

CHANNEL POWER: A STRAIGHTFORWARD MARKETING CHANNEL GAME

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ABSTRACT

Although a large number of marketing simulation games have been introduced, little empirical support for their effectiveness has been reported. A literature review concerning game effectiveness suggests that targeting behavioral learning and an emphasis on simplicity are required. A classroom marketing channel game is described which addresses these requirements and also provides a vehicle for continuing research in game effectiveness. Research implications of the game design are discussed.

INTRODUCTION

Since 1957, games and simulations have been used as means for advancing learning where limited experience exists (Watson 1981). One area of study for which games can be seen as a useful enhancement is marketing channel management. Although many undergraduate students possess experiences in direct exchange interactions, few have seriously considered the implications of either channel structure or channel interactions on firm strategy. Typically, teachers and textbooks employ theory from conflict resolution, communication, and marketing functions to develop understanding in this field. A common response by undergraduates to these approaches is that they are too theoretical and therefore impractical. Some means for increasing the perceived relevance of these theories would be useful.

This paper details the development of a straightforward marketing channel game for use as a supplement to standard course components. We purposely employ the term straightforward rather than simple. Though the game may initially appear simple, it offers students opportunities to gain complex insights into the nature of channel interaction. Use of a

straightforward game is supported by Raia (1966). He found that groups involved in game-playing performed better on an examination than those engaged in case study but that there was no significant difference between groups using complex or simple games.

The remainder of this paper is organized in three sections. First, the previous use and effectiveness of games and simulations in business education will be briefly reviewed. Included are considerations employed in the game design addressing shortcomings cited in game and simulation research. Next, the game design will be developed including the structure, roles, and process of game play. Finally, implications for future research regarding game effectiveness will be discussed.

PREVIOUS RESEARCH

Since business simulation games were introduced 35 years ago, they have gained "widespread use" (Watson 1981, Whiteley and Faria 1989). Although a significant body of research has developed, there remains insufficient evidence to suggest that games and simulations are more effective as teaching tools than other methods such as case study (Whiteley and Faria 1989, Greenlaw and Wyman 1973).

Whiteley and Faria (1989) recognize three areas of research in game and simulation use. These are: 1) examination of factors which influence the game environment and game performance, 2) study of the types of learning promoted by games, and 3) assessment of the pedagogical value of games relative to other teaching methods. These authors refer to four reviews of game and simulation research - Greenlaw and Wyman (1973), Keys (1976), Wolfe (1985), and Miles et al. (1986). Rather than replicate earlier reviews, attention is given here to the summary

finding that research is inconclusive concerning the teaching effectiveness of games.

Two weaknesses have been identified in attempting to evaluate research in game effectiveness. First, research efforts have varied significantly regarding factors influencing performance (Whiteley and Faria 1989). Second, the type of learning evaluated has varied between studies. Most studies emphasize the relationship between teaching technique and levels of theoretical learning. Recognition that learning varies by type is important because it suggests that researchers may not be measuring the type of learning provided in experiential exercises.

Of significance to the design of business games is the finding by Whiteley and Faria (1989) that game play did not affect performance on either theory or applied exam questions, but did significantly affect student ability "with respect to quantitative questions...". This is consistent with an hypothesis that game play is helpful in promoting behavioral learning. Students who had made calculations for game decisions were more adept at reproducing those behaviors. This suggests that game play is appropriate for instruction in such areas as group problem solving, negotiation, personal selling, and the present case of channel communication behavior.

A review of channel games (Gentry and Pickett 1982) reveals that primary differences between previous games and Channel Power are the level of complexity, and the time required. The computer game, Drock World, requires 6 hours for 6 play periods whereas in Channel Power, 25 play periods are simulated in 3 hours (1 hour for the 1st period and 5 minutes for the next 24 classes).

In response to the review, three considerations are employed in game design. First, the game is targeted toward development of communication behavior skill and interorganizational determination of channel strategy. These objectives are supplemented by the game's contribution to conceptual learning of such topics as channel functions, separation of channel flows, conflict resolution, and interdependence. Second, the game is straightforward yet challenging. Finally, the game is designed to require minimum time both inside and outside the classroom.

GAME DESCRIPTION

The object of the game for each participant is to contribute as much of their assigned function as possible in the timely satisfaction of orders. This is accomplished through participation in a simulated channel system consisting of manufacturers, upstream and downstream carriers, wholesalers, and brokers. Initially, the channel is unorganized. As students attempt to procure or supply material needed to complete orders, informal channel relationships are established. Those students that theorize or discover that formalization and maintenance of channel relationships results in improved performance tend to do well in the game. Reflection on outcomes associated with various strategies assists students in developing marketing channel concepts.

Students are assigned one of five roles listed above. Various class sizes can be accommodated by varying the number of products and potential channels. Each potential channel consists of manufacturers (one for each different product), two upstream carriers, one wholesaler, two downstream carriers, and one broker. A minimum of three different products and two potential channels are required. For this reason, the minimum number of participants is 18. With a two-channel game, however, affiliations may be too obvious unless demand for a given product is radically different between the brokers.

Optimum game size appears to be 30 to 40 players. This allows introduction of three or four potential channels and four different products. This arrangement provides sufficient ambiguity regarding channel organization strategy while not being so large as to be administratively unwieldy.

Play of the game involves communication and strategic moves by players performing limited channel functions. The instructor serves as customer by providing each broker with a list of orders. All orders may be provided at the beginning, or for a more complex game, the instructor may choose to release orders gradually. This more advanced game is useful for introducing demand estimation techniques and the concepts of speculation and postponement. Consistent with Raia's (1966) research regarding complexity, it is not recommended for

initial participation. In the following section, the functions and decisions of the various roles will be discussed. Following these outlines, a description of the administration of game moves is provided.

Manufacturers

Players assigned the role of manufacturer are responsible for producing, storing, and releasing one product to the distribution system. In the original game, the products were given the names widgets, gadgets, sprongs, and boings and consisted of a 3x5 card with locations for recording the manufacturer, carriers, wholesaler, and broker. Manufacturers are assigned a production capacity of two units per week. Other than determining production levels, the only other strategic decision given to the manufacturer is determination of which upstream carriers are authorized to carry their products.

Carriers

Players assigned the role of carrier are responsible for moving material in the channel system. Upstream carriers may move only among manufacturers and wholesalers. Downstream carriers may move only among wholesalers and brokers. The instructor should explain that typically, brokers neither take possession of nor assume title to goods. Therefore, the downstream carriers are actually making a "drop-shipment" directly to customers. Two constraints affect the strategy of carriers. First, it takes a week to move from one location to another. Second, each carrier has a load capacity of 10 units unless a downstream order exceeds 10 units. In that case, the complete order may be carried.

Wholesalers

Players assigned the role of wholesaler are responsible for receiving, storing, and assorting materials provided by upstream carriers in concert with order requirements. The only strategic means for affecting channel performance by the wholesaler is by selecting those carriers, both upstream and downstream, with whom they are willing to do business. Wholesalers must receive any return material from brokers that they originally shipped. This material may be sent upstream or held for future orders.

Brokers

Brokers in the game simply receive completed orders. Only orders delivered on or prior to the due date are accepted. Late orders are canceled. The primary responsibility of the broker is to communicate orders to other channel members. Gaining commitment of channel participants is important to broker success. It is hoped that they experiment to find a number of ways for establishing commitment.

Scoring and Record Keeping

Each participant is evaluated based on orders delivered against other participants at the same channel level. Manufacturers are compared with manufacturers, upstream carriers with upstream carriers, and so on. In this way, channel members recognize interdependence in competing at their channel level. It has been suggested that contribution of games to overall course performance be modest to prevent conservative play (McKenney and Dill 1966).

The game is designed to require minimum time inputs on the part of both students and instructor. Plywood and nails or a series of baskets, can be used to locate and move material. Each completed order consists of a set of product cards which includes a record of who performed each function. Scoring is performed at the end of the game simply by keeping completed orders and tallying them. It is recommended that interim tallies be provided.

Conducting the Game

Students are assigned roles and given a copy of rules one week prior to the start of the game. It is recommended that the initial session consist of a one hour period in which students communicate freely and begin to construct advantageous channel arrangements. Brokers are given customer orders at the beginning of this period. They are advised that order information is their primary source of power and should be used wisely. The only restriction on communication is that collusion among members at the same channel level is prohibited.

At the end of one hour, initial week moves are conducted. The sequence of moves is important for

maintaining game constraints and minimizing time required for play. First, wholesalers organize materials received in the prior week. Second, downstream carriers make their moves. Third, upstream carriers make their moves. Finally, manufacturers place material manufactured for the week on the board. Any material delivered to the broker by downstream carriers can be reviewed against order requirements any time following this sequence.

Debriefing is a crucial element in the experiential learning process (Thatcher 1986). Channel Power is designed to enhance reflection. Since only five minutes are used each period for game play, discussion during the remainder of the class can be used to investigate game implications of theory topics.

RESEARCH IMPLICATIONS

Although a number of channel games have been developed, no research examining the effectiveness of this class of games was uncovered. Inconclusive findings regarding the educational value of games cannot be generalized to the channel setting. For this reason, a systematic research program for assessing the effectiveness of games for teaching channels is recommended. Channel Power is an appropriate beginning research tool because of its simplicity and the ability to relate it to various kinds of learning - theoretical, applied, and behavioral.

Research findings regarding game effectiveness can be interpreted in two ways. One explanation is that learning provided in experiential exercises has been improperly measured. An alternative explanation is that game complexity has inhibited learning. Channel Power is a vehicle for testing both hypotheses.

In the first case, learning in a class using Channel Power can be compared to that of a group using another method. In the second case, comparison of groups employing Channel Power and a more complex channel game should be made with respect to various types of learning. The second hypothesis can be tested in detail by systematically introducing complexity to the Channel Power game and measuring the impact on learning between groups. Systematic evaluation using a single game is complementary to the cross-sectional approach employed to date.

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