubrics** are used: the technical content requirements are shown in Table 4 and the presentation aspects are denoted in Table 5. The technical content requirements rubric presented in Table 4 is for the instructor's use and to communicate expectations to the students as they prepare for the exercise. Table 4 contains eight primary dimensions and these dimensions are consistent with most business plans: strategy, target markets, distribution channel, marketing, research and development, manufacturing, finance and integration of the various tactical choices into the projected financial statements.

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Insert Table 4 about here

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The second business plan rubric presented in Table 5 is related to the communication activity with the independent judges. In a relatively short presentation of 10-12 minutes, the student teams must communicate the highlights of their business plan. Prior to the exercise, the students are asked to prepare a one-page executive summary that is shared in advance with the judges. Prior to the formal presentation, the independent judges are asked to review and rank the student teams' executive summaries – see Table 5, row 1.

Following each presentation, the judges are asked to score the presentations at both the team and individual levels as shown in the middle and lower sections of the Verbal

Communication Rubric in Table 5.[3] Like the executive summary, judges are asked to rank the presentations. Experience with independent judges has suggested that they want to be viewed in a positive light and seldom want to be the person responsible for giving students a "bad grade." In recent years, the concept of ranking was introduced, forcing the judges to rank order the students' work. This provides better feedback to the students and the instructor as well as more useful assessments from the judges.

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Insert Table 5 about here

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Furthermore, the quality of the presentation and follow-up questions and answer period has business-like consequences for the students.[4] The event is called a venture capital fair and the LSIBS permits an infusion of venture capital into the simulation. Importantly, the amounts do not have to be equal among teams (e.g., one team might negotiate a $2 million infusion while another is able to negotiate $5 million). The entire process, including the executive summary, the business plan presentation and the private question and answer period between the independent judges and the student teams, plays a role in the amount ultimately infused into the student's company.

Rubric scores and rankings by the independent judges are shared in an anonymous fashion with the students for feedback and the instructor seriously considers them in the grading process. In the most recent three semesters, the students' presentation (communications) scores

[3] Prior to the venture capital fair, the instructor spends approximately one hour preparing the venture capitalists with the details of the event. The investor overview includes simulation details, hints on making quick but informed investment decisions, the rules related to the event and a careful overview of the rubric in Table 5.

[4] The venture capital fair lasts approximately five hours and is conducted during the late afternoon and evening. The presentation is limited to 10-minutes for each team and is conducted privately with the venture capitalists. Assuming seven or eight teams, the question and answer period and investment negotiations fills the remainder of the approximately 3.5 hours of the activity.

averaged 90.3%, 88.5% and 89.6% with the lowest score during the three year period being 75% and the highest 95%. The scores reflect the seriousness assigned to the exercise and the extensive preparation given by both the students and their instructor.

Stockholder Report / Final Presentation

At the end of most LSIBS exercises, there is frequently some kind of accountability phase of the team's performance. At this time, there is also an opportunity to invite the independent judges to return to the classroom to determine how the teams fared during the final portion of the activity. The stage setting may be the first shareholders' meeting, a Board meeting, or a meeting with the "top brass." Importantly, teams must look the independent judges in the eye and provide an accounting of their actions and performance in the periods since the plan was initially presented. Specifically, the teams are asked to 1) recap their business plan, 2) review their financial, market, operational and human resources performance during the period since the business plan presentation, 3) assess their business strategy and performance, and 4) evaluate their ability to compete in the future. As part of their review of their business strategy and performance, the teams need to 1) compare their actions taken against the business plan, 2) discuss departures from the business plan and the justification for those departures, 3) review significant events that affected the company and/or market, and 4) explain why they did or did not achieve their goals. Like other aspects of the course, students are expected to ground their final report in numbers and analysis, using the tools of management and data provided by the simulation. The presentation can be concluded with a focus on reflective learning. In terms of accountability, the independent judges are usually eager to discover their return on investment

and why the plan went well or badly. They often ask challenging questions about performance, strategy, tactics, competition, and the business logic behind all of these issues.

The "Verbal Communication Rubric" (Table 5) is used during final presentations and is completed only by the instructor.[5] The data for the last three offerings averaged 91.2%, 97.1% and 96.8%. Generally, these presentation scores are marginally improved over those observed during the business plan presentations. In a fashion similar to the executive briefings, the students appeared to exhibit a deeper understanding of the management of their simulated firms by the end of the exercise. This is not to say that all were successful in the management of their companies, but they understood the process, what they had done right and wrong, and what they needed to do to improve their performance.

