

# Developments in Business Simulation & Experiential Exercises, Volume 8, 1981

## IMPROVING THE LEARNING OF A BUSINESS SIMULATION GAME BY INCREASING THE PROCESS CONTENT

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### ABSTRACT

Business games have been used in management education for over twenty years, ranging from simple decisions for specific functions to more complex games which attempt to integrate the various tasks of management and the environment of business. The success of these efforts, however, has been mixed. Most agree that the gaming situation heightens interest and participation, and the quantitative results provide feedback. Gaming can also teach strategy-making, goal-setting, and interpersonal factors in organization decision-making, although these elements have been more difficult to replicate. As a result, some valuable learning is lost. This paper presents an attempt to capture process components, thereby enhancing the overall game experience for the students.

### THE M.B.A. MANAGEMENT GAME AT S.U.N.Y. -- ALBANY

At the State University of New York at Albany, all M.B.A.'s are required to take a course entitled "Management Analysis: Comprehensive Simulation" based on F. Warren McFarlan, James L. McKenney, and John A. Seiler, *The Game* (N.Y.: Macmillan Publishing Co., 1970). The course runs for two weeks, and there are no other courses taken during this period. One of the purposes of the simulation is to integrate the functional areas of finance, marketing, and production to carry out a firm's policies and operational objectives. This aspect is typical of similar courses taught elsewhere, and can be considered to comprise the "formal" component of the game where specific objectives are quantified and decisions are submitted to achieve those objectives.

In addition, there is also an "informal" component that attempts to demonstrate the nature and implications of organization structures and control mechanisms so that students can better appreciate the processes inherent in human interactions. The game is structured so that students should appreciate the significance of informal systems and processes in organizations. This is done by encouraging conflicts and interdependencies among the functional units.

### The Formal Structure of the Game

A memorandum" (i.e., syllabus) sent to all members of the M.B.A. class a week prior to the start of the game notifies the students that they will form ten-member teams. As a result, most of the students select their own teams beforehand. However, the remaining students are assigned to teams. In addition to selecting teams, the students also decide on the assignment of their tasks and responsibilities. Because the complexity of game mechanics requires so much time to explain, neither team selection nor task assignments are discussed in class, although they certainly affect the performance of the game, the learning that takes place, and overall student satisfaction with their experience. Therefore, an awareness of how groups formed and interacted would contribute greatly to achieving some of the course objectives.

There are three formal tasks or positions. Corporate

headquarters develops the firm's strategy and then makes the key financial decisions in support of that strategy by raising funds and approving budgets. As investment centers, these units must forecast the firm's rate of return, market value of their stock, and change in surplus value. Divisions determine the demand for the particular market they are operating in, and then attempt to satisfy that demand. As profit centers, they must forecast market share, total sales revenue, and net income. The plants provide the products to the divisions at the lowest possible costs. Therefore, they are responsible for forecasting volume produced, factory overhead, and cost of goods sold.

The formal organization of the game as described so far is standard practice in many business schools. What makes the simulation unique, however, is that the members of the three functional units are physically separated. Each of the sub-groups is assigned an office in Albany, and the only means of communicating is the telephone. This oftentimes leads to frustration in coordinating decisions, especially since the functional units are evaluated in part on their own forecasting accuracy and in part on the forecasting accuracy of their teammates. In addition, they are also evaluated on overall firm performance to further encourage transmission of relevant information.

### The Informal Process of the Participants

The formal arrangement of the game establishes a number of interpersonal dynamics, depending on the personal goals of team members, the formation of teams, and the individual relationships that existed prior to or formed during the simulation. These dynamics were heightened by the obstacles preventing direct, face-to-face discussions and encounters during the day. As a result, different mechanisms were designed to facilitate coordination and communications limited only by the imagination and creativity of the team members, their motivations, and the purposes they saw in the exercise.

An example of different goals is the concern some students exhibited in dealing with the deadlines imposed by the instructor during the two weeks. Some appeared to be concerned with submitting any decision rather than thinking about how a good decision is made and agreed upon. The quantitative game results appear to be more tangible than the actual decision-making process. As a result, students tend to miss valuable insights on how the simulation actually replicates such real organization phenomena as boredom, anxiety, competition, and mistrust.

The written comments on course evaluations were reviewed in order to better ascertain the perspective of the game participants and understand their experiences. Overall, the students thought that the game was good" or "excellent, with over three-fourths of the respondents rating it as an A" or "B course. One of the students who rated the course as an "A" commented that the game was "worthwhile, interesting, and fun." This contrasts with a student who thought the course deserved only a "C": "I didn't get much out of the course -- nothing [was] 'taught' and little had to be applied except common sense.

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These two opinions demonstrate different expectations and the satisfaction in attaining their personal goals during the simulation. For instance, one of the Students commented that the course was "valuable in learning how to communicate and cope with others. Unfortunately, this objective was not obvious to everyone since it was not explicitly dealt with by the instructor. Oftentimes, the result was that students thought they were leaving the course without tangible tools or a meaningful opportunity to apply specific techniques.

What is apparent is that the formal structure suits the students that are analytical and spend their time trying to understand the rules and mechanics of how to play the game." This is evident by the suggestions made to add reference materials to the game instructions and to make computer terminals more accessible. One student commented: "I loved the course, except for what can happen to you if you make a simple little error. Be- ware!" Such errors result in the wrong information being processed, and may be costly to the team.

### IMPROVING THE LEARNING YIELD

Objectives of the game include the development of analytical and interpersonal skills. Both are necessary in making good decisions. What is evident from the course evaluations, however, is that learning can be enhanced if the students are made more aware of the dynamic processes that result from overcoming physical separation of functional areas. There is often a sense of not being able to make the optimal organization decisions.

The significance of the group formation process and task assignment cannot be ignored in the subsequent interpersonal dynamics. For instance, at one extreme was the so-called 'super group, comprised of the top students in the class and who tended to possess superior analytical skills. Originally cohesive and compatible, their effort did not result in expected performance, in part due to an inability to reject the decisions of their colleagues. Frustrated in their attempts to "win the game," they ended the course by finding faults in each other and by passing the blame to one another.

At the opposite extreme is the team which came to be known as "F-Troop" since their members had not been selected by anyone else and so they were forced together. They spent half their time overcoming a sense of rejection, and gaining confidence and team pride. Some members performed very well, whereas others were among the worse in the entire class.

Had the members of these extreme group situations --and the ones in between, as well -- understood their motives in playing the game, then perhaps the process they experienced would have made more sense and been of greater value to them. There are several methods to accomplish this in order that the learning experience be improved. All of the methods rely on giving feedback to enhance the students' abilities to analyze their decision-making processes. They also downplay the significance of the formal game operations by emphasizing student insights into personal goals and motives.

First, neutral observers can be assigned to record group interactions and decision-making behavior. These observers would compare different groups and later report their findings to the class.

Second, questionnaires can be designed to measure dimensions of group sentiment and extent of goal congruence. Then, the performance of the teams can be evaluated and discussed with the class.

Third, a structured de-briefing can highlight expected behavior patterns and review previous situations. This would allow the students to reflect on their behavior, interpret their rationales, and understand their personal goals and assumptions.

Finally, long-term feelings can be ascertained by observing group formation patterns, individual decision-making styles, and interpersonal behaviors and responses. ("Super group" never did get together again.) After a period of time, students might be better able to reflect on what occurred. As one commented: "I'm not sure what the course content was - I'm not sure yet (if I consider it a valuable experience.]" Perhaps there would be less doubt if business simulation games incorporated process components more fully.