

# Developments in Business Simulation & Experiential Learning, Volume 11, 1984

## THE USE OF SIMULATION IN THE TEACHING OF BUSINESS POLICY

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### Abstract

The use of computer simulation in the Business Policy Course has been hampered by a widespread misunderstanding of the purposes of the course. Another obstacle has been a belief that it is not possible to incorporate simulation into the case method in such a way that the advantages of both methods are retained and the shortcomings of both are minimized. A combination pedagogical technique called the Simulated Case is proposed, its characteristics are discussed, and the manner in which it would be used is described.

### Introduction

The effectiveness of using computer simulation in teaching business policy is an issue that has been debated extensively over the past few years [8, 9, 11, 12, 13, 14]. These debates have, for the most part, addressed themselves to the question;

How does computer simulation compare in effectiveness with the case approach in teaching business policy?

This formulation of the question is really impossible to answer since the case approach embodies a wide range and complex mixture of pedagogical techniques [1, 4, 10]. Aside from this specification problem, no investigator seems to have asked the more basic question:

How effective are the techniques, generally described as the case method, in teaching business policy?

An answer to this question is a necessity if the first question is to be answered. However, this question is, and will continue to be, unanswerable until some consensus emerges on what business policy is and, as a result, what we are trying to teach. The literature does not generate optimism that this consensus will emerge soon [2, 6, 7, 8, 11].

Viewed from this perspective, it is not surprising that the debate between advocates of the case method and advocates of computer simulation continues since they are really attempting to answer the following question:

How does one method (simulation) compare in effectiveness with a variety of methods (the case approach) in teaching a subject area which we are unable to define?

The impossibility of answering this question is obvious.

Rather than attempting to answer the unanswerable, this paper will discuss the use of simulation in the Business Policy Course within the framework of what the purposes of the Business Policy Course should be and how well classic case analysis and its variations fulfils these purposes. We will find that there are some widespread misconceptions about what the purposes of the Business Policy Course really are.

### Purposes of the Business Policy Course

The need for, and the purposes of, the Business Policy Course were enunciated more than twenty years ago in this quotation from the Gordon/Howell Report;

The capstone of the core curriculum should be a course in "business policy" which will give students an opportunity to pull together what they have learned in the separate business fields and utilize this knowledge in the analysis of complex business problems.

The business policy course can offer the student something he will find nowhere else in the curriculum; consideration of business problems which are not prejudged as being marketing problems, finance problems, etc., emphasis on the development of skill in identifying, analyzing, and solving problems in a situation which is as close as the classroom can ever be to the real business world, opportunity to consider problems which draw on a wide range of substantive areas in business, opportunity to consider the external, nonmarket implications of problems at the same time that internal decisions must be made, situations which enable the student to exercise qualities of judgment and of mind which were not explicitly called for in any prior course. Questions of social responsibility and of personal attitudes can be brought in as a regular aspect of this kind of problem-solving practice. Without the responsibility of having to transmit some specific body of knowledge, the business policy course can concentrate on integrating what already has been acquired and on developing further the student's skill in using that knowledge. The course can range over the entire curriculum and beyond.

Clearly a policy course must come in the senior year--preferably in the last term. It just as obviously must be a case course, we can imagine no other way of achieving the same objectives [5].

A summary of these purposes would be--to provide students with an ability to:

- pull together previously acquired knowledge from a number of separate functional fields
- identify problems without having their functional orientation pre-judged
- make decisions considering both internal and external implications for the organization
- make decisions in an environment that is as close to the real world as possible.

Although the Gordon/Howell Report indicates that these purposes must be accomplished through the use of the case method, we should evaluate this statement in light of the fact that the Gordon/Howell Report was published in 1959 when the major alternative to case analysis (business simulation) was not available for consideration.

### Invalid Assumptions About the Business Policy Course

Of equal importance to what the Gordon/Howell Report says is what it does not say. It does not say that a long-range planning or (to use the more current phrase) a strategic management approach is required to achieve the purposes of the Policy Course. Many policy courses seem to have made the invalid assumption that a top

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management, long-range orientation is the only method of achieving the purposes of the Policy Course.

This questionable assumption has become so ingrained in academic thinking over the past twenty years that it seems to be taken for granted that a long-range or strategic, top management orientation is the only way that the student can pull together or integrate knowledge from a number of separate functional fields. Recently, however, this assumption has begun to be questioned [2].

One might argue, with some validity, that the top management part of the assumption may have been at least partially valid during the fifties when the normal organizational mode and imperative was centralization. Under a centralized organization the integration of functional fields takes place only at the top. However, since the late fifties, the basic trend in organizational design has been strongly in the direction of decentralization of authority and responsibility as exemplified by the product line division form of organization. In this latter type of organization most, if not all, functional fields are integrated below the highest organizational levels.

The other part of the invalid assumption is that the long-range or distant time horizon is the only locus of multi-functional problem-solving and decision-making. Most division managers in product line divisions, as well as their subordinates, would take strong issue with that assumption.

These invalid assumptions seem to indicate that business education has not remained current with evolving policy trends in the real business world.

### What the Purposes of the Business Policy Course Should Be

Until some consensus emerges about what business policy is, it seems best to rely on the genesis of business policy for most schools, i.e., the Gordon/Howell Report.

If we take this report as the basis of the Business Policy Course and the authority for its purposes, we could generate the following definition. Business Policy should be a course that would provide students with an ability to identify the functional orientation(s) of a wide range of business problems and to apply the appropriate knowledge from one or more business functions to solve problems and make decisions that consider both internal and external implications in an environment that is as close to the real world as possible.