TEAMWORK, LEADERSHIP AND PROFESIONALISM

Peer Evaluation Assessment

AICPA Core competencies and the AACSB encourage schools to develop teamwork, interpersonal skills, and collaborative learning among students. In the accounting masters program, equitable workload sharing, teamwork, leadership and professionalism are important course and programmatic objectives. In order to determine how well these behaviors are evident, a peer evaluation assessment tool was created. The merits of peer evaluations have been extensively discussed in the literature. See for example, Falchikov (1995), Gueldenzoph and May (2002), Cederblom and Lounsbury (1980), Dochy, Segers and Sluijsmans (1999), and Topping (1998).

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[5] From the independent judges' perspective, the initial business plan presentation (venture capital fair) takes approximately five hours plus travel time. Some drive two or more hours to participate in the event. The independent judges are invited to observe final presentations but often times work assignments limit their ability to do so. Whether the judges are able to attend in person or not, they are provided a full accounting of their teams' performance as well as that of their investment portfolio.

The peer evaluation assessment tool is presented in Table 6 and is collected twice (just after the business plan / venture capital fair and after the accountability phase). The peer evaluation rubric is provided to students on the first day of the course. Moreover, on the first day, the instructor assigns readings on teamwork, leadership and professionalism and those readings are discussed in the following class period just before the student teams are formed.[6]

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Insert Table 6 about here

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The peer evaluations suggest that students tend to be fairly positive about their teammates. Specifically over the last three offerings, the average scores have ranged from 96.8 to 97% and are fairly consistent across the entire exercise. The high peer evaluations may reflect 1) the strong emphasis placed on teamwork throughout the exercise via lectures, exercises and coaching, 2) the student's knowledge that his/her contribution and professionalism will be evaluated by his/her teammates, and/or 3) the student wanting to avoid personal problems and their repercussions. However, those students making deficient contributions are periodically observed; for example, across 101 students, the lowest student peer evaluation was 73.9%.

Furthermore, the instructor monitors team activities during the executive briefings and students may email the instructor to discuss team challenges. In addition, the instructor offers the option of an intervention if teams deteriorate to a point where they can no longer function. However, team problems have seldom arisen to the intervention level in the graduate program.

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[6] Assigned readings include the AICPA's "Core competencies," AICPA's "Downturn Presents Leadership Opportunities for B&I CPAs," AICPA Section 50, from the Code of Conduct ("Principles of Professional Conduct"), excerpts from "Leaders and Leadership" by Harry J. Bruce (chapter 1 of The Management of Strategy in the Marketplace), MSNBC.com's excerpts from "How to Be a Good Leader" by Jack Welch and Suzy Welch, "Ten Qualities of an Effective Team Player" from Dummies.com, "How to Become a Good Professional" by Gijo George (Erzine Articles) and "What Does it Mean to be Professional" from Yahoo Answers.com.

This may be partially because the LSIBS is offered near the end of the accountancy program and the program includes frequent team-based activities.

Rotation of Leadership

In the normal course of team-based projects, natural leaders tend to emerge and take a dominant role in managing the work. Without intervention, other team members are left in a follower role. In developing leadership and teamwork skills, everyone needs to obtain experience in being both a leader and a good team member (following and supporting the leader through their contributions). To broaden the leadership experience for all team members, the role of team leader is rotated throughout the later portions of the exercise.

The initial team leaders are elected during the first class session. Those leaders then assemble their team through a drafting exercise similar to the allocation of rookie talent by professional sports leagues. Teams usually consist of three to five persons. The elected leaders then act as president and chief executive officer through the business plan presentation (end of the Transition Phase as depicted in Figure 1). Subsequent to the venture capital fair, four periods remain in the simulation. During the final simulation periods, each team member serves as president and chief executive officer for one period with the following responsibilities:

- Assess challenges and opportunities.
- Facilitate communications within the team.
- Assign tasks to teammates, as appropriate.
- Remain accountable for the overall results.
- Handle their responsibilities in a professional manner.

Leadership rotation during the LSIBS has been incorporated into the course during three semesters and formally assessed twice. The first assessment was completed solely by the instructor and student scores averaged 91.2%, ranging from 87% to 97%. In the subsequent

semester, assessment was completed solely by the students. The students' assessments averaged 97%, considerably higher than the previous semester's instructor assessments; however, the lowest leadership assessment was 84% while the highest was 100%. Thus, on average, the students were more rewarding towards each other on average but more penal to those persons deemed under-performing with regard to leadership.[7]

The leadership evaluation signals to the students what is important in leading and supporting a team. By measuring these attributes, it increases the odds that the students will do them. Second, it provides feedback to the students so they can adjust how they work with others as they go forward in their career. As feedback to the instructor, it provides additional insight into why certain people are considered leaders on the team. This information can help administrators target what to improve or reinforce throughout the curriculum.

