LEARNING TO IDENTIFY AND SATISFY CONSUMER WANTS:
A CLASSROOM GAME

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This paper describes a classroom game being developed for consumer behavior courses. A description of the game follows an introduction that explains the reasons for developing this experiential tool, and a discussion of the students' background before beginning the game.

INTRODUCTION

A common frustration shared by college teachers is a tendency on the part of many students to "memorize" material in the course in order to satisfy the professor's requirements for a good grade. The student's goal in many cases is not to learn the material, but to achieve some target grade. Insight into the causes of this problem can be gained from the persuasion and opinion change literature--particularly the theories of Kelman [4] and Bauer [1].

Both Kelman and Bauer recognize that in any persuasive situation, the effect depends not only on <u>what</u> is said, but also on the relation between the receiver of the information and the source of the message. If the message source is perceived to be in control of some means of gratification to the receiver, the receiver is likely to <u>comply</u> with what is said in order to gain this gratification. Message <u>acceptance</u> may not occur with this compliant behavior.

If message acceptance is to take place, two things must be present. First the receiver must be in a "problem-solving" mode, and second, the information must come from an expert source. This results in the receiver <u>internalizing</u> the message, that is accepting it as his own "truth."

In the traditional classroom situation the message source is the teacher; the receiver is the student; and the persuasive message is the course material. Because the teacher has control over the means of gratification (grades) the expected behavior of the student is compliant behavior. A compliant student can feed back what teacher said, and get rewarded.

To decrease this tendency toward compliance and increase the likelihood that material will be learned and internalized, it is necessary to either remove the means of gratification from the teacher, or remove the teacher from the role of message source. The first choice is inconsistent with tradition; experiential learning tools allow the second.

Experiential learning tools force the student to become experienced in the problem area and to become, in effect, his own expert source of information. The nature of a simulation game

puts the student in a problem solving mode and the information gained from the experience becomes internalized.

For these reasons we decided to try to design a classroom game that would give the students an appreciation for the difficulties involved in satisfying consumer preferences. Classroom experience had taught us that many students who have learned what the teacher said display a surprising lack of understanding for the complexities involved in satisfying consumer preferences.

CLASSROOM BACKGROUND FOR THE GAME

The idea behind this game comes from Haley [3]. Haley points out that not all consumers of a product are seeking the same kinds of benefits from the product and suggests that market segmentation based on benefits desired is a logical strategy. In fact, "The benefits which people are seeking in consuming a given product are the basic reasons for the existence of true market segments." [3, p. 31]. The problem for marketing strategists is to identify the segments in terms of benefits desired, to choose what segments to appeal to, and to organize the marketing mix around those chosen segments. While this concept seems simple, it is operationally very complex.

Students in consumer behavior courses are given the task of identifying particular want-satisfying attributes in a population and of designing a product or products that best match those wants. The specific product used in this game is coffee. At this early stage in the development of the game, only physically identifiable attributes of coffee are included. Future development of the game will include psychological attributes as well.

By the time the game is introduced into the course the students have been exposed to a few theoretical consumer choice strategies. They understand that a consumer chooses between brands of coffee on the basis of the perceived attributes of the available alternatives. They are most familiar with the linear compensatory model presented by Engel, Kollat and Blackwell [2]. The Engel, Kollat and Blackwell approach is that a consumer will choose the brand for which he has the most favorable attitude. The attitude toward a brand is a function of whether or not the consumer believes the brand possesses certain attributes and the importance he places on those attributes for coffee use. Specifically:

$$A_j = \sum_{i=1}^{N} B_{ij} I_i \tag{1}$$

where A_j is the consumer's attitude toward brand j;

B_{ij} is the consumer's belief that brand j possesses attribute i;

I_i is the importance to the consumer of attribute i and

N is the number of salient attributes for coffee choice.

The attributes available in the game are:
1. style of coffee (ground, instant, freeze-dried)
2. size of container (1 pound, 2 pounds, 3 pounds for ground coffee; 2 oz., 4 oz., 8 oz. for instant and freeze- dried)
3. caffeine content (regular or decaffeinated)
4. flavors (plain, chickory, European style)

Equation 1 implies that if a person prefers ground coffee with certain other attributes and he is given a choice between (a) ground coffee with one other preferred attribute and (b) freeze-dried with three other preferred attributes, he will choose the freeze-dried coffee. That is, equation 1 allows the absence of one attribute to be "compensated for" by the presence of others. This particular example is contrary to intuition. Many ground coffee drinkers would reject instant or freeze-dried coffee regardless of the number of other attributes present. First, they combine knowledge of attributes in a hierarchical fashion, then they apply compensatory measures.

Beginning the game, then, the students are aware that different consumers evaluate different attributes in their brand choice and that some consumers must have a certain style of coffee before any other attributes are evaluated. The problem is threefold:
1. Research the market to identify groups of consumers desiring similar attributes;
2. Design a brand of coffee that will attract the most consumers; and
3. Communicate brand information to the market.

The communication problem in practice is often many times more difficult than the identification problem. A potential consumer must first be exposed to the brand message. Even if he is exposed to the message, there is no guarantee that he will pay attention to it. He may even identify the message with another manufacturer or decide that he doesn't believe what is said. To keep this game within bounds, these communication problems are not included; exposure to brand information assumes complete processing of the information.

THE GAME

The game simulates the research, design, and communication steps of launching a new brand of coffee. The data base of the simulation is a generated population of 600 consumer families. It is produced using a random number generator with a set of functional relationships among classification variables (age, race, education, etc.) and coffee preference variables. Students sample from this population to research preferences and communicate to it to sell their products.

To begin play, a class is organized into as many as ten competing teams. These teams make decisions and analyze results over the six sessions of play. The first and second sessions focus on allocation of resources among research, design, and communication. The constrained budget forces the students to weigh the marginal benefits of spending for each. The research decisions required are sample size, number of questions (beyond a minimum of ten chosen from a list of 22) and extent of analysis (extra fees are charged for additional two and three- way crosstabulations). The design decisions (made in later sessions) involve the width of the attribute offering. The brand can be produced as ground, instant or freeze-dried. It may also be produced in a variety of flavors and sizes and as decaffeinated and/or regular. However, for each additional variety made available in the offering a substantial extra production cost is incurred. Thus the cost of giving consumers variety within the brand must be balanced against research and communication activities. The communication decision (also made in a latter session) involves an advertising level choice. The more money that is spent, the larger is the proportion of the population that is aware of the brand offering. The choices and costs within these three areas are shown in Exhibit 1. At the end of the second session, teams have made a tentative decision for allocation of resources among research, design and communication and have made the research decisions of sample size and questions to be answered. The questions are chosen from a pool of 22 questions.

EXHIBIT 1

Budget

Your total budget must NOT exceed $200,000

MARKET RESEARCH – includes analysis (frequency count, means, variances and standard deviations for all questions; any 4 two-way crosstabulations, 1 three-way crosstabulation.)

Survey Size	Basic Cost (includes 10 questions)	Incremental Cost (each additional question)
100	$15,000	$100
200	30,000	200
300	45,000	300

Additional Analysis (each)

2-way crosstabulation $ 1,000
3-way crosstabulation 2,500

EXHIBIT 1 (cont'd.)

PRODUCTION COSTS

Style of Coffee:

Ground-$50,000   Instant-$55,000   Freeze-Dried-$60,000

Size:

1 lb. - $15,000	2 oz. - $10,000
2 lb. - 12,000	4 oz. - 8,000
3 lb. - 10,000	6 oz. - 7,000

Caffeine Content:

Regular - $20,000   Decaffeinated - $30,000

Flavor:

Plain - $20,000   Chickory - $25,000   European style - $35,000

ADVERTISING - level of exposure

20% - $ 5,000	50% - $32,000
30% - 12,000	60% - 45,000
40% - 21,000	70% - 60,000

In Session 3 they communicate their research desires to the instructor and receive output in Session 4. Between Sessions 4 and 5 the groups use the research results to "design" a brand that will satisfy more consumers better than the other groups' brands. The descriptions of all brands are input to the data base between Sessions 5 and 6. The results are announced in Session 6 and the "winner" is the group with the most unit sales. Brand shares are determined by applying a choice model to the simulated population, given the offerings of the teams and the level of communication. First, for each consumer unit it is determined which brands the unit is aware of. It is only among these brands that a choice will be made. Whether a communication is made to a unit by a brand depends on the level of exposure paid for by the team and on the outcome of a random number generator. Next, it is determined which of the known brands is most attractive. This is determined using a hybrid compensatory-hierarchical choice model. The model is hierarchical with respect to type (ground--instant--freeze-dried) and compensatory with respect to the other attributes. Finally, it is determined if a consumer finds the "winning" brand sufficiently attractive to switch over to it from his existing brand. This depends on the absolute level of attractiveness of the winning brand and on the degree of brand loyalty of the unit.

Up to Session 6 each student has been simply playing a game and having fun. Each group "knows" that it has succeeded in satisfying wants. However, only one "wins." The losers realize that matching products to markets isn't as easy as they thought. Class discussion should emphasize the probabilistic nature of consumer choice.

SUMMARY

In all, this is a very simple game. Its sole purpose is to help students to appreciate that product-market matching strategies are not as simple as they seem. Issues such as price, long-term sales success, media selection, message format and prior consumer learning are intentionally left out. The only realistic complicating factor that is built into the program is a tendency for "brand loyal" consumers to have a lower probability of selecting any new brand. It is up to the student to recognize the possibility based on previous classroom material.

The initial development of this game is purely for use in consumer behavior classes. Elaborations that can be added over time include variations in media choice (e.g., demographic characteristics of audiences to be reached) and variations in market research collection devices (e.g., telephone, personal interview, mail survey). Additions of this type will help make the game useful in other classes.

REFERENCES

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3.   Haley, Russell I., "Benefit Segmentation: A Decision Oriented Research Tool," Journal of Marketing, Vol. 32, (July, 1968), pp. 30-35.

4.   Kelman, Herbert C., "Process of Opinion Change," Public Opinion Quarterly, Vol. 25 (Spring, 1961), pp. 57-78.