### How Can the Purposes of the Business Policy Course Be Achieved Most Effectively?

considering the Gordon/Howell purposes stated previously, it seems clear that the case method in any of its variations cannot be considered the only valid way of teaching the Business Policy Course and of achieving its objectives. The question then becomes one of evaluating the advantages and disadvantages of each available approach and of choosing the best approach based upon this evaluation.

#### Case Method

In the hands of a skilled instructor the case method can certainly bring a sense of realism to the classroom with respect to the past history of the organization and its present status [3] Its major weakness is that it provides little sense of closure for the student since it is not possible to know how the students analysis and resulting recommendations for objectives, strategies and policies

would have fared if they had really been implemented in the real world by the organization described in the case. As is often stated to students by instructors regarding case analysis:

There are no right answers in case analyses but there usually are some clearly wrong ones.

The student is left hanging at the conclusion of the case analysis with possibly some greater understanding of the important factors that should be considered in the case. However, students have little specific understanding of the relative importance of these factors and no feedback on the probable results if objectives, strategies, policies, and decisions based upon their assumptions about the relative importance of these factors were implemented. Students usually have an uneasy feeling that they have missed something because they have no indication about the results of their analysis and decisions. They may well enjoy the course but the better students are perceptive enough and intelligent enough to realize that enjoyment alone should not be the sole outcome and, that feedback will be swift and unmerciful in the real world.

#### Management Simulation Method

Management simulations are generally believed to generate significant levels of interest and motivation on the part of students. However, the major advantage of simulation is that it provides most dramatically the sense of closure and achievement that the case method so sorely lacks. Students can analyze the history of the company and the industry that the game provides, develop what they believe are appropriate objectives, strategies, and policies based on this historical analysis and indicate the decisions that they believe should be made to implement these strategies.

The next step in the simulation approach is for the student decisions to be input to a simulation model which provides rapid feedback to the student on the effectiveness of the strategies and the decisions that emanate from these strategies. Such feedback provides not only closure for the student but new information which can be used to modify the strategies, policies, and decisions that will be input to the model for the next report period. Incremental experience and learning from this experience takes place on a recurring basis as decision input generates feedback on results which stimulates learning, which results in modified (and hopefully improved) decision input, etc., etc. Learning becomes a sequential, cyclical process in which learning builds upon past learning.

#### Comparison of Case and Simulation Approaches

Whereas the case method, at best, is a single cycle learning experience which depends upon somewhat subjective evaluations by the instructor and other students about the validity of proposed student decisions, the simulation method provides an iterative learning experience in which the student learns on an incremental basis with each learning cycle reinforcing and broadening the previously acquired knowledge.

However, the current approach to simulation exercises is probably somewhat less realistic than a good case taught by a qualified and imaginative instructor.

If one must choose between the case approach and the simulation approach, it seems that each approach offers significant advantages and disadvantages. However, case or simulation is not really a choice that must be made since it is possible and practical to combine the two approaches in a way that not only minimizes the deficiencies of each

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approach but also gains effectiveness from the symbiotic combination. Although a number of detailed design considerations need to be developed, the basic configuration of such an approach is described in the following section.

### The Simulated Case - Best of Both Worlds

The term Simulated Case is a descriptive one since it is a case that has been developed through the use of a simulation model rather than an actual company history. However, the model will describe a specific industry.

This simulation model is developed and used in the following way. A model of an industry is developed that represents the interaction of environmental factors, internal factors, decisions of the subject firm (that firm that will be described in the simulated case) and decisions of other firms in the industry.

The financial and operating history of the industry and its member firms developed by inputting decisions that reflect the evolving objectives, strategies and policies of all firms in the industry. The results of these decisions over a number of years for the subject firm and all other industry firms form the basis for the development of a case describing the subject firm's history with the other firms forming the competitive industry for that subject firm.

The case would then be written in normal case text format with financial and other data as exhibits based on the model output for the subject firm and competitive industry history that was generated from the model.

Students would analyze this case in the normal case analysis fashion and would develop recommendations for objectives, strategies, and policies that seem appropriate based on the case history provided. Instructor and peer review would then take place. (At this stage, from the students point of view, the exercise is identical with the classic case approach.)

Students would then implement their proposed objectives, strategies and policies through appropriate decisions that would be input to the model for a sufficient number of decision periods to measure whether the objectives had been achieved and to determine the quality of the strategies and policies that had been developed by the students.

An ex post facto analysis of these results would provide valuable feedback to the students to further the learning process. It would be possible for the students to develop new strategies, policies, and decisions based on experience that could be again input to the model to test their validity.

The ultimate configuration of the simulated case would incorporate the development of objectives, strategies, policies, and the decisions resulting from them into a program that would take output data from the model and generate decisions for the subsequent time period. In this way the results of a specific set of planning assumptions and philosophies can be readily tested over as long a period as is desired.

Although Gordon/Howell said nothing about the Business Policy Course having to address itself to a long-range time perspective, recent trends in business clearly show the importance of this point of view.

This long-range time perspective can be readily incorporated in the simulated case as described below.

The simulated case should clearly be superior to either case analysis or simulation individually.

### Conclusion

The competition between the case method and simulation as the pedagogical method for the Business Policy Course is both unproductive and unnecessary. A combination of these methods which would offer the advantages of both methods and would minimize the shortcomings of each is available.

This combination, called a Simulated Case, provides both the analytical rigor of the case method and the experiential learning advantages of simulation. It provides a sense of closure for the student and a mechanism for evaluating the quality of the analysis and resulting decisions that are made. Finally, it makes it possible to evaluate objectives, strategies, policies and decisions over as long a time period as desired.

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