OBJECTIVE SIMULATION ASSESSMENT: PERFORMANCE SCORECARD

For some time, businesses have been using a critical tool to help measure performance across a myriad of dimensions and functional areas of the firm: the balanced scorecard (BSC, Kaplan and Norton 1992) allows managers to take a holistic view of the business (Atwater, Kannan and Stephens 2008; Dilla and Steinbart 2005), as opposed to optimizing certain areas to the detriment of others. While balanced scorecards and similar tools have proven invaluable for managers in the field, they also hold great promise for assessing students engaged in an LSIBS. In fact, most, if not all, LSIBS employ a performance scorecard in some form. Typically, the scorecard is used to evaluate a team's overall performance based on achievements within each

[7] The rubric to assess leadership rotation is similar in appearance to the leadership rubric presented in table 6, except that the dimensions for assessment included the following characteristics: assesses challenges and opportunities; facilitates communications within the team; assigns tasks to teammates as appropriate; remains accountable for the overall results; and handles their responsibilities in a professional manner.

business function. The objective (numerical) criteria specific to the simulation described in this paper includes measures of financial performance, market performance, marketing effectiveness, investments in the future, asset management, manufacturing productivity, creation of wealth, human resource management, and financial risk.[8]

The BSC is calculated at the start of each decision period based on the previous period's results. Each team receives both an overall performance score and detailed scores on individual (functional area) performance criteria. They also receive comparable numbers for the industry (competition) to facilitate benchmarking. Delving into the underlying calculations for each metric, it is possible to discover the root causes of performance shortfalls. The BSC also provides templates to help students understand how to develop formal analyses grounded in financial and non-financial numbers.

On the positive side, when judged using the objective criteria of the Balanced Scorecard as denoted in Table 8, approximately 90% of the accountancy teams performed satisfactorily or better; while 10% can be classified as struggling. Further analysis has revealed that the primary problem of those that struggle is that they could not earn a reasonable profit (return on investment) over the course of the exercise. This limitation was, in turn, driven by an inability to 1) satisfy customer needs, 2) develop widespread distribution, 3) drive production costs down via economies of scale, lean operations, and quality, 4) manage their financial resources, and ultimately 5) execute a successful business strategy.

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Insert Table 7 about here

[8] While standardized scorecards are often provided by LSIBS, formulating one's own scorecard is possible. For example, between 2000 and 2008, the instructor developed an in-house 18-metric BCS placing emphasis on measures of profitability, financial conditions, customer satisfaction, productivity and efficiency, and investments in the company's future. Because the LSIBS and in-house BSC results correlated at the 98-99% level, the instructor adopted the BSC provided by the simulation starting in 2009.

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FEEDBACK, CHANGE AND CONCLUSIONS

Shaftel and Shaftel (2007) observe that "a close relationship exists between the appraisal of student achievement and the evaluation of educational programs, because evaluating student outcomes may reveal the success or failure of educational programs." The information accumulated through these activities and assessments has helped the course instructor to adjust lectures, readings, and coaching. The data also provides feedback to other instructors and administrators regarding the curriculum that precedes the LSIBS course. For example, the course instructor was able to cause a change in prerequisite finance content because of feedback from the external venture capitalists (independent judges). The investors consistently marked students down because the students did not completely understand how to value their firm. The LSIBS instructor found that the finance professor had offered instruction on valuations. Jointly, it was determined that the material was adequate but that the students were not making the connection between relatively sterile classroom activities and the chaotic "real world" scenario set out in the LSIBS. Going forward, the finance professor agreed to adjust his approach to ensure that the students had a greater appreciation for an environment that embraces the complexities and ambiguities of the real world. The LSIBS instructor placed greater emphasis on the valuation material. Turning to communication, student skills present on-going challenges with regard to professional deliveries and over time the instructor has significantly increased the amount of material used to prepare student presentations. Finally, as noted above, the balanced scorecard results suggest that 10% of the teams essentially failed to develop a viable business in the face of challenging competition. To address this shortcoming, the instructor plans to allocate more executive briefing time in the last half of the LSIBS to those teams needing the most help.

In conclusion, we offer a learning strategy regarding the incorporation of a LSIBS in the accounting curriculum with the overall goal of enhancing accounting education. The simulation and add-on activities are relevant to preparing accounting students with a broader business understanding. Our experiences described herein suggest that the LSIBS and its related add-on activities help prepare accounting students to fulfill their important role as business leaders by refining their decision-making skills. The accounting instructor is able to challenge students to leverage their affinity for numbers and their willingness to approach decisions in an organized, disciplined manner. These activities build on the foundation of core business skills developed in the broader business curriculum by training accounting students in the thorough analysis and proper interpretation of financial and non-financial numbers. The totality of the LSIBS as described also pushes students to work in unstructured environments where new problems emerge throughout the exercise and some of those problems are of the students' own doing – less than optimal decisions in one period results in unanticipated challenges in the next. The uncertainty associated with dynamic market conditions and competitor play emulates the uncertainty of the real world and helps student develop a tolerance for and appreciation of ambiguity.

