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THE USE OF DECISION SIMULATIONS IN MANAGEMENT TRAINING PROGRAMS: CURRENT PERSPECTIVES

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ABSTRACT

While the use of business simulation games in university business courses has been increasing over the past twenty-five years, their use in management training programs has been declining. This paper reviews the current usage of business decision simulations in management training programs and speculates as to why their usage has been declining.

INTRODUCTION

Sony Corporation of Japan is bringing another product to the U.S. market. This isn't the typical electrical! electronics product that Sony is noted for, however. This product is a game; a management training simulation game that has been developed by Sony and used as part of their own management training program. This management training simulation is currently being tested by business firms in San Francisco, Los Angeles, Seattle, Hawaii and Vancouver.

The Sony management game puts the participants in the role of the CEO of the business firm. The game is designed to be used as part of a management training program along with discussions, cases and other instructional devices. The Sony game was developed several years ago when Sony's president, Kazuo Iwama, examined the company's management training program and found it lacking in providing hard decision-making experience. Mr. Iwama instructed Sony's management training personnel to develop a decision-making exercise. The management game that resulted has been successfully used by Sony and will now be marketed in North America by Tokyo-based Career Development International to U.S. and Canadian businesses at a cost of $500 to $600 per participant [15]

BACKGROUND

When compared to the lecture and case method of instruction, business games are relatively new. They have been around for less than 30 years. Their direct ancestors are war games, dating at least from the German Kriegspiel of the mid-nineteenth century [13]. Perhaps the most famous and also the most ambitious war games were conducted at the Total War Research Institute and the Naval War College of Japan, as part of the Japanese preparations for World War II. Strategic and tactical games were also developed for use at the United States Naval War College [10].

In 1955, RAND Corporation developed a game which focused on U.S. Air Force logistics. This game, called Monopologs, required its players to act as inventory managers in a simplified simulation of the Air Force supply system [13]. The Air Force considered Monopologs to have been highly successful as a training device. The success of Monopologs may have been one of the important contributing factors in the early development of business decision simulations.

The first widely known business decision game was developed in 1956 for the American Management Association [22]. In this top management game, five teams of players operated firms competing in a hypothetical, one- product industry. Each team made quarterly decisions covering price, production volume, budgets, research and development, marketing, and marketing information. The computer output included reports on sales, revenues, costs and profits.

After a few trial runs and some polishing, this game was made the central feature of a special two-week course at the AMA's Academy of Advanced Management in New York in 1957. The game attracted many favorable and even enthusiastic comments from executives and academicians who participated in the two-week course and became a continuing part of the Academy's Advanced Management Training Program.

Rapid Growth

After 1957, there was a rapid growth in the number and usage of business games. As an example of this, we can survey the growth of marketing games. The first survey of marketing games appeared in the Journal of Marketing in 1962 [17]. This listing included 29 simulation games, about half (15) being computerized, the remainder noncomputerized. Interestingly, 20 of these marketing simulation games were developed by business firms for their training purposes and only 9 by academicians for university teaching. From this point, marketing simulation gaming for teaching purposes grew rapidly. A 1967 survey of American Association of Collegiate Schools of Business members reported that 94 percent of the respondents used decision simulations In some part of their curriculum [3]. More recently, a 1974 survey of marketing simulation games included 53 marketing games and this list was not complete [7]. Currently, there is something in the neighborhood of 100 marketing games of all varieties available through publishers, business firms and universities [8].

Considering simulation games of all varieties, the first simulation directory appeared in 1969 and listed slightly over 200 games and simulations [9]. In 1971, the first edition of The Guide to Simulations/Games for Education and Training was published and listed over 400 games and simulations. The current edition of The Guide (1980) lists over 1,200 games and simulations of all varieties [11].

BUSINESS GAMES IN INDUSTRY

While the number of business games has expanded rapidly in recent years, most of this seems to have been for purposes of university teaching rather than management training. This has not always been the case. The use of business simulation games in industry for management training was very popular in the mid-1960's. The following comment appeared in The Wall Street Journal:

"The soaring popularity of business games stems from their effectiveness in supplementing the pamphlets, lectures, and case

studies on which most management training and employee-indoctrination courses are based" [1]. Among the many big users of simulation games for management training in the 1960's was AT&T [2]

Approximately 15 years ago, Procter & Gamble introduced a simulation game entitled Venture for sales personnel and management trainees. The game, used at all P&G plants and offices, put the participants in the shoes of the top management of a manufacturer of cake mixes. Also at that time, the Boeing Co. was using three different simulation games. Operation Feedback was played by employees in line for beginning management positions; Operation Suburbia was played by middle-managers; and Operation Interlock was played by top management in retraining/refresher programs [14].

