

Developments In Business Simulation & Experiential Learning, Volume 24, 1997

Business Plans, Case Studies and Total Enterprise Simulations: A Natural Co-existence

S. Dolly Malik. SUNY College at Geneseo
Barbara J. Howard. SUNY College at Geneseo
Kenneth O. Morse. University of Waikato

ABSTRACT

Total enterprise business simulations and the case study method have been the primary learning tools used to incorporate an integrative component within the business curriculum. This paper discusses a third learning tool, which may be used as a supplement to or a substitute for either of the other tools: the business plan. The business planning process creates a real-life simulation situation for students, which allows them to integrate the various business functions to create a meaningful and relevant learning experience. The paper discusses how this learning tool is similar to and different from the case study method and the total enterprise simulation.

INTRODUCTION

Many business schools are pushing toward construction of an undergraduate capstone experience, which encourages students to integrate each of the separate functional components of business into a holistic body of business knowledge. For quite some time now, there has been a debate among members of ABSEL with respect to the benefits of using a total enterprise business simulation over the case study method as a learning tool which incorporates the integration component (i.e., Miles, Biggs and Schubert; 1986; Gosenpud and Washbush. 1993; Leonard and Leonard; 1995). This paper discusses a third learning tool, which may be used as a supplement to or a substitute for either of the other tools: the business plan. The business plan is an experiential technique designed to provide students with an opportunity to develop their analytical, integration and decision making skills. A business plan contains a formal review of all facets of a business' operations, from start-up costs to production plans to firm organization and ownership structure; thereby, bringing together salient portions of important business functions in a single exercise. Therefore, this real-world simulation provides a logical foundation for integrating the segmented components of learning which are a standard of the typical college curriculum.

While the business plan exercise is often used in many entrepreneurial courses, there are few discussions of the pedagogical issues associated with this exercise in academic publications. Furthermore, the business plan simulation has the potential for very broad application in the business curriculum. In this paper, after discussing the framework of the business learning process, we will identify some of the advantages of the business plan as a real life simulation.

Finally, we will discuss how the business plan simulation may be used in conjunction with the case study method or a total enterprise simulation (TES) to provide students with an in-depth exposure to the integrative nature of conducting business operations.

The Business Plan

To date, most people equate simulations with popular computerized simulations. We contend that exercises which put students through real-world experiences are also simulations. Over several semesters, we have included business plans as formal course requirements in our management curriculum. The purpose of using these plans has been to give the students a situation, which requires them to integrate their acquired skills and knowledge while developing the students' ability to think critically, be creative and conduct practical analysis with realistic financial constraints.

A business plan is "a written guide to planning and organizing a business to reach a projected goal" (SBA. 1983). As such, the SBA recommends all business firms, large or small, have a formal plan. In order to create a business plan, a decision maker must conceptualize, on the basis of market and competitive research, the design of all the operations necessary to start up a new business or expand an existing one. An attractive feature of the business plan is its cross-disciplinary focus, in that it brings together significant portions of accounting, finance, management, marketing, logistics, production and service operations as well as personnel management in a single exercise. Further, the business plan requires strategic thinking as well as knowledge of the normal day-to-day operations of the firm.

The business planning process also forces the decision-maker to come to grips with the constraints imposed by both the internal and external environment. Internally, the decision-maker must face the financial constraints imposed by limited capital and imperfect, or limited, information. Externally, the manager is constrained by the unknown behavior of competitors as well as the uncertainty of the consumer marketplace and the economic environment. The final outcome of the business planning process should be the identification of a market niche for the purpose of conducting a viable business operation. Within this market niche, the firm must fit its mission with both its internal and external

Developments In Business Simulation & Experiential Learning, Volume 24, 1997

environment in order to be successful. As designed, the business plan simulation allows participants to experience a real-world project which is designed to utilize and enhance their ability to integrate their knowledge of business processes in a manner that also develops their analytical, decision making and creative skills.