Our work may not be transferable to all college and university settings. Our description of a LSIBS is resource intensive, requires the majority of course time, and entails extensive team-on-one instructor interaction with students. Also, the most complex and comprehensive simulations have a steep learning curve for the instructor due to the many moving parts and possible outcomes for any given team and / or individual. Nevertheless, as demonstrated, a LSIBS can be used to help accounting students identify and exploit their competitive advantage

for the benefit of their clients and businesses, by levering their affinity for financial and non-financial numbers as well as their willingness to analyze problems in a disciplined fashion.

References

*AACSB Assurance of Learning Standards: An Interpretation (*2007). Tampa, FL: *AACSB International.*

Accounting Education Change Commission (AECC) (1990). Objective of Education for accountants: Position Statement Number One. *Issues in Accounting Education*, 5(2), 307-312.

AICPA (2000), *Core Competencies*, from the CPA Vision Project Final Report.

Ammon, J.L., S.K. Mills (2005). Course-Embedded Assessment for Evaluating Cross-Functional Integration and Improving the Teaching-Learning Process. *Issues in Accounting Education*, 20(1), 1-19.

Arel, B.M., S.B. Hughes and J.F. Sander (2011). The Personal Financial Reporting Project: A Student-Based Comprehensive Learning Project. *Issues in Accounting Education*, 26(4), 777-796.

Amatucci, F.M., R. Grimm (2011). "Reinventing" the Business Plan Process for Sustainable Start-Ups. *Journal of Strategic Innovation and Sustainability*, 7(1), 154-159.

Atwater, J.B., Kannan, V.R., & Stephens, A.A. (2008). Cultivating systemic thinking in the next generation of business leaders. *Academy of Management Learning and Education,* 7(1): 9-25.

Cederblom, D., & Lounsbury, J. W. (1980). An investigation of user acceptance of peer evaluations. *Personnel Psychology,* 33(3): 567-579.

Dilla, W., & Steinbart, P. (2005). Relative weighting of common and unique balanced scorecard measures by knowledgeable decision makers. *Behavioral Research in Accounting*, 17(1): 43-57.

Dochy, F., Segers, M., & Sluijsmans, D. (1999). The use of self-, peer and co-assessment in higher education: a review. *Studies in Higher Education*, 24(3): 331–350.

Duffy, T.M., D.H. Jonassen, eds (1992). Constructionism and the Technology of Instruction: A Conversation. Hillsdale, NJ: Erlbaum.

Eligibility Procedures and Accreditation Standards for Business Accreditation (2011). Tampa, FL: *AACSB International.*

Falchikov, N. (1995). Peer feedback marking: developing peer assessment. *Innovations in Education and Teaching International*, 32(2): 175-187.

Fosnot, C.T. (1996). Constructivism: A Psychological Theory of Learning. In *Constructionsim: Theory, Perspectives and Practice*, edited by C.T. Fosnot, New York, NY: Columbia University.

Gueldenzoph, L. E., & May, G. L. (2002). Collaborative peer evaluation: Best practices for group member assessments. *Business Communication Quarterly*, 65 (March): 9**.**

Hafner, J. C., & Hafner P.M. (2003). Quantitative analysis of the rubric as an assessment tool: an empirical study of student peer-group rating. *International Journal of Science Education,* 25.12: 1509-1528.

Jervis, K.J. and C.A. Hartley (2005). Learning to Design and Teach an Accounting Capstone. *Issues in Accounting Education*, 20(4), 311-339.

Kaplan, R.S., & Norton, D.P. (1992). The Balanced Scorecard: measures that drive performance. *Harvard Business Review*, 70: 71-9.

Kelmar, J.H. (1992). Business Plans for Teachning Entrepreneurial Behavior. *Education and Training*, 34(1), 30.

Krathwohl, D.R. (2002). A Revision of Bloom's Taxonomy: An Overview. *Theory into Practice,* 41 (4), 212-218.

Lavoie, D., A.J. Rosman (2007). Using Active Student-Centered Learning-Based Instructional Design to Develop Faculty and Improve Course Design, Delivery and Evaluation. *Issues in Accounting Education*, 22(1), 105-118.