Other companies and organizations extensively using business simulation games in the mid to late 1960's and early 1970's included Grubb & Ellis (the second largest real estate firm in the U.S.); Joseph Magnin Co. (chain of over 50 retail outlets); Walden Book Company; May Department Stores; the Sun Oil Company; the American Institute of Bankers; and the United Auto Workers [5] . There were undoubtedly many others whose simulation usage was not reported in the business literature.

Limited Current Usage

While the use of business simulation games for management training was very popular in the mid-1960's, they do not seem to be as popular today. By far the heaviest usage now is at colleges and universities. Examine the business literature; it is difficult to find references to the use of business simulation games for management training. One recent source has summarized the current state of usage of business simulation games in industry as follows: 'While techniques such as role playing and in-basket exercises have been used in management assessment centers, the use of business games has been limited; in fact, games have apparently been overlooked by many firms" [8] . Scattered evidence of the use of simulation games for management training can be found, but a literature review will turn up very little. Why hasn't the business game remained as popular for management training as it has for university teaching?

Game Benefits

Certainly business games offer many benefits. The business game in industry can be used to serve at least three purposes: (1) screening current employees, (2) orienting new managers, and (3) for continuing management training programs. When a company hires a new manager from outside, it is not always possible to do a truly effective screening job. In effect, firms use a "hire and hope" policy. In this situation, the post-selection orientation period is critical to the future success of the new manager and it is here that a simulation game may be quite helpful for providing some decision-making experience and assessing the new manager 's performance.

In addition to its use as an orientation device, the business game can also be used as a powerful tool for screening current employees who are about to move up in the management ranks. In these situations, it is difficult to assess the behavioral skills needed for management success. However, analytical and decision making skills, although not the sole determinants of managerial success, can be observed; and a good way of observing them is through the use of a business game.

In addition to screening current employees and orienting new managers, the specific industry game can also be used in a continuing management development program. For experienced managers, industry gaming acts as a flight simulation; they know how to fly, but they can try their skill under some different circumstances. The cost of failure in a business game is nil compared to failures in the real organizational environment. For experienced managers, the business game may also serve to identify additional training needs or bad habits that have been developed.

The use of business games helps the management trainee develop in three major areas. First of all, the participant is able to sharpen the analytical skills necessary when making judgments on the basis of incomplete information and, as well, experiences the immediate consequences of those decisions. For example, the management trainee learns to separate relevant from irrelevant material, establish priorities, set goals, assign weights to different issues, and determine alternative courses of action. Secondly, the manager gains insight into his/her own behavior as the actions of others are identified and interpreted. Thirdly, the manager is given experience in dealing with others. Most decision simulations involve some amount of joint decision-making and sharing of responsibilities [18].

Beyond this, the use of a business simulation game for management training offers a number of other advantages:

* The participant is active throughout; not passive as is often the case with lectures and discussions.

* Participants can learn from experience without paying the price of wrong decisions made in a real business situation.

* Time can be compressed with years of business activity being simulated in a single day.

* Feedback is immediate.

* Discussion is realistic as it can be tied to specific game results.

* Managers are given a more global view of the business environment rather than thinking in terms of one small department or division of the company.

Game Drawbacks

While the business game offers many possible benefits, obviously it is the potential or actual drawbacks of business games that are limiting its current usage in management training programs. One drawback often cited is that each business game is developed to serve a specific purpose, situation, industry or product area and lacks relevancy in other situations. Hence, the applicability of most decision simulations is severely limited.

Another possible drawback is the difficulty of evaluating game performance. There are often many factors on which performance can be evaluated and determining which is most appropriate in a given situation is very difficult. Even if a number of factors are used in the evaluation process, there is the question of how to weigh each of the factors. Where this drawback occurs, it is the fault of the game developer. After doing a very thorough job of developing the decision simulation, the developer often gives little thought to a means of analyzing performance. Trainer or instructor support material accompanying the participant manuals is often

severely lacking.

A possible drawback when it. comes to using decision simulations in a continuing training program is management attitudes or perceived risk. Some executives have refused to play games labeling them as 'childish'. Furthermore, as decision simulations by their nature may identify areas of weakness, some top managers fear participating in games because a poor performance may cause them to lose stature.

Finally, there is the problem of how real the game is. "…the benefits of a simulation depend on how closely it replicates the parameters of situations that the manager will actually encounter in the real world. Replicating human behavior is a difficult business; social processes always contain a greater number of variables than any simulated exercise can take into account" [21]. To the extent that those administering training programs feel decision simulations deviate from the real world, they will not be used.

