

THE DESIGN AND MARKETING OF NEW EDUCATIONAL PROGRAMS

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College enrollments increased at an average annual rate of 8.25 percent from 1960 to 1969 [3, p. 79]. However, in the period 1970-1974 the growth rate fell to an average of 2.7 percent [3, p. 79]. The decrease was more severe in private schools where enrollment grew at less than one percent and in various departments of universities, such as engineering, where enrollments actually declined [3, p. 79, 86]. During this period costs increased and tuitions correspondingly rose, thus further aggravating enrollment problems. Competition between schools has increased and quality students have become more difficult to attract. The decline in enrollment growth combined with increasing costs have put pressures on university budgets. A recent study of enrollment trends and financial indicators concluded that 49.2 percent of colleges and universities are financially unhealthy [7]. Universities have found their growth plans threatened and, in some cases, academic quality in jeopardy.

The purpose of this paper is to explore a marketing science approach to these higher education problems. Although management science has been applied to improving staffing, course scheduling, budgeting and resource allocation, little research in marketing has been reported [9, 10]. This paper will consider methods for creating new educational programs that will attract quality students, support increased tuition, and represent leadership and excellence in education.

#### MARKETING APPROACH TO DESIGN

Marketing is concerned with designing, communicating, and distributing products that meet the needs of consumers. In the case of universities, the product is an educational program and the consumer is not one group, but several clientele groups including students, faculty, and potential employers. If the marketing approach is successful, an educational plan will be developed that better meets the needs and preferences of these clientele groups and better achieves the university's goals of leadership, excellence, and impact.

In the university setting care must be taken to balance the desires of various clientele groups. For example, although it may be possible to "sell" the potential students a six month program that grants a masters degree, it is unlikely to represent the standard of quality education desired by faculty. On the other hand, one could visualize a six year program that represents the ultimate in academic quality, but would not attract any enrollment. In the 1950-1970 periods of high demand faculties could specify what they wanted to provide, but in today's market there must be a balance between the desires of students who make a decision to enroll in a college or university and what the faculty wants to provide. One could also conceive of a program that would attract student and faculty interest, but be unattractive to a potential employer of a graduate. Although universities do not function solely to meet the needs of employers, the needs of organizations who will be served by college graduates are important to recognize. The task is to design an educational program that attracts students, represents quality education, and meets the needs of the employment market.

This paper attacks this task by application of a design methodology proposed by Hauser and Urban [5]. They proposed that consumer behavior be directly observed with respect to a set of choice alternatives, that measures of perception and preference be taken, and that these measures be integrated in a model to predict choice. A product would then be designed to position itself uniquely in terms of the underlying perceptual dimensions by which consumers evaluate products. This paper will extend the Hauser and Urban methodology by including consideration of multiple clientele groups and by linking specific features of a product (e.g., price, ingredients) to preference and the psychological attributes of that product (e.g., "quality").

These contributions will be developed within a description of research

to support the designing of a new masters degree program for the Alfred P. Sloan School of Management at M.I.T. MIT began its masters program in 1925 with a program that reflected leadership through a discipline-based approach to management requiring study of economics, behavioral science, and quantitative methods. While this has been a successful approach, some concerns were developing in 1975 due to a financial deficit, a lack of visability and recognition, and a lower than desired proportion of students coming to Sloan after being accepted. In addition, there were some faculty members who were concerned with the need for continued innovation to achieve leadership in management, attract a quality (highly motivated, intelligent, and diverse) student body, and impact on the practice of management. The following sections describe the research undertaken to respond to these concerns and the designing of a new masters degree program to achieve the school's goals of excellence and impact. First, the process of creating alternatives will be described and then the measurement and modeling of clientele response will be outlined. The preferences of students and faculty were investigated and since Sloan is a professional school, the preferences of employers also were considered. Considerations of design and implementation of the new programs are presented and the paper closes with a discussion of the implications of this work for marketing services and future research needs.

#### MEASUREMENT

##### Creative Input

Good design begins with creative efforts to expand the range of alternatives that could be implemented. In many cases modification of existing products and services are not sufficient to meet objectives, so procedures are needed to create major new product attributes or dimensions of program

innovation. The new alternatives should encompass the entire space of potential perceptual dimensions so that the trade-offs and preferences involving all dimensions can be clearly understood. Thus we term these new concepts "stretchers".