Analysis is the centerpiece of this simulation. The advantages of the business plan simulation are significant. The business planning process allows participants to make the link between analysis and integration. After analyzing the environment and synthesizing the relevant market-related information, the planning process requires planners to identify where they can best compete - their niche—and how they can best compete--the design of their competitive strategy. Further integrating their research of the marketplace, planners must establish their financial expectations for the firm and determine if their strategies are financially feasible. Developing financial projections requires participants to integrate the external environment of the business with its internal environment, and to explicitly quantify their assumptions about the financial and operating characteristics of their venture. Thus, students must clearly relate financial statements to the rest of the business plan. In doing so, they learn to work within capital' constraints similar to those they would face in the real world. The final integrative step occurs when, given the environment, the strategy, and the financial constraints, participants design an organizational structure, which will support the implementation of their defined strategy.

From a decision making perspective, the business plan presents some interesting dilemmas to participants. Both rational and emergent decision processes are necessary in order to develop a viable business organization. From a rational perspective, participants must establish an organizational mission, goals, strategies, and structure, which maximize the fit between the business' operations and the external environment. As they develop their plans, students may return to various information sources to discover answers to questions about the firm's environment, as well as their competition. This requires the modification of early draft plans as the broader competitive picture develops. Furthermore, since the planning process is long term, the plan must be continually updated to attempt to the changes in the external environment. This type of continual adjustment to the business plan adds a component of the emergent decision making process to the design process. This is a beneficial aspect of the business plan simulation because emergent decision making is the predominant decision making style in the business world (Quinn, 1981). Since business education tends to emphasize the rational approach to decision making where extensive planning leads to the choice of the best possible solutions, the emphasis on the need to revise business plans in conjunction with external environmental changes creates a more realistic

scenario of "real-world" decision making for students.

In the business plan simulation, participants must determine what type of business they would like to develop and operate; a freedom to develop a start-up operation, which is restricted only by their financial constraints. The financial constraints actually stretch students' creative skills by forcing them to adapt to restrictions similar to those that would be imposed in the real world while still achieving the objective of creating a new business. In addition, by placing the onus of idea development on the participant, the planning process creates demands for creative action since control of the plan rests entirely in the hands of the participants. The facilitators only give the participants the outline of the standard components of a plan, from which they have to generate the actual content of the plan. Very few projects allow participants to develop their creative skills in a realistic format like the business-planning project.

As with any exercise, the academic environment imposes limitations on the ability to construct a truly realistic exercise. The availability of source material in the form of written documentation, coupled with the diversity of sources of reliable information imposes a constraint on business plan construction. Library resources are increasingly expensive, and compendia of viable firm and market data become dated rather quickly. While the development of an international electronic network of resources promises improvement in the availability of such resources in the future, it also promises the possibility of inundation of data flow.

Likewise, these exercises are generally limited to a single semester or quarter, wherein the curriculum is divided into finite and measurable components for the convenience of record keeping. While "quick response" is a general industry standard, most planning activities are developmental in nature, and incremental in implementation. Given the single semester or quarter time constraint, neither of these realistic activities is likely to be obvious to the student through such exercises. Of course, continuing into a second semester would improve the probability of achieving this learning objective, but curricular constraints may limit that opportunity.

Structurally, it is likely that some students may have a previous background in one or more industries, which gives them some distinct advantages in this short term planning environment. Because speed of acquisition of information is one of the distinct limitations to this type of exercise, those with accumulated human capital are likely to have an early advantage. This is especially true as the undergraduate student population incorporates more older students, and those reentry students returning to complete earlier educational programs. This can have some positive transfer effects. This,

Developments In Business Simulation & Experiential Learning, Volume 24, 1997

however, may not be the case since groups tend to divide labor along lines of comparative advantage, resulting in the maintenance of individual expertise. This specialization may significantly boost the progress of that group over others not so well endowed. While this is a distinct drawback, it is not unrealistic in the work environment.