<u>Current Users</u>

While the usage of business simulation games for management training seems to have declined since the mid- 1970's, certainly a number of firms are using decision simulations today. Some examples of current users include Union Carbide Corp. which uses a game called <u>Looking Glass Inc.</u> which puts the participants in a plant manager position; Boeing Co. uses a game entitled <u>Topexec</u>; Consolidated Edison Co. of New York uses a game called <u>Broken Squares</u> in a continuing training program for upper level managers; AT&T continues to be a decision simulation user whose training program includes games entitled <u>Relocation: A Corporate Decision</u>, <u>Trebedies Island: The Economics of Monopoly Management</u>, <u>Where Do You Draw the Line? An Ethics Game</u>, and <u>The Privacy Game</u>; Clairol Co. uses a sales management game; the Bank of America uses <u>The Great American Management Game</u>; American Airlines uses <u>The Site is Right</u>; the Greater Los Angeles Visitors and Convention Bureau also uses <u>The Site is Right</u>; Chevron uses <u>Play It Safe</u>; Keebler Co. uses Eat the Clock; CNA Insurance puts its new sales recruits through You Bet Your Life; the First National Bank of Boston uses the <u>First Investment Game</u>; and Westvaco Corporation, a paper manufacturer, uses <u>The Field Sales Manager's Game</u>. Certainly other companies are using decision simulations as well [24].

Beyond the business firms using decision simulations in their training programs, a number of companies specialize in the design and administration of decision simulation exercises. Some of these companies include Art Associates, Inc. of Cambridge, MA; The Center for Simulation Studies located in Clayton, MO; Didactic Systems, Inc. of Cranford, NJ; The Games Preserve of Fleetwood, PA; Harwell Associates of Convent Station, JN; Instructional Alternatives of Bloomington, IN; Simile II of Del Mar, CA; SINTEK of Cambridge, MA; System's Factors, Inc. of Duluth, MN; and A.T. Kearney, Inc. of Chicago.

If a business firm would like to incorporate a nonconventional business game into their training program, a show business flavor can be added by using the services of Art James. Formerly the emcee of numerous television programs including "Concentration", Art James now heads a company which develops very lively business games for their clients. A number of the games mentioned earlier, such as <u>The Great American Management Game</u> for Bank of America, <u>The Site is Right</u> for American Airlines, <u>Play It Safe</u> for Chevron, <u>Eat the Clock</u> for Keebler, and <u>You Bet Your Life</u> for CNA Insurance were developed by Art James [2].

<u>Use It Correctly</u>

If a decision simulation is to be used as part of a management training program, it must be used correctly to achieve its full benefits. A decision simulation provides opportunities for learning before, during and after the actual decision-making rounds of the competition.

Prior to beginning the competition, the participants should establish goals, develop a plan, establish strategies, and identify alternatives. In essence, prepare for the role they are going to undertake. This type of preparation is often overlooked in the participant's real job. Managers do not take enough time to prepare in advance, relying instead on 'gut feeling' reactions. By requiring participants to prepare in advance of the simulation competition, proper organizing and planning habits can be taught.

With the use of lectures or case studies, it is easy for participants to sit back and simply point out the mistakes made in the situation under consideration. In most cases, errors are obvious and the people depicted are highly stereotyped versions of managers with severe administrative shortcomings. In these situations, it is very easy to identify mistakes and 'how I would have done it better' solutions.

The decision-making simulation does not allow this easy out. The participant does not have the luxury of seeing mistakes made by others. Instead, the participant must view the current situation, make a set of decisions, and live with the results whether good or bad.

Once the decision-making rounds of the simulation competition have been completed, the post-game period allows for another learning opportunity. An analysis and critique of the participant's performance provides valuable insight into what has happened and why. This is the point in time when the trainer or instructor's role is most important. Unfortunately, it is also the point where most simulation administrators falter. The administrator often just lets the simulation results 'speak for themselves' or provides a very brief summary and overview. Good evaluation material from the simulation author can go a long way in helping the administrator provide the proper post-game evaluation.

CONCLUSIONS

Decision-making simulations offer many benefits over other instructional devices. Their growth and enormous use at the university level attests to the fact that they are well thought of by academicians. While the same game benefits apply to their use in management training programs, their usage in this environment seems to be on the decline. As interested simulation users, do we want to do something about this? Or, referring to the opening example of this paper, is this simply another industry in which we're going to let the Japanese show us how its done?

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