The development of stretchers has been successfully attacked through "Synectics" techniques [8]. Synectics is a problem-oriented procedure that attempts to create new alternatives using the input of a diverse group drawn from within the new product provider or clientele groups. It emphasizes complete listening by participants and constructive thinking that builds upon initial ideas. A specially-trained group leader serves as a scribe and polices the discussion so no ideas will be lost. The group would typically take the specific problem of the person responsible for new product implementation and work to find a solution. First participants express their wishes for an idealized outcome or restate aspects of the problem as questions of "how to" achieve specific outcomes. Then many alternative solutions are generated. For example, one procedure is for each participant to write down one real idea and one fantasy. Then these ideas are examined with a priority order being set by the individual with the specific problem. The suggested procedures are based on the assumption that all ideas are infeasible when suggested, but rather than discarding them, they are examined for their positive aspects along with the specific concerns they generate. Then efforts are made to overcome the concerns and build on the positive aspects of the ideas to specify a new product in terms of its target market, primary benefit claims, and differential positioning. We term this definition of the product the "core selling proposition". Early research results from perceptual mapping or market segmentation studies have been particularly useful in developing core selling propositions since they describe the existing market and help define the task as creating a new dimension in the market or a new basis of segmentation.

In the Sloan School research, these creative procedures were used to create several different specifications for a masters program in management. The problem was to create a unique program that attracted quality students at premium tuitions, demonstrated academic excellence, and promoted recognition of the Sloan School. The group consisted of students, faculty, alumni, administrative personnel, and the dean. Early research results based on exploratory surveys of MIT and Harvard undergraduates indicated the perception of "getting a good job" was a critical factor in selecting a business school. This finding was used along with personal knowledge and experience of the group to guide the creative effort. The group generated many ideas and after being sure minimum criteria for quality education were met, the ideas were refined to yield three new programs to be tested with potential students, the faculty, and recruiters.

The first two were based on segmenting the market for a masters degree by providing a "generalist" program, for those interested in breadth along with the expected MIT level of content, and a "specialist" program which allowed the student to gain in-depth skills in a particular area such as finance, economic analysis, or market research. Both were designed to facilitate career success, but by different paths. The specialist would rise through a functional area to be a part of the top management team while the generalist would rise through a range of functional areas.

The generalist program was called the "Young Executives Program" or YEP, and was characterized by: (1) intensive 12 month duration, (2) high emphasis on group problem solving and communication skills, (3) training in basic disciplines of economics, organization theory, quantitative methods, and information systems, (4) a two-week trip to visit leaders in business and government in New York and Washington, (5) a computer game exercise to serve as a thesis, and (6) broad exposure to law, culture, and the environment. The core selling proposition was

that this program provides the student a breadth of practical skills and builds confidence and competence to pursue a career leading to an influential management position.

The specialist program was called the "Intensive Program in Management", or IPM, and was characterized by: (1) in-depth specialization through over 15 elective courses, (2) a high level of flexibility for the student to define his (her) individual program, (3) high faculty interaction through "learning cells" where three to six students work intensively with one faculty member in their area of specialization, (4) a summer job internship between the first and second years of the program, and (5) rigorous treatment of the underlying disciplines. Through in-depth study of the underlying disciplines and a specific area along with realistic experience, the student would be prepared to rapidly advance to the top of a functional area in an organization and be influential in policy and strategy formulation.

A third alternative program was created for public management and offered the student a program to develop management skills particularly for management in public organizations. These three concepts were felt to be innovative and met the faculty's view of at least minimum quality of education. They stretched the perceptual range of alternatives now available to students, but they realistically could be implemented. The three new programs were the basic stimuli for the survey research in each clientele group.

#### Sampling and Questionnaire

Three clientele groups were formally surveyed - potential students, Sloan School faculty, and recruiters. In addition, informal responses were obtained from alumni and current Sloan students. The potential student sample was randomly drawn from the undergraduate populations of the University of Pennsylvania, Northwestern, and Stanford Universities. Respondents were initially screened by phone to

determine if they were "interested in pursuing a career in management". 1500 calls were completed and 20 percent were interested in a management career. These 300 people were sent a written questionnaire and although this questionnaire took 40 minutes to complete, 40 percent of the questionnaires were returned. The phone screening questionnaire also asked the respondent what schools they would consider applying to for admission. The set of schools each respondent stipulated was called his/her "evoked set". Only 5.3 percent evoked Sloan while 34 percent evoked Harvard. This clearly indicated the recognition and awareness problem MIT faced. The written questionnaire asked each student to rate their evoked set of schools across 20 scales on a 1 to 5 agree/disagree basis. These scales were developed after group discussion with students to determine their semantics and the factors they considered in evaluating a management school. After rating their evoked set and providing a rank order of their preferences, they read a one page description of the existing Sloan School program, rated it, and inserted it in the preference order. Next they read the two new concept descriptions, rated them on the scales, and provided a new preference rank order over their evoked set, the existing Sloan program, and the new concepts. Those interested in public management read and rated the new public management program. The final questions were demographic, and measured various factors such as motivation, innovativeness, and their sources of information.