Marketplace Business Simulations® by Innovative Learning Solutions, Inc. Knoxville, TN (2010): www.marketplace-simulation.com.

Mertler, C. A. (2001). Designing scoring rubrics for your classroom. *Practical Assessment, Research and Evaluation, 7*(25).

Nitko, A.J. (2001). *Educational assessment of students* (3rd ed.). Upper Saddle River, NJ: Merrill.

Pathways Commission (2012), *The Pathways Commission: Charting a National Strategy for the Next Generation of Accountants*, American Accounting Association and American Institute of Certified Public Accountants, July.

Shaftel, J. and T.L. Shaftel (2007). Educational Assessment and the AACSB. *Issues in Accounting Education*, 22(2), 215-232.

Springer, C.W. and A.F. Borthick (2004). Business Simulation to Stage Critical Thinking in Introductory Accounting: Rationale, Design and Implementation. *Issues in Accounting Education*, 19(3), 277-303.

Srianta, I., C.Y. Trisnawati (2010). Implementing of Business Planning Project with Experiential Approach: A Case Study of Entrepreneurship Teaching to Non-Business Students. *World Journal of entrepreneurship, Management and Sustainable Development*, 6(4), 325-333.

Swan, K., Shen, J., & Hiltz, S. R. (2006). Assessment and collaboration in online learning. *Journal of Asynchronous Learning Networks,* 10 (1): 45-62.

Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, 68 (3): 249-276.

Vinvent, P.S., S. Farlow (2008). "Start-a-Business": An Experiment in Education Through Entrepreneurship. *Journal of Small Business and Enterprise Development*, 15(2), 274-288.

Zamora, V.L. (2012). Using Social Enterprise Service-Learning Strategies in Introductory Management Accounting. *Issues in Accounting Education*, 27(1), 187-226.

Table 1
Large-Scale Integrative Business Simulations

Large-Scale Integrative Business Simulations	
Simulation Name (alphabetical)	**Brief Description and Website**
The Business Strategy Game by GLO−BUS Software, Inc.	The Business Strategy Game is an online exercise where class members are divided into teams and assigned the task of running an athletic footwear company in head-to-head competition against companies managed by other class members. http://www.bsg-online.com/
Capstone Business Simulation by CapSim Management Simulations, Inc	In Capstone Business Simulation, students run a $100 million company for five to eight years. Students begin the simulation with five products but can develop a portfolio of up to eight products. http://www.capsim.com
Glo-Bus by GLO−BUS Software, Inc.	GLO-BUS is an international simulation where the focus is on competitive business strategy. GLO-BUS is an online exercise where teams of students run a digital camera company in head-to-head competition against companies run by other class members. http://www.glo-bus.com
LINKS Enterprise Management Simulation and Supply Chain Management Simulation by Randall G Chapman	The LINKS Enterprise Management Simulation is a team-based, competitive strategy simulation designed for integrative business strategy course applications, usually competed over eight simulation rounds. LINKS firms are manufacturers in the set-top box industry and engage participants in all aspects of business strategy and profitable enterprise management. http://www.links-simulations.com
Marketplace ® Business Simulation - International Corporate Management (ICM) and ICM with Outsourcing by Innovative Learning Solutions, Inc.	Marketplace teams of three to five students build an entrepreneurial computer manufacturing and distribution firm. In the Outsourcing version, participants can become suppliers or resellers (distributors) only and must negotiate and secure contacts with other student teams to achieve successful supply chain management. http://marketplace-simulation.com/
Mike's Bikes – Advanced by SmartSims, Inc.	Mikes Bikes-Advanced is a strategic management simulation, combining practical hands-on decision making with real world modeling. Students learn the key concepts of business strategy as they run their own company within an online industry. http://www.smartsims.com/simulations/mikesbikes-advanced

