

Developments In Business Simulation & Experiential Learning, Volume 24, 1997
THE USE OF BOARDS OF DIRECTORS TO EVALUATE REPORTS AND PRESENTATIONS
IN AN UNDERGRADUATE BUSINESS POLICY COURSE

William D. Biggs, Beaver College

ABSTRACT

This paper describes the author's experience with using a variety of individuals to serve as members of a board of directors for undergraduate students playing a computerized general management simulation as part of a business policy course. The use of the boards to evaluate student reports and presentations is discussed. Some of the benefits and problems associated with using board members are presented.

INTRODUCTION

For about 15 years the author has used both cases and a computerized business simulation as part of a senior-level business policy course. The same simulation has been used for all fifteen years, however, the current version, *Micromatic: A Management Simulation* (Scott, Strickland, and Hofmeister, and Thompson. 1992) is designed for the microcomputer and is somewhat more complex than the original version, *Tempomatic IV: A Management Simulation* (Scott and Strickland. 1984), which was designed for the mainframe computer. The simulation is a moderately complex general management simulation in which students, working as members of a management team, must make and integrate decisions in the functional areas of marketing, finance, production, and human resources. In addition, they must consider external influences, such as economic, legal, and social conditions and the nature of the industry and competition within the industry when making their decisions. Decision sets represent a quarter of a year of business operations and during the semester we currently require 16 sets of decisions which means the students are operating the company for four years. As in the 'real world' there are random and lagged events involved. For example, there is a 7% probability that only 80% of the raw materials will arrive and raw materials ordered in one quarter do not arrive until the next quarter. When the students take over the company it has been in

existence for two years so there is historical data available.

To add to the "real worldness" of the environment the students must prepare written reports and make presentations to their board of directors and the public at large. There are three types of reports and presentations. First, at the end of the their initial year of operation (i.e., year 3) the students must prepare a business plan. The business plan is read by the board of directors and the students make a presentation to the board concerning the plan. Second, after years 4 and 5 the students prepare a management report that describes what they set out to accomplish, what happened, and what they will do in the future. Again, these reports are read by the board members and a presentation is made to them. Finally, after year 6 the students prepare a poster which, with verbiage and graphs, gives an overview of how the company performed. The posters are put on display in the library gallery and a public meeting is held. Biggs (1992) provides more information concerning the use of poster presentations.

THE BOARDS OF DIRECTORS

The board members are drawn from five sources: (1) faculty members from business administration and economics from a number of colleges in the area; (2) faculty members from other departments at the college; (3) members of the college board of trustees; (4) business executives not associated with the college; and (5) alumni of the business program who played the game when they were students. The board members are told that their role is that of a questioner not adviser. The board members are asked to evaluate the reports and

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

presentations. About two days prior to meeting with the students the board members receive the reports and evaluation forms. During the meetings the students have 15 minutes to make a presentation and the board has 20 minutes to ask questions and discuss results and plans. Each board member serves on two boards so they have comparative information.

BOARD AND INSTRUCTOR

TABLE 1. INSTRUCTOR AND BOARD RAW SCORES AND RANKS

Team No.	Instr. Raw Score	Board Raw Score	Instr. Rank	Board Rank	Difference	
					Raw	Rank
1	69.9	66.6	7	9	3.3	2
2	68.5	61.9	9	10	6.6	1
3	74.1	86.2	6	4	-12.1	2
4	76.2	71.4	5	7	5.2	2
5	65.0	67.1	10	8	-2.1	2
6	95.0	100.0	1	1	-5.0	0
7	93.6	93.3	2	2	0.3	0
8	79.7	79.0	4	6	0.7	2
9	85.3	87.1	3	3	-1.8	0
10	68.5	85.7	8	5	-17.2	3
Ave.	77.6	79.9				

EVALUATIONS

An interesting aspect of the evaluations of the reports is that over the years the author has found a highly positive relationship between his evaluation of the student reports and the board evaluations. Table 1 presents data for the first management report from one semester.

The raw score in Table 1 for the boards are based upon an average of the scores submitted by each board member for a particular team using a form provided by the instructor. The form contains seven questions related to the report: (1) well written; (2) well conceived, (3) clearly organized; (4) complete, (5) apparently accurate; (6) helpful and/or convincing; and (7) generally satisfactory for its purpose. For each question the board members can respond that they strongly agree (10 or 9 points), agree (8 or 7), disagree (6 or 5), strongly disagree (4 or 3), neither agree nor

disagree (2 or 1), and no basis for judgment (0). An average score is calculated for each board member and an overall average for all the board members for a team. The reports are then rank ordered using the average raw scores. The author's raw scores for each team were derived using a more detailed evaluation form which provides the students with points on 16 different criteria. The total points can range from 0 to 100. The instructor's raw scores are not simply obtained by adding up the points for each item for each team, however. Instead a linear transformation is used based upon the authors past experience. Typically, a point count of 45 equals a percentage score of 60 and a point count of 95 equals 95 to 100. All other points are then distributed using the formula $Y=aX + b$. Again, the reports are rank ordered using these raw scores.