BUSINESS PLANNING v. TRADITIONAL CASE ANALYSIS

The business plan goes beyond the traditional case method in several ways. While both the case study and the business plan focus on providing students with opportunities to develop their analytical skills, the business plan starts the student on the analytical journey *tabula rasa*, the case study provides students with a structured set of facts that they must use in doing their analysis. In the business plan situation, students must find this information for themselves prior to analysis. Second, the case study often directs students to a dominant problem with which a pre-existing organization must grapple. The business plan generates problems as part of the emergent decision making process required to start up a business, without suggesting such dominant problems.

As was discussed earlier, integration skills are a key component of any capstone exercise. Integration skills are not normally the outcome of case study analysis: rather, the case study relies on decomposition, as well as after-the-fact review, to demonstrate one of many approaches to analysis. Furthermore, case studies require a great deal of direction from the instructor to illustrate the cognitive links between case material and other relevant content (Walters and Marks, 1981). Wexley and Latham (1981) also point out that learning from a case method often results in transfer of training problems. In business planning, the emphasis of the learning is on the PROCESS of constructing a business plan rather than on the business itself. Therefore, the learning achieved from the business plan is likely to be more generalizable to other business situations/conditions. Thus, another advantage of using the business plan as a capstone exercise is the ability to expand beyond the capability normally attributed to case study analysis.

The integrative thrust that most case studies have is very different from that of the business plan. The case study presents the student with a situation where they must apply the knowledge that they have learned to a set of facts, which they are required to integrate. The business plan requires students to actually integrate all of their learning to generate a set of decisions. This is not to say a student does not integrate knowledge when doing a case study, but the planning process moves that integration to a greater level of understanding, so that it may form the basis of making decisions. For instance, case studies normally involve analyzing a given set of financial statements versus the business plan, which requires creating a set of *pro forma* statements from scratch. Creating projected financial

statements is a much more involved and in-depth process than analyzing existing statements. In a case study situation, participants do not need to understand how the numbers in the financial statements were derived. On the other hand, developing financial statements for a start up operation or a new business phase forces students to make and justify assumptions about how and where their operation is going to generate financial capital so that they can estimate future financial operations.

In terms of decision making, the case study process focuses on the rational decision process. Since the analysis of the case study relies on hindsight, participants may be as rational as they can be with the given information. Case studies generally identify the major problems facing the operation as part of the presentation of the facts of the firm. Further, since participants are only given a certain amount of information, it requires less cognitive processing to engage in rational analysis. The planning exercise, especially when it is designed to make students start the firm from scratch, confronts students with so much information that it is almost impossible to engage in the rational decision making process for the majority of the decisions that students must make. Therefore, the emergent decision making process becomes the primary decision model.

Finally, the case study process allows very little room for creativity in the decision making process. The company is established, the problem identified, the facts of the case given, and all that remains is for the student to generate an analysis. Creativity is further limited in the case study because the presentation of the facts often sets up participants' expectations that there is a "correct" solution since they can often find out what the case firm actually did. The Business Plan simulation provides no information to the participants other than the issues, which must be addressed within the business plan. Therefore, issues and information are not given in a neat factual presentation as is true with a case study. Such lack of structure forces students to make assumptions and collect data to support those assumptions. The student must choose what information to gather, how to analyze it, which direction to take the start-up operation, what type of business to develop, how to structure the organization, what funds to generate and where to raise them, and how to tailor their business operations to their financial limitations. Finally, the process makes students explain the rationale behind the decisions that they finally chose, and to justify those choices. The entire process forces a student to come up with the necessary information, thereby instilling creative thought into each step of the process. Likely, more so than with the case study, the student becomes an active participant in the decision process as a stakeholder: after all, the enterprise is their idea, and they have a significant investment of time and energy in developing their proposal. In our opinion, few

Developments In Business Simulation & Experiential Learning, Volume 24, 1997

academic exercises bring the student to this brink, as would happen in their post-collegiate employment. From this perspective, the capstone exercise really does provide a capstone experience.