Table 2
Learning Objectives to Which LSIBS Can Contribute

Course Learning Objectives • Identify the risks and opportunities in global markets. • Think strategically about a business enterprise, assessing its present competitive position, its long-term direction, its resources and competitive capabilities, the caliber of its strategic plan, and its opportunities for gaining sustainable competitive advantage. • Develop a cross-discipline understanding of business, including operations, marketing, production, distribution, financial and accounting.
Means By Which The Objective Is Accomplished
Strategic decision making and integration are hallmarks of LSIBS. Students learn that strategy formulation is insufficient; instead, the business graduate must skillfully execute that strategy, adapting to unforeseen problems and opportunities. The creation of value is not a single event, but an evolutionary endeavor. • LSIBS require complex and comprehensive decision making supported by appropriate business analyses. • Market, competitive, operational, and financial conditions unfold over time, causing problems and opportunities that cannot be fully anticipated. • LSIBS require students to determine how to create and deliver value to customers via managing the entire value chain, including most or all of the following activities: marketing, procurement, production, human resources, sales, and distribution. • Students are often required to apply various financial theories as they contemplate the firm's value, their investment options, capital structure, and risk. Financial reporting and analysis offer key inputs to SWOT analyses and often provide impetus to change in strategy and tactics.
Course Learning Objectives • Analyze business opportunities and alternative strategies. • Analyze company performance with a goal of leading subsequent decisions to achieve competitive advantage.
Means By Which The Objective Is Accomplished
Students are challenged to properly prepare market research, profitability, cost-benefit, capital structure, human resources, and operational analyses in a systematic and disciplined manner. The data affords students the ability to use spreadsheet tools, graphical analysis tools, statistical packages, and management-science techniques to analyze their data.
Course Learning Objective • Work together in a supportive and effective way.
Means By Which The Objective Is Accomplished
LSIBS include many complex activities, requiring the division of responsibility, development of functional expertise and collaboration to be successful. Also, the teams face considerable stress because 1) teams can fail, 2) everything is interconnected, and 3) the market is dynamic as competitors adapt to each other's tactics. Team members must work to find the decision balance that will yield the highest performance.
Course Learning Objective • Unstructured problem-solving. • Tolerance / appreciation for ambiguity.
Means By Which The Objective Is Accomplished
LSIBS decision periods bring about new challenges and opportunities, many caused by competitor moves and innovation, some caused by their own misjudgments. Repeatedly, students must analyze each aspect of the business to maximize value, including operational fixes and effective competitive responses.

Table 3
Executive Briefing Rubric

Date:

	0-69% Inadequate	70-79% Needs Improvement	80-89% Adequate	90-100% Thorough / Thoughtful	Score	Score	Score	Score	Score
TEAM NAME:				STUDENT NAME:					
Strength of Logic, Integration and Understanding	Terse presentation of conclusions or actions taken.	Presented decisions but the business logic for the decisions was only partially developed and/or sometimes weak or unclear.	Adequately presented actions taken with a logical argument: however, a more comprehensive business analysis could have made a stronger case.	A strong logical argument employing business concepts, principles and ways of thinking. Decisions were supported by a comprehensive and integrative analysis of market, operational, and/or financial data.					
Ability to Answer Questions	When prompted for an explanation, the student was unable to answer (e.g., needed help from teammates)	When questioned, student demonstrated a partial or limited understanding.	When questioned, student demonstrated an adequate understanding.	The student was able to think on his/her feet and respond to wide-ranging questions and challenges in a thoughtful, confident manner.					
Management by the Numbers (using the tools of management)	No data or analysis was presented to support the student's plans, decisions, etc.	Limited use of data or analysis to support the student's decision. More or better quantitative information is required.	Student adequately used the quantitative data to support his/her arguments and decisions.	Comprehensive use of quantitative data to support the student's arguments. Student effortlessly incorporated hard data when making a decision (may have used more advanced tools of management).					

Table 4
Instructor's Rubric to Evaluate Business Plans

Team Name:	**0-69%** **Inadequate**	**70-79%** **Needs Improvement**	**80-89%** **Adequate**	**90-100%** **Thorough / Thoughtful**	Score
Strategy • Overall low cost provider • Focused low cost provider • Broad differentiation • Focused differentiation	Choice is flawed and potentially disastrous. For example, the team has chosen a low cost strategy but selected a factory in a locale with very high labor costs.	The strategy is not inherently flawed but the students have not developed a plan to ensure that the strategy can be successful. In other cases, some of the tactical choices appear in conflict with the overall strategy suggesting that the team does not understand their choice of strategy.	The strategy choice is adequate and the student seems to demonstrate a reasonable understanding of what the strategy means and how to implement it towards a successful future.	The strategy is well articulated and inherently consistent throughout all tactical decisions.	
Target markets	Targeted market segments do not have much in common; synergies are lacking.	Targeted segments have natural synergies but the firm has selected a segment that is most likely outside of its ability to serve adequately. And/or team is diluting its efforts by taking on a third segment before it establishes itself in its two primary target segments.	Targeted segments have natural synergies and are within reach of the firm's resources to exploit.	The selection and progression of target market priorities is likely to lead to an efficient and effective exploitation of multiple segments by Q8. The firm has the resources to provide the needed R&D & production capacity, plus it has demonstrated that it can deliver high value before expanding into new segments.	
Distribution channel Sales offices, web centers and distribution	Very limited expansion to new geographic markets.	Slow progression into multiple markets and/or sales channels. Expansion plan is insufficient to allow the firm to compete on a world scale.	Steady expansion into the world market leading. Firm has the potential to become an international competitor. It there is a limitation, it is that the expansion is not well integrated with other activities.	Steady expansion into the world market with a growth pattern that reflects a strong competitive position, the synergies inherent to multiple channels, and economies in terms of advertising, shipping, staffing.	
Marketing Development of Brands and Advertising	No development of new brands. Inadequate advertising.	Limited introduction of new brands (one or two new brands over the course of a year). Brand selection, price points and advertising expenditures are likely to be insufficient to keep up with the competition.	Steady introduction of new technology and new brands. Focus is on bringing out the "best brand" within a segment. Brand selection is not a priority. Advertising growth is strong and is likely to lead the competition.	Steady progression of brand introductions to increasingly meet customer needs. Portfolio of brands reflects multiple price and value points within a segment. Advertising expenditures are strong and synchronized with segment expansion, new product introductions and geographic expansion.	