In the student group, an experiment was carried out with respect to tuition. Two levels were tested for the programs. \$9,500 and \$11,000 for the Young Executives Program, and \$7,500 and \$9,000 for the Intensive Program in Management, and \$7,000 and \$9,000 for the existing Sloan two-year program. Two-thirds of the sample was exposed to the low levels and one-third to the high level of tuition.

The recruiter sample was obtained from the list of recruiters who



interviewed at Boston area schools. Each respondent was further qualified by phone. Sixty-five questionnaires were sent to companies. Approximately one-half of these went to recruiters and one-half to the person who made the final hiring decision. 46 percent were returned. In the questionnaires recruiters rated Harvard Business School, the existing Sloan program, YEP, and IPM along a set of 21 scales that reflected important factors used in judging management school graduates. These scales were generated by a group discussion with 10 recruiters.

The faculty sample consisted of 20 percent of the Sloan School faculty or 11 respondents. It was a purposive sample designed to represent each functional area and faculty rank and did not include the faculty members directly involved in this research. The faculty were exposed to the concepts and rated them on a set of scales generated by previous discussion with selected faculty members. Then each faculty member specified his level of intent to support each new program on a 5 point scale from definitely would support to definitely would not support the new programs.

#### CLIENTELE RESPONSE

##### Potential Students

The underlying perceptual dimensions affecting choice of a management program were derived based on a factor analysis of the scale ratings of students' evoked sets and the new programs. A principal components analysis indicated that three underlying dimensions accounted for 39.2 percent of the variance. A common factor analysis confirmed the three dimensional interpretation. The first dimension reflected the "outcomes" of the education program and was correlated to scales representing exciting job opportunities, salary, membership in a world wide alumni fraternity, prestige, and that one "cannot go wrong" with a degree from this program. The second dimension correlated with scales reflecting common sense, real world, and relevancy and was named "realism". The third dimension

reflected the "process" of education and was correlated to perceptions of students, high faculty contact, and financial aid.

Average standardized factor scores were used to represent the perceptions of existing business schools and the new programs. They are shown as a perceptual map in Figures One and Two. Wharton, Stanford, and Harvard are high in the "outcomes" dimension, while the existing Sloan program is low.<sup>1</sup> Sloan's current program was equal to others in "realism". On the "process" dimension Harvard was characterized by highly competitive students while Sloan was viewed as having a friendly, cooperative student atmosphere. The new programs strongly differentiated themselves on realism, both with respect to the existing Sloan program and other business schools. Both YEP and IPM were viewed as more realistic and relevant. The IPM program also was high on the process dimension because of high ratings on flexibility and faculty contact. The concepts did improve perception of salary and job opportunities slightly, but did not improve prestige and alumni ratings, so the existing and new concepts were not significantly different on the outcome dimension.

Regressions of preference rankings against the factor scores across all individuals and schools indicated the relative importance of the dimensions as outcome (.65), realism (.2), and process (.15). These coefficients were all significant at the ten percent level. With these estimated coefficients, 40 percent of the individual first choices and 30 percent of the full rank order preference judgements were correctly predicted. This can be compared to a 15 percent correct first choice prediction for a model in which each factor was equally important.

The first preference for Sloan was one percent of the sample based on existing awareness. When exposed to the existing Sloan program this rose to

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1. In assessing the significance of the difference of the means in Figures One, Two and Three, the reader can conservatively use .2 as an approximation to the standard deviation of the difference of means.