BUSINESS PLANNING v. TOTAL ENTERPRISE SIMULATIONS

While both the Business Plan (BP) and Total Enterprise Simulation (TES) are very comprehensive and integrative learning tools, they do differ in their strengths and their weaknesses. These two methods of learning also differ in the way that they provide participants the opportunities to develop their analytical decision making and integrative skills as they utilize their creativity.

As stated above, the BP requires participants to analyze a large variety of information at each step of the exercise. The TES also requires considerable integration of information in order for the participants to play the simulation. The difference is that the TES provides participants with the information that they need to do the exercise, whereas the BP requires research to identify and gather the relevant information. Furthermore, the TES requires the analysis of basically the same type of information over time, while at each step of the BP, participants must analyze different types of information to move the project towards completion. There are several TES which do try to incorporate new environmental information over the course of the game but the essential components of information remain the same. Another difference between the two learning tools is that the TES provides participants with outcome feedback that is related to the decisions that they have made and requires them to analyze this information in order to learn what was successful and what was unsuccessful about their decision making process. The BP lacks this important feedback loop since students do not usually implement their business plans.

From a decision making perspective, there are a number of differences as well. Both the TES and the BP require participants to make decisions, which will set the direction of the firm that is the focus of their projects. The TES defines the firm, its market and the constraints for the participants while the BP requires that the participants define their own firm, its environment and the relevant constraints. The TES is focused on providing experiences which emphasize the rational decision making approach because the way TES are constructed, there is likely to be an optimal strategy which generates the maximum outcomes for the decision makers (i.e., the most profit the best ROI). The use of emergent decision making is more implicit in the process of playing the game because decision makers often adapt their decisions for the next period based upon the performance feedback received. The BP places an emphasis

on both the rational and the emergent decision making approaches. The participants have to be rational when deciding which niche to exploit and how to do it. The emergent decision making occurs when business plans are changed and adapted to fit the changing external and internal business environment. The range of decisions made to complete the BP project are much broader than those necessary to play the TES because none of the organizational factors are pre-decided and all require explicit consideration by the decision maker. Therefore, BP exposes participants to a wider range of decision situations than the TES. In contrast, the TES provide participants dynamic decision situations which result in outcomes that impact subsequent decisions; thus, incorporating a performance feedback loop. Both of these methods create a situation where decision making is autocorrelated (e.g., that a decision at TI impacts the decision at 1'2), it is just the context of the decisions that differs. In the TES, the autocorrelation arises from previous performance outcomes while, in the BP, initial strategic choices limit the subsequent development of the business (i.e., your strategy will impact the type of structure you select).

As with the other skills, both the TES and the BP provide a number of opportunities to develop integrative skills. Both the TES and the BP make the participants draw information together on all components of the business in order to complete the simulation exercise. Due to the feedback component, the TES also allows participants to integrate outcome performance with subsequent decision making. In addition, by having different groups of firms operate within the same industry, the TES integrates the competitive component into the simulation process. While this competitive feature is lacking in the planning process, *per se*, it can be interjected by the instructor. For example, if, in the grading process, significant weight is placed on profitability and plans are graded on their profit potential the instructor can insert the competitive component into the BP.

Most TES elicit creativity from their participants by allowing different strategies to be implemented during the course of the simulation. In other words, different participants can use different strategies and/or the same team can use different strategies over the course of the simulation. The TES is limited in the amount of creativity allowed because of the standardization factor and the level of detail that must be pre-determined prior to the development of a TES. The BP, on the other hand, fosters creativity at every step of the process. As described above, the entire responsibility of developing a business operation is in the hands of the participants. The only constraints on the participants are those imposed by the business' internal and external environment--particularly, the financial limits. This inserts another degree of realism into the planning process.