Table 4 (continued)
Instructor's Rubric to Evaluate Business Plans

Team Name:	**0-69%** **Inadequate**	**70-79%** **Needs Improvement**	**80-89%** **Adequate**	**90-100%** **Thorough / Thoughtful**	Score
Research and development (R&D)	Shared intellectual property (IP) choice is potentially disastrous for company.	Licensing and cross licensing partially justified; outcome is hard to predict.	Thoughtful development of licensing and cross licensing strategy; outcome should be positive.	Exceptional development of licensing and cross licensing strategy; outcome should be positive.	
Manufacturing Expansion and production management	Plan will result in significant shortages of or excess inventory levels.	Plan will meet sales demand and achieve reasonable inventory levels in most quarters.	Plan will meet sales demand and achieve reasonable inventory levels.	Plan is optimal to meet sales demand and achieve reasonable inventory levels.	
Manufacturing Changeover R&D	Choice is a very limited investment and is potentially disastrous for company.	The investment is less than optimal and will potentially limit future growth.	The investment is most likely adequate but possibly too small (or too large) given the scale of the company.	The investment appears optimal given the scale of the company.	
Manufacturing Quality Investments	Choice is a very limited investment and is potentially disastrous for the company.	The investment is less than optimal and will potentially limit future growth.	The investment is most likely adequate but possibly too small (or too large) given the scale of the company.	The investment appears optimal given the scale of the company.	
Finance Mix of debt and equity and expected returns	Scheduled borrowings and loan repayment exceeds the debt capacity of the firm.	The plan is undercapitalized, firm has not scheduled enough equity and debt to achieve reasonable investments in future.	There is sufficient debt and equity to invest in new assets, sales outlets, R&D and factory improvements, but investors may perceive some risk if planned cash balanced are too low.	Optimal mix of equity and debt that allows the firm to grow aggressively but without serious risk.	
Details and integration of tactical plan and pro forma statements	Failure to fill in all relevant cells in tactical plan and/or pro forma financial statements (no estimate for total assets, licenses, changeover, etc.). Inconsistencies between tactical plan and pro forma financial statements (numbers are not the same for the same financial activity).	All cells are filled in, but there is a lack of correspondence between various cells or entries. For example, productivity estimates are not in sync with progression and competitiveness of worker compensation or demand is projected to increase without a corresponding increase in marketing and sales efforts.	Tactical plan and pro forma financial statements are complete and entries are linked and consistent across functions. The plan may not be sufficiently ambitious, or ambitious plan is not fully supported in the tactical details.	Tactical plan and pro forma financial statements are well integrated. There is a logical progression of investments and activities that fully support each other and add substantially to the investors' confidence that everything is attainable.	

Table 5
Rubric to Evaluate Business Plan Communications

Verbal Communication Rubric					Team Name	Team Name	Team Name	Team Name	Team Name	Team Name	Team Name	Team Name
					Rank	**Rank**	**Rank**	**Rank**	**Rank**	**Rank**	**Rank**	**Rank**
Rank Each Team: Executive Summary												
Presentation Assesment	**0-69%**	**70-79%**	**80-89%**	**90-100%**	**Score**	**Score**	**Score**	**Score**	**Score**	**Score**	**Score**	**Score**
Meets Goal: Sparks Interest (1) VC want to associate with success; (2) VC want to make money; (3) VC need to believe that they can trust the team members; (4) VC must like their investee management team.	Does not meet or meets a few of the assignment goals	Meets many of the assignment goals	Meets almost all of the assignment goals	Meets or exceeds all assignment goals								
Please use the following to judge whether the presentation goals were met:												
Communication skills/Style	Persuasive presentation: Eye contact, voice modulation, enthusiasm, confidence, focused on main points											
Organization	Logical and effective organization: Opening statement catches audience interest and stays focused											
Quality of wrap up	Persuasive and effective wrap up / closing statement											
Graphics/Media	Professional slides: Graphics/media effectively support/reinforce and guides the presentation											
Mechanics	Free from grammatical and spelling errors											
Individual Presenter Scores	Name											
	Score / Ranking											
	Name											
	Score / Ranking											
	Name											
	Score / Ranking											
	Name											
	Score / Ranking											
	Name											
	Score / Ranking											
Rank Each Team: Presentation												
Rank Each Team: Question & Answers / Negotiations												