AVERAGE STANDARDIZED FACTOR SCORES

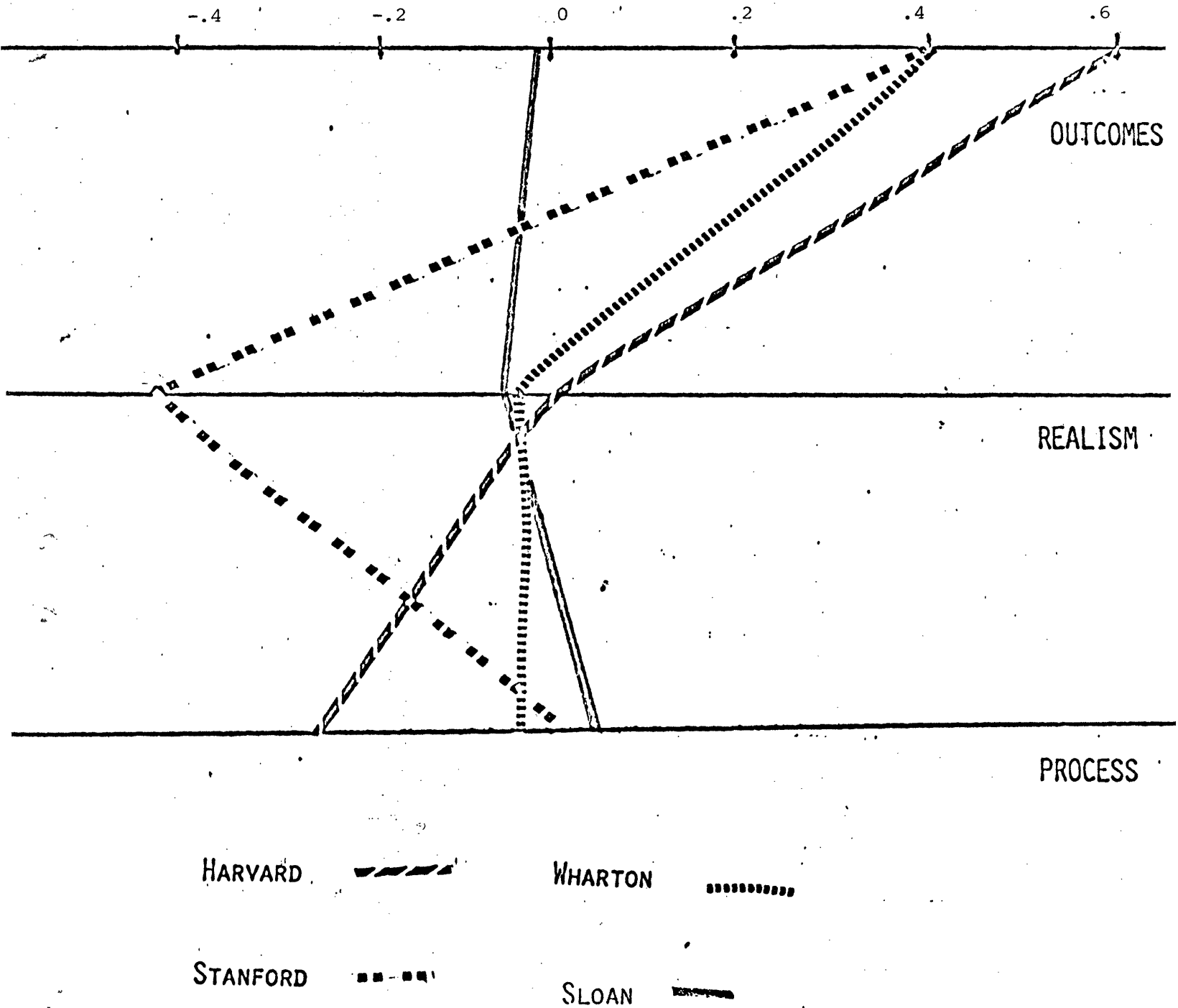


FIGURE ONE: POTENTIAL STUDENT PERCEPTUAL MAPS -- EXISTING PROGRAMS

AVERAGE STANDARDIZED FACTOR SCORES

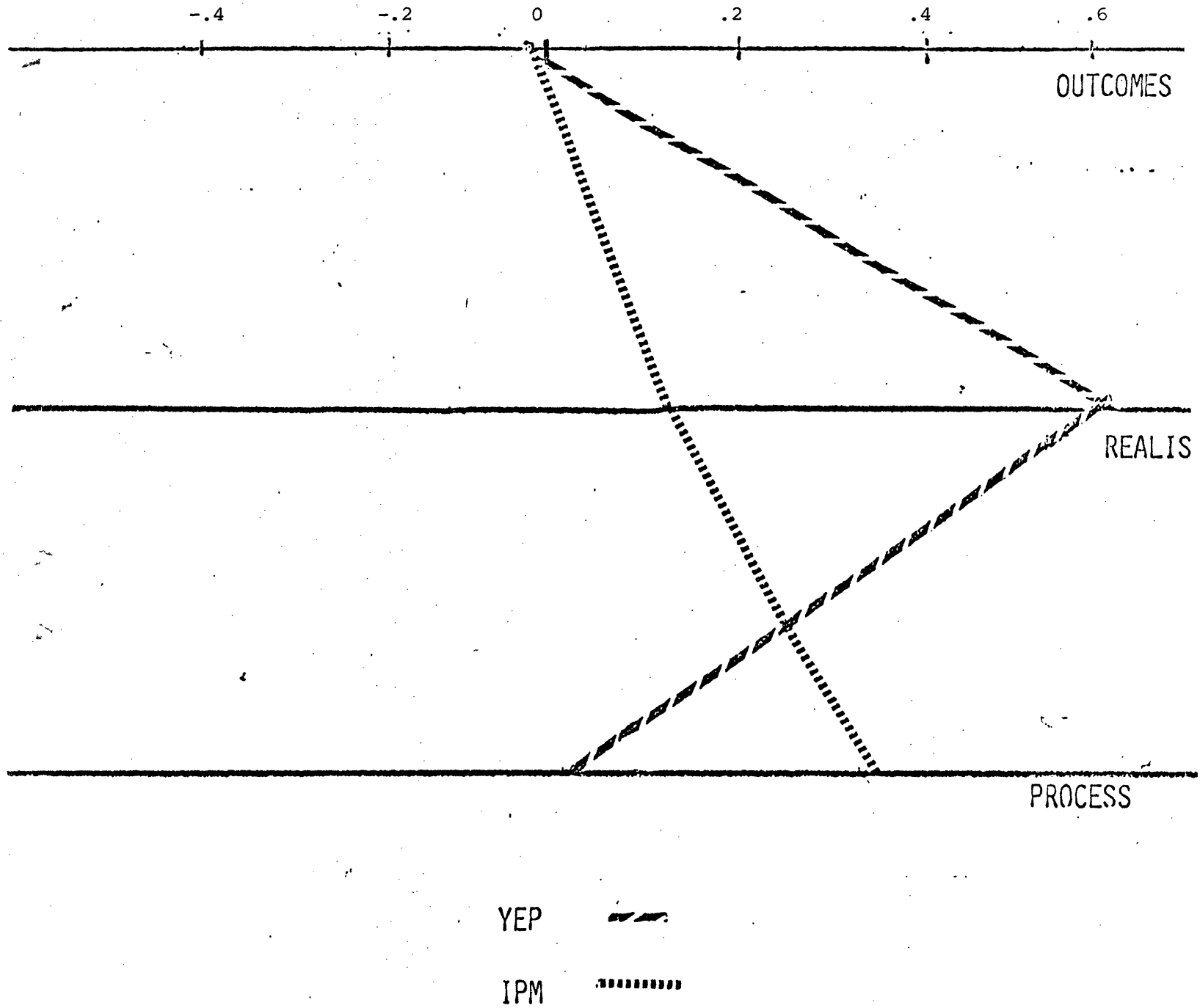


FIGURE TWO : POTENTIAL STUDENT PERCEPTUAL MAP -- NEW PROGRAMS

11 percent first choice. After exposure to the two new concepts, the first preference for Sloan rose to 37 percent with the YEP program receiving 22 percent, IPM 10 percent, and existing Sloan 5 percent. Of those who preferred an MIT program, 87 percent of the respondents preferred the new concepts to the existing Sloan program. These responses may be biased upwards since, although sponsorship of the questionnaire was not identified as MIT, the respondents did see three Sloan concepts. However, the nature of the sample may have biased the results downward since the three schools surveyed (U. of Pennsylvania, Northwestern, and Stanford) all have their own business schools and their undergraduates are pre-disposed towards them. In balancing these biases there appears to be ample evidence of high response to the new plans and support for a market segmentation strategy. This high response was confirmed by a separate study of 32 potential students now working in companies. In this sample 44 percent had first preference for the two new concepts. The undergraduates who chose the new programs were desirable students. They had significantly higher test scores (S.A.T., math and verbal), were more definite in their career plans (43% of those who preferred the new plans could designate their field of concentration versus 18% for those who preferred existing Sloan), and were more highly motivated (33% of those who preferred the new plans versus 18% for existing Sloan chose the high motivation response).<sup>2</sup>

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2. The motivation question was:

Please check which statement most closely represents your future aspirations.