As can be seen from Table 1 the rank ordering of the reports is quite similar. In fact a sign test of the null hypothesis that the rank order of the evaluations by the board members will not differ from the rank order of the instructor is supported ($p > .05$). This high level of correspondence is remarkable when one considers that each board member only saw two reports whereas the instructor evaluated all 10. In addition, two different forms are being used for the evaluations. Evidently they provide a holistic approach to the evaluation so correspondence is achieved. Perhaps even more impressive is the high degree of correspondence between instructor and the board raw scores. Only for teams 10 and 3 are there any substantial raw score differences between the board scores and the instructor and in both cases the instructors scores are lower because the instructor had more information about some very specific types of requirements which were not fulfilled and saw all 10 reports whereas board members only saw two reports. Even so the regression for the raw scores yields an r^2 of .656. The boards also evaluate the students' presentations. One part of the evaluation deals with how

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

well the total presentation was organized by the team and the extent to which all the team members participated in the presentation. A second part provides feedback to the students individually concerning his/her effectiveness. Each student receives only his/her own individual evaluation, however, the team members are encouraged to share their evaluations with one another. Since I also like symmetry the students also evaluate the board members at the end of the semester.

BENEFITS AND PROBLEMS ASSOCIATED WITH THE BOARDS

The use of the boards of directors has a number of benefits. First, the students benefit because of their interaction with the diverse audiences represented on the boards (i.e., faculty, alumni, business executives, and trustees). The students are forced to formulate their ideas and communicate them orally and in writing. The students also receive feedback from the board on the reasonableness of their strategies and tactics. As reported by Rosenthal and Werner (1992) we find that the students change their behavior from the first meeting to the second as they adapt to feedback from the board. Second involvement of faculty members from business and economics gives credibility to their subject areas when the students discover that they are being asked questions which relate to learning from other courses. Third, the involvement of faculty member from other disciplines demonstrates to students that there are dimensions of knowledge, logic, problem solving, critical thinking, etc. which can be drawn upon from other subject areas. The involvement of faculty from other disciplines also gives credibility to the business curriculum as the level of expectations is realized. Fourth, the members of the board of trustees have a chance to interact with the students to assess the "product" that the institution is 'producing.' Fifth, the executives report that they benefit because the students make them think. Sixth, the involvement of alumni is helpful. Students in one sense see themselves five or six years from now. From an institutional standpoint the inclusion of the alumni provides one addition way in which our graduates are tied back to the institution. Seventh, the involvement of faculty from other institutions provides them with direct knowledge concerning our graduates

who may attend their institutions as graduate students. Finally, the instructor benefits because the students become aware that the concepts being used in class are used and understood by people in the 'real world.' In addition, the instructor benefits from the board members' evaluations of the student reports. As indicated above there is a high degree of correspondence between the evaluations and the students are typically quite surprised to see this. The instructor also benefits from the board member evaluations of the presentations both on a group and individual basis. It is not logistically possible for the instructor to arrange presentations so that all could be attended therefore the boards provide information, which would not otherwise be available.

The use of the boards is not without its problems. First, some board members will fail to attend the meetings. For this reason I recommend the use of four or five members per board so if one or even two fail to attend there is still a feeling on the part of the students that they have a board with whom to speak. If five members are used, however, and they all attend the students may feel intimidated if there are only three students on the team. Second, the use of the boards creates timing problems. The decisions must be spaced in such a way that information can be provided to the board, the meeting held, and the next decision submitted but without overlaps. Third, even when board members are told not to give advise they will do so. It is always interesting when students tell me about advice they have received and I know it is wrong either because of the conditions I have created or worse yet due to theoretical considerations.

CONCLUSION

Even with the problems I encourage more simulation users to use boards of directors. The 'real world' aspects that are brought to the simulation far outweigh the problems. The interested reader may want to contact the author or others

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

(Rosenthal and Werner, 1992 or Wheatley, Roberts, and Einbecker. 1990) who have used boards of directors in the classroom.

REFERENCES

- Biggs, W. D. (1992) The use of poster presentations as a final project in the business policy course. *Developments in Business Simulation & Experiential Exercises*, J. Gosenpud and S. Gold (eds.), 17-19
- Rosenthal, W. and Werner, W. J. (1992) The use of "a board of directors" to evaluate and validate decisions in a competitive graduate management simulation course. *Developments in Business Simulation & Experiential Exercises*, J. Gosenpud and S. Gold (eds.), 221.
- Scott, C. R., Jr. and Strickland, A. J., 1111 (1984). *Tempomatic IV A Management Simulation*. Boston, MA: Houghton Muffin Company.
- Scott I.W., Strickland, A. J. III, Hofmeister, D L., and Thompson. M. D. (1992). *Micromatic: A Management Simulation* Boston, MA: Houghton Mifflin Company.
- Siegel, S. and Castellan, NJ, Jr. (1988) *Nonparametric Statistics for the Behavioral Sciences*. New York NY: McGraw Hill Book Company.
- Wheatley, W. J., Roberts, R. M. and Einbecker, R. C. (1990). A complex simulation and community involvement yield an award-winning capstone experience. *Simulation & Gaming*