Table 6
Peer Evaluation (Within Group)

Name:_____

Assignment:_____ Date: _____

Given the attributes of good team participation listed below and considering our group's effort (input) and success (output), allocate (including yourself) the workload among team members and rate each person (including yourself) on the other dimensions on a scale of 0% to 100% - see syllabus for grading scale where generally 90-100=A and 80-89 = B:

Name	Workload		Character / Teamwork	Competency / Leadership	Professional	Explanation less than 80%*
	=100%					

At a minimum, being a good team participant means being a trusted team member:
Character and Teamwork

(a) Attending meetings, prepared and on time
(b) Making yourself available to meet with teammates at reasonable times
(c) Completing a "fair share" of the total work load
(d) Listening to teammate's ideas and valuing everyone's contributions

Competence and Leadership

(e) Contributing high quality ideas
(f) Contributing high quality written work
(g) Demonstrating a professional level of responsibility to the team: "get it done"
(h) Demonstrating leadership when your unique abilities were needed by the team

Professionalism

(a) Contributing expertise to the overall success of the team
(b) Demonstrating ethical behavior, commitment and personal accountability

* Note: When allocating workload and assigning group members percentages, deficient scores should NOT be a surprise to fellow group members.

Table 7
Distribution of Cumulative Balanced Scorecard Scores for 33 teams

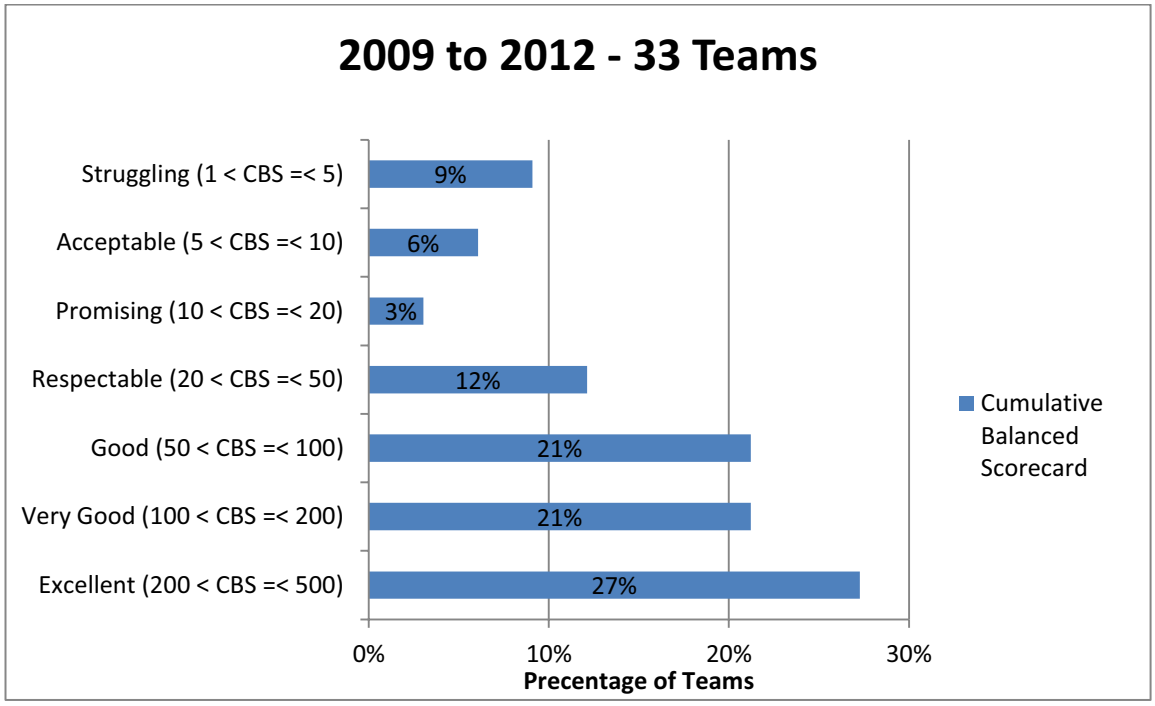

Figure 1
Simulation Pedagogy