- a. \_\_\_\_\_ I am most concerned with achieving a highly influential position which I would expect would command a high salary as well as prestige. I am willing to forego as much leisure time as necessary to accomplish this, even if it entails working more than 60 hours a week.
- b. \_\_\_\_\_ I am interested in a secure, worthwhile and financially comfortable career. It is important that I have enough leisure time to enjoy my personal life and to develop personal hobbies such as reading, music, etc.

The public program did not receive a favorable response. Only 18 percent read and rated the program and of these only 11 percent had first preference for it relative to the other masters program options.

The analysis of the experiment on tuition indicated no significant difference in the preference response at the high versus low levels. Tuition in the ranges considered did not seem to be critical when embedded in a concept statement clearly stating the benefits of the new programs.

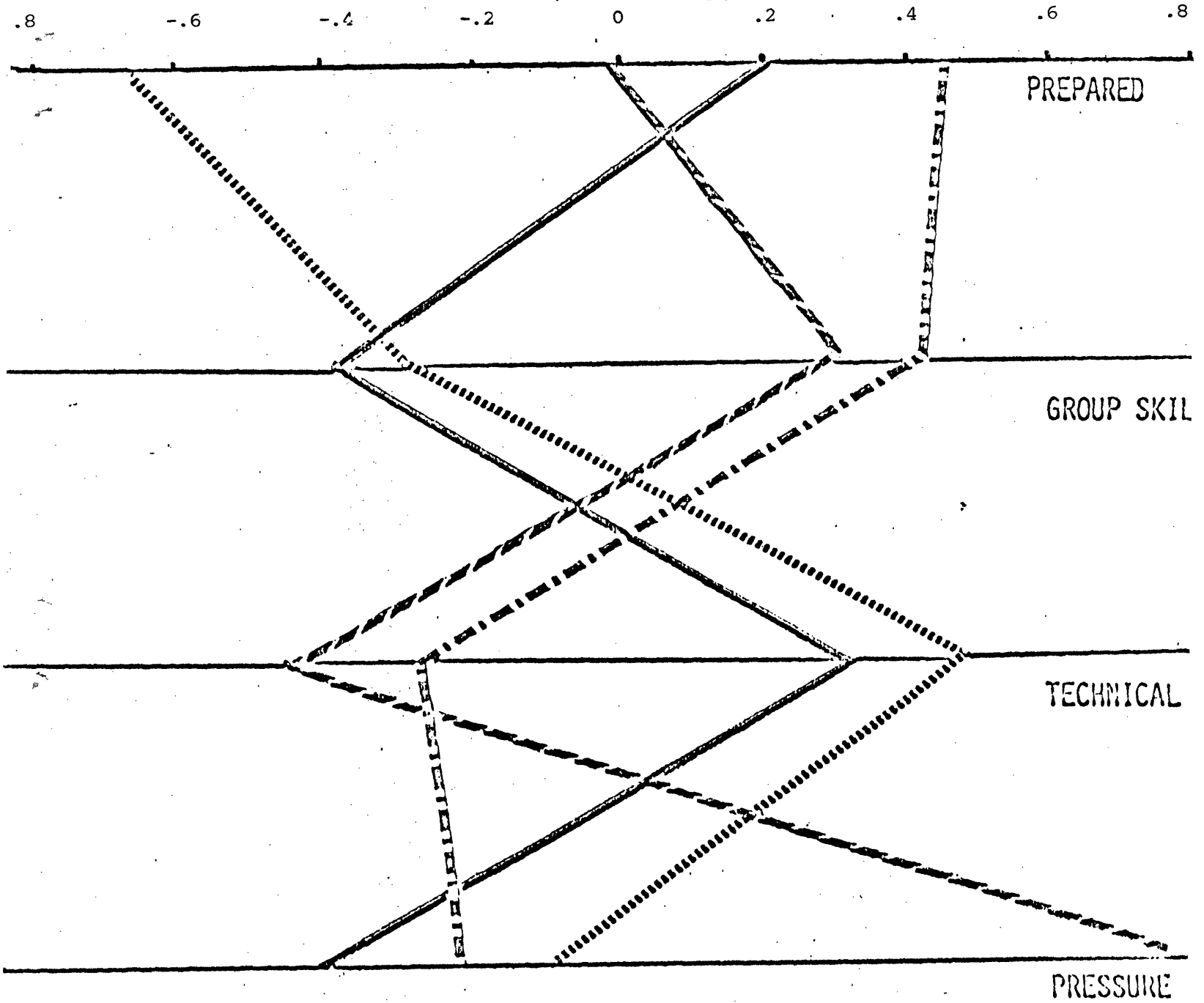
In summary, the students perceived the new programs as different from existing programs and responded positively to the strategy of market segmentation. It appeared that Sloan would attract an intelligent, committed, and motivated student body to a set of programs at an increased tuition level.