Developments In Business Simulation & Experiential Learning, Volume 24, 1997

THE INTEGRATIVE LEARNING TOOLS: A NATURAL CO-EXISTENCE

Tue BP and the Case Study

While there have not been examples of exercises which have combined the case study method with the BP reported in the literature, the two exercises, . due to their complementary strengths, could easily be combined to create a complex learning experiences.

if participants are asked to do a case analysis on a particular firm, a natural extension of this learning process would be to ask them to then do a business plan for that firm. The planning simulation would be geared toward demonstrating how to implement the solutions the participants generated for the problems presented in the case. This combination requires an analysis of the case firm AND a plan for the continual operation and success of the company. This combination would be particularly useful if the instructor selects cases about firms, which are faced with downsizing or expansion plans. Participants would be required to complete a business plan for these specific situations, which would allow them to develop an understanding of how plans are used within a continuing operation. The rational decision making emphasis of the case study method could easily meld with the emergent decision making required for this type of planning simulation. Adding the BP to the case study method allows the participant to engage in the planning process but within the constraints of the facts and history of the *firm* presented in the case.

The BP and the TES

A natural combination of learning techniques would be the use of the BP with the TES. Participants would be asked to create a plan for a *firm* within the industry used in the TES and then, the participants would have the opportunity to implement the plan by playing the game. The MARKETPLACE (Cadotte, 1988) actually suggests this combination as part of the simulation. There are also a few reports of this type of combination in the literature.

Anderson and Lawton (1992) actually compared the TES performance of teams which prepared formal annual plans with those that did not in a study designed to assess whether or not learning is related to YES performance. They found that the use of formal plans related to a team's financial performance on the simulation. The authors report that TES performance did not have significant relationships with any other learning measure. The article does not specify what the students were required to address in the formal annual plan so it is difficult to assess how closely these plans resemble a business plan as defined in the current paper. Still, this study does suggest that a planning component to the TES experience may increase participants' learning.

Curran and Hornaday (1987) also combined formal planning with playing a TES for their students. The primary purpose of the study was to examine whether planning was related to TES performance and student satisfaction. In this study, the researchers found no significant difference in performance or satisfaction between groups that were required to write a formal long-range plan and those that did not. In a second study, however, the results showed that there was a clear difference between the performance of the planners versus the non-planners (Hornaday and Curran, 1988). Specifically, the planning teams performed better than the non-planners in their earnings, stock prices, EPS and ROI. The non-planners actually had less efficient operations with large asset-laden firms, higher D/E, and more loans. Interestingly, there was no difference between the planning teams and the non-planning teams in terms of satisfaction with the simulation (Hornaday and Curran, 1988). As with the Anderson and Lawton article, not enough information is given about the exact requirements for the format plans to determine whether they meet the characteristics of the BP but the outcome was the same: IFS performance increased as a result of participants engaging in the planning process prior to doing the computer simulation.

These studies suggest that the use of BP with *TES* can lead to increased learning for the participants. This, inspite of the fact that writing a BP for a YES situation where many of the internal and external environmental components of the firm are constrained by the limitations of the game, shows the power of the planning process as a learning tool. This fact, while not widely documented in the literature, appears to be acknowledged by many academics. Anderson and Lawton (1992) conducted a survey to determine what methods are used for evaluating student performance on TES. Their results found that written plans were an evaluative component of TES performance assessment for 16% of their sample.

As discussed previously, the real strength of the BP as an integrative learning tool is the opportunities for students to start a business from scratch and establishing their own constraints by having to make all of the decisions based on their own research and analysis. Using the BP with a TES limits this creative aspect of the plan. However, if more YES are developed as open systems, as suggested by Patz (1993), the inherent flexibility of the BP can be more fully exploited when used in conjunction with the TES.

Another way that the BP and the YES may be combined has not been reported in the literature. It is possible for the instructor to use the BP as an intervention in the TES learning process. For example, the participants may start the TES game and play it for a few decision periods. Once they have an understanding of the game and have generated some performance information, the instructor may make them suspend play until they develop a formal business plan. Upon completion of the BP, the participants are asked to play

Developments In Business Simulation & Experiential Learning, Volume 24, 1997

several more decision periods of the YES to see if there are any significant gains in their performance and learning because of the planning intervention. Using the BP in this way shows participants the importance of having some sort of plan when they are "running" a company.

