

Simulations, Games and Experiential Learning Techniques:, Volume 1, 1974

SIMULATION AS A SUPPLEMENTARY LEARNING EXPERIENCE IN MARKETING PRINCIPLES

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In the search for new opportunities to improve the student learning experience in marketing principles, an experiment was conducted several years ago by the author in which a computer oriented simulation was used as a supplement to the regular course of study. Since then, and as a result of favorable student reaction, the simulation has been used depending on availability of support personnel, size of class and arrangements for computer usage.

There are many recognized techniques which can be used in the search for knowledge beyond the normal classroom lecture and textbook assignments. These could include: library research, guest lectures, supplementary readings, outside projects, study guides and case analysis just to name a few. However, none seem to bring together an integration of these various learning techniques quite as well as computer oriented business simulation.

Admittedly there is very little scientific basis for this statement. The method of evaluation has lacked any degree of sophistication; yet, in response to unidentified questionnaires which have been filled out by participating students at the conclusion of each course, the simulation has consistently received a very encouraging vote of confidence from approximately 90% of any given class.

Empirical evidence has apparently fallen short in proving or disproving the validity of the computer oriented business simulation. Yet, the motivational aspects of the simulation offer a trade-off that cannot be denied. Observation and frequent contact with teams of students who are actively involved in the simulation indicate that the influence of "running our own business", the competitive urge to sell more products than other companies in the industry, and the desire to be recognized as a profitable and well managed firm, generate an enthusiasm which is seldom witnessed in the traditional classroom.

In any event, one of the secrets of success in the teaching/learning process, like so many other activities, is the need for personal involvement. From this standpoint a computer oriented business simulation is an ideal teaching method since students have the opportunity to interact with one another throughout all phases of the decision making process.

Objectives of the Simulation

Typically most instructors establish certain objectives which should be attained over the duration of a specific course. The same is true of the simulation, and the following objectives have been used with some degree of success:

1. To encourage a better understanding of the interrelation among

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various functions of a business.

2. To provide the framework for gaining greater knowledge and appreciation of those business functions outside the participant's own study, experience or prior training.
3. To stimulate and develop a keener awareness of those elements which constitute organizational leadership within a corporate structure.
4. To develop better analytical abilities and improve decision making skills from a company as well as a personal, departmental and/or functional point of view.
5. To experience the organization, planning, information transfer, analysis, review, balance, interaction and all other concepts needed by management to operate a profitable company.

Once these objectives have been carefully noted, the individual teams are in a better position to establish their own specific company goals.

Implementing the Simulation

In order to encourage the proper business climate during the simulation students are first asked to provide basic information on their background, academic interests, contemplated major and accumulated grade point. Company assignments are then made so that it is possible to provide some degree of balance among the above criteria. Handouts at the first session include: a memo from the instructor outlining various activities to be completed during the organization stage of the simulation (see Exhibit 1); detailed description of the simulation; a list of suggested charts and their parameters; a sample statement of company objectives; and an outline of topics to be covered in the written "Annual Report" which is submitted at the conclusion of the simulation (see Exhibit 2).

A class period is then scheduled for introduction and orientation. by this time companies are asked to establish a corporate name, develop a simple organization chart, elect officers and set forth the duties and responsibilities of each participant.

With the completion of these preliminary activities the officers of each company are asked to meet and develop the specific company objectives which are to be achieved over the designated period of play. These objectives are submitted during the next class period for review by the instructor. If the objectives do not meet necessary standards, criticisms are noted and sent back to the particular company for revision.

Once the company has been organized and the objectives have been approved the decision making process gets underway with two decisions scheduled each week. Each decision period represents a three month time frame. A total of 16 periods (the equivalent of 4 years) is included in the simulation. After the final printout has been distributed each team

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is required to develop a 10-15 minute “Annual Meeting” for presentation before the class, and also submit a detailed written “Annual Report”.

The use of audio-visual aids is encouraged to make the annual meeting more interesting and more dramatic. Guidelines for the writing of the annual report suggest that this phase of the simulation should be not only factual but demonstrate a high degree of creativity in “selling” the reader on the company, its management and the attainment of objectives.

From the Critics Point of View

There are those who are highly critical of using a simulation at a level where it is felt that the major thrust should be to teach concepts or at least lay the foundation for more sophisticated courses of study. In part these critics are right. A good foundation of knowledge is vital and the concepts do need to be clearly developed. Often when using the simulation at the principles level we literally force the student into situations involving the decision making process before he reaches certain stages in the text or lecture materials. Under these conditions the highly motivated student will respond by reading ahead of the regular assignment, searching out ideas from other authors, and experimenting with inputs from other courses. In addition, many will spend a surprising number of hours discussing factors relating to the simulation.