#### Recruiters


The recruiters' ratings of Harvard, MIT, and the new concepts were factor analyzed by principal components procedures. Four dimensions accounted for 63 percent of the total variance. The first dimension was correlated to scales that reflected real world knowledge, action-orientation, practicality, relevant skills, ability to choose career, and contact with business people. It was named "job preparedness". The second reflected "group skills" and was correlated with a graduate's sensitivity to people, leadership abilities, generalist aptitude, and interpersonal skills. The scales loading heavily on the third dimension were sophisticated skills, analytical, research orientation, faculty contact, and creative attack on problems. We called this the "technical skills" dimension. The final dimension represented the degree of competitive "pressure" the program placed upon the student.


The average standardized factor scores are shown in Figure Three. The existing program at Sloan was rated lower than Harvard on job preparedness and group skills, but higher on technical skills. Recruiters saw Harvard as a high pressure environment while MIT was low. The recruiters rated the new programs

AVERAGE STANDARDIZED FACTOR SCORES



HARVARD 

SLOAN 

IPM 

YEP 

FIGURE THREE: RECRUITER PERCEPTUAL MAP

favorably. Both the YEP and IPM program exceeded Harvard on job preparedness. YEP was similar to Harvard on group and technical skills. The new program segmentation is clear with YEP excelling on group skills and preparedness. IPM has depth of technical skill and attains good perceptions on job preparedness. The individual ratings were weighted by the recruiter self-designated importance for each scale to obtain a single overall evaluative measure [11]. Based on the weighted ratings, 63 percent of the recruiters rated one or both of the new concepts superior to Harvard and the existing Sloan programs. The weighted average of the importances and factor loadings indicated each of the four overall dimensions to be equally valued.

#### Faculty

The faculty sample was small (11 respondents), but designed to be representative. Their ratings of the new programs were widely dispersed. The faculty heterogeneity is shown in their willingness to support the programs. See Table One. Thirty percent of the faculty would definitely support the IPM program while forty percent probably would not. Eighteen percent would definitely support the YEP program while 36 percent definitely would not. Some liked the increased specialization of IPM since it would build strong technical skills, support joint research, and be academically sound. Others felt this was not what was needed for a good management education. Some liked the YEP since it would have high impact on the field, but others saw it as inferior in academic quality. The differences of perception in a client are important to recognize if any change is to be made. Rather than leading to no change, these differences must be faced, discussed, and resolved if new programs are to be implemented. This discussion must recognize the desires of students and the professional field of management, as well as the faculty.



TABLE ONE: FACULTY WILLINGNESS TO SUPPORT NEW PROGRAM IMPLEMENTATION

	Definitely Yes	Probably Yes	Maybe Yes Maybe No	Probably No	Definitely No
Intensive Program In Management	30%	30%	0	40%	0
Young Executives Program	18%	18%	28%	0	36%

Comparing Clientele Response

The students and recruiters were both interested in career success. The student preception of "outcomes" reflects the "preparedness" dimension of recruiters. The student perceptions of realism and relevancy is also a component of the preparedness dimension of recruiters. Recruiters seemed particularly concerned with group skills as a positive attribute of graduates. Although both recruiters and potential students perceived Harvard high and MIT low on pressure, recruiters had a preference for more pressure while students preferred a friendly and cooperative atmosphere. Recruiters valued technical skills as did the MIT faculty. The faculty was interested in impact on management, but both students and recruiters were more interested in the immediate job and career effect of the program.

The recruiters and students viewed IPM and YEP as very different from Harvard and other schools while the faculty saw IPM as more of the existing Sloan approach and YEP as being more like Harvard. This may account for some of the negative faculty views about YEP.

The differences between perceptual dimensions and positionings are important to recognize. The information reflected in the high importance students attached to jobs and the separate dimension of group skills by recruiters were new insights to the faculty. The faculty and administration next faced the question of what actions to take based on this research.

PROGRAM DESIGNDecision Alternatives

Three change alternatives were available: (1) improve the marketing of the existing Sloan program, (2) position Sloan as an all specialist program, (3) segment the market with two programs based on the YEP and IPM. The first alternative could increase awareness and enrollment. Recall that first preference of Sloan was 11 percent given exposure to the existing program. Although this would not require new faculty commitments, it would not demonstrate leadership in management education through a unique program and it would not improve the school's impact on management. The alternative of an all-specialist program would be new and is based on the strategy of doing what MIT is well prepared and expected to provide. Although much of the faculty would approve of this, some would not and the student and recruiter response would not be very positive. More importantly, a major segment of the market that wants a generalist program with academic content would not be served.

The research results indicated the third alternative of market segmentation could be successful. Student preference increased from 11 percent first choice for Sloan to 37 percent first preference and 63 percent of the recruiters rated the new programs superior to both Harvard and the existing Sloan programs. The programs are innovative and could attract a highly able, committed, and motivated student body at a premium tuition level. The unifying concept encompassing both programs is that realism, coupled with an emphasis on basic disciplines, yields competent graduates prepared for successful careers. From a student perspective, both programs were unique in terms of realism, and exciting careers were of prime importance. Faculty had professed a keen interest in a strong discipline approach. Recruiters were concerned that graduates should have real world knowledge and be competent to implement that knowledge. The

unifying concept thus appeals to all three important clientele groups. A number of faculty meetings and discussions were held in early 1976 before a commitment towards the new programs emerged.

#### Feature Specification

Once a general planning strategy had been developed, a second phase of research was undertaken to specify the mix of features needed to operationalize the strategy. The YEP and IPM were creative concepts designed to stretch the perceptual space of alternatives and were not a final set of specifications. The importances of various program features were derived in order to determine their role in formulating preference and perceptions of realism and job success.

This phase of the study used conjoint analysis procedures [4]. In these procedures the importances of specific features were statistically determined from individual preference rank orderings of alternative combinations of features. Monotone analysis of variance (MONANOVA) is used to specify an importance weight for each feature for each individual [4]. The rank order of various combinations of features served as the dependent variable while the features were the independent variables. MONANOVA proceeds to find a set of importance weights and a monotone transformation of the dependent variable such that an additive model of the weights best recovers the value of the transformed dependent variable. In the case at hand, potential students were exposed to all factorial combinations of four program features. Table Two defines the features and the alternate levels tested. Those who had first preference for IPM were exposed to one set of 16 different combinations of the features and those with first preference for YEP to another set of 16 factorial combinations of features. This partitioning of the sample was done so that importances could be measured within the segments of the market targeted by each program.

TABLE TWO  
FEATURES AND DESIGN OPTIONS

Young Executives Program

1. Trip: Personal visit to key leaders of business and government or no trip.
2. Tuition: Tuition of \$10,000 or \$13,000 for 12-month program.
3. Thesis requirement: Regular thesis or computer business game.
4. Group skills: Regular class on organizations or intensive group decision sessions.

Intensive Program in Management

1. Internship: Summer internship or no internship.
2. Tuition: Tuition of \$8,000 or \$11,000 for entire program.
3. Flexibility: Students specify own program or advisor specifies program.
4. Duration: Twelve-month or eighteen month duration.

The sample was 26 Northwestern students who were interviewed in this phase of the research. Each student rank ordered 16 alternative feature profiles so 416 preference observations were present. Importances were estimated by monotone analysis of variances of each individual separately, and monotone analysis of variance across all individuals. In addition, a metric analysis of variance (ANOVA) across all individuals was conducted. The results are shown in Table Three. All three methods give similar results. Treating the data as metric or non-metric leads to similar results. This is consistent with recent Monte Carlo work by Carmone, Green and Jain [1]. All the coefficients were significant at the one percent level in the ANOVA. No interaction effects were significant at the fifteen percent level.

The importances in Table Three reflect the change of preference when a feature is changed from the first to second level. For example, the coefficient for the trip represents the change in preference between the condition of no trip and a trip.

TABLE THREE: RELATIVE FEATURE IMPORTANCES IN ESTABLISHING PREFERENCES

Young Executives Program

	<u>Trip</u>	<u>Lower Tuition</u>	<u>Computer Game</u>	<u>Intensive Group Session</u>