While most reports of the combination of the two integrative tools have used the BP first and then had the participants engage in the YES, a good learning situation may be created by having the participants first play the YES and then, based upon their learning during the YES, develop a BP for a start-up operation in the TES environment. In this way, the participants are exposed to the creative and integrative components of the BP simulation after having developed some experience of running a firm within a particular industry. Since most start-up operations are attempted within industries that the entrepreneur has some familiarity with, this combination adds another dimension of realism to the simulation process.

CONCLUSIONS

As is clear from this discussion, all three methods create numerous learning opportunities. There does not appear to be one "best" way to incorporate integrative learning into a course curriculum because all three techniques, while emphasizing similar processes, also have very different objectives. For this reason, it is not at all inconceivable that the optimum integrative learning will occur with the use of all three methods.

The purpose of this paper was to describe the use of a business planning exercise as an integrative tool and to explore its advantages and disadvantages with respect to very popular integrative learning tools: the case study method and the TES. After this review, several future research directions are clear. The effectiveness of the BP in teaching contextual material should be empirically tested. To date, only the affective responses of participants have been evaluated (Morse, Laschenski and Bossung, 1996). As specified earlier by Malik and Howard (1996), TES should be evaluated on the basis of its effectiveness at teaching process issues. The same recommendation applies to the business planning simulation since such a large component of this project is process-application. Finally, simulation facilitators should consider the possibility of integrating the BP with the TES and then empirically assessing the learning of both contextual and process issues.

REFERENCES

- Anderson, P. & Lawton, L. (1992) A survey of methods used for evaluating student performance on business simulations. Simulation & Gaming, 23(4), 490-98
- Anderson P. & Lawton, L (1992) The relationship between financial performance and other measures of learning on a simulation exercise. Simulation & Gaming, 23(3), 326--340
- Cardotte, Ernest (1988) MARKETPLACE, Times Marion Press
- Curran K. & Hornaday, R. (1987) An Investigation of the Relationships Between Format Planning and Simulation Team Performance and Satisfaction. Developments in Business Simulations and Experiential Exercises, 14, 43-46.
- Gosenpud, J. & Washbush, J. (1993) Comparing the Simulation with the Case Approach: Again! But, This Time Using Criteria Appropriate for the Simulation. Developments in Business Simulations and Experiential Exercises, 20, 126-133
- Hornaday, R. & Curran, K. (1988) Formal Planning, Simulation Team Performance and Satisfaction: A Replication Developments in Business Simulations and Experiential Exercises, 15, 17-21
- Leonard L & Leonard, T. (1995) Graduates' Views on the Use of Computer Simulation Games Versus Cases as Pedagogical Tools. Developments in Business Simulations and Experiential Exercises, 22 83-87.
- Malik, S.D. and Howard B. (1996) How Do We Know Where We're Going If We Don't Know Where We Have Been: A Review of Business Simulation Research. ABSEL, v.23, P-49-53
- Miles, W., Biggs, W. and Schubert, J. (1986) Student Perceptions of Skill Acquisition Through Cases and General Simulation. Simulation and Gaming, 17(1), 7-24
- Morse, K., Laschenski, J. & Bossung, S. (1996) "Teaching Across Disciplines" an experiment in multiple course team projects". Journal of Private Enterprise Education, 7, 227-240.
- Patz, A. (1993) Open System Simulation In J. Gentry's (ed.) Guide to Business Gaming and Experiential Learning, New Brunswick: Nichols, 159-176.
- Quinn, R. (1981) Logical Incrementalism NY: Scott-Foresman.
- Walters, O. & Marks, S. (1981) Experiential Learning and Change, NY: J. Wiley and Sons.
- Wexley, K. & Latham G. (1981) Developing and Training Human Resources in Organizations Glenview, IL: Scott, Foresman.
- U.S. Department of Commerce Small Business Administration (1983) Creating Your Business Plan, (Washington D.C.: U.S. Government Printing Office), Pub. 62-48.