Other Considerations

Another consideration is a careful examination of the “real” world where countless decisions are made under conditions of extreme uncertainty. Unfortunately many academicians and students believe that business operates on a highly sophisticated level. This is the exception rather than normal practice. On the other hand, business men continue to improve in their decision making ability, but in all too many of the small and medium sized companies, decisions are still made by the “seat-of-the-pants” approach, a crystal ball or a “gut” feeling by management.

Under the circumstances it would appear that we are providing a valuable service when we expose our undergraduate students to the same type of uncertainty which is faced by the typical businessman. Possibly the involvement in operating a business where the profits and/or losses are only on paper can serve as valuable training for a managerial position.

Summary Viewpoints

Use of the simulation as a supplementary learning experience in an introductory level course will continue to be a controversial issue among academicians. Yet, when maintained in the proper perspective the underlying positive values of bringing theory and practice into a closer and more meaningful relationship cannot be denied. The following evaluation of the simulation is representative of the response which is generally received when the simulation is used as a supplement to the marketing principles course.

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“The simulation provided an appreciation of the difficulty encountered in a complex business system of keeping all relevant variables under control at the same time. One example was the situation in which a price increase generated greater profit provided that sales could be maintained at the new higher price level. Another involved recognizing that marketing expenditures, which ordinarily are expected to generate additional orders, was very often partially offset by the lower prices of our competition. Experiences similar to these point out rather vividly the importance of approaching marketing decisions from a systems perspective.

A second beneficial effect of the project was to provide an appreciation of the inherent difficulties associated with group decision making. The need for compromise in arriving at consensus decisions became apparent at an early stage. Furthermore, the dynamics of the decision making process showed the value of drawing upon the expertise of individuals with dissimilar interests and backgrounds.

Finally, there is much to be learned from a careful analysis of the completed simulation. This final analysis brought out trends and relationships which affected the business fortunes of the firm during its operational lifetime. Examples are the effect of R & D expenditures and the generation of orders, the effect of the economic index on orders, and the comparison of sales with orders over the life span of the corporation. Although we were aware of these relationships and trends while the simulation was in progress, their real significance could be appraised far better in retrospect.”

In conclusion, Confucius is credited with saying: “I hear and I forget...I see and I remember... I do and I understand.” For many of us the computer oriented business simulation is a teaching/learning device which continues to gain student support, involvement and course understanding. Possibly this is because the student is challenged into doing: and through his own doing. . .better understands the business system.

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Exhibit 1

PRELIMINARY SIMULATION ASSIGNMENT

1. Read all materials issued during this class session. Develop a list of questions concerning the material for discussion during the next class period.
2. Determine name of company and develop a company logo.
3. Prepare a statement of specific company objectives which management expects to achieve over the sixteen (16) decision periods. Examples: (1) percent of anticipated growth in total assets; (2) percent of anticipated growth in dollar and/or unit sales; projected plant expansion throughout the simulation; product, pricing and marketing objectives; and, specific objectives with respect to lowering unit costs and for improving the product through research and development expenditures.
4. Develop an organization chart and job descriptions covering the duties and responsibilities which have been assigned to each student who is participating in the management of the company.
5. Carefully review the rules concerning the simulation, analyze the first printout, and then undertake discussion on the first decision. Consideration should be given to the company's present financial position, market share, and overall objectives. In addition, it is recommended that the special forecasting form which is included in the handout material be used in connection with each decision.
6. During the next class period the company president will submit a typed report including: (1) name of company and logo; (2) statement of company objectives; (3) company organization chart; (4) job descriptions covering the duties and responsibilities of each student participating in the management of the company; and (5), any questions on the operation of the simulation. In addition, a decision the first decision sheet should be submitted covering period two of the simulation.

IMPORTANT: Be sure to keep a copy of everything submitted to the instructor in connection with the simulation. This includes decision forms, statement of objectives, organization structure, etc. Also, it is suggested that a running record be maintained covering the reasons why certain decisions were made each period, why strategy changes were made, and anything else of significance which might assist in develop- the company annual report and annual meeting presentation.

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Exhibit 2

SIMULATION ANNUAL REPORT

1. President's letter to stockholders.
2. Organization chart and description of duties and responsibilities of each participant in the simulation.
3. Statement of original company objectives.
4. Objectives in review.
5. Comparative income statements for each of four years of operation.
6. Corporate performance graphs.
7. Conclusions.
8. Individual appraisal of the simulation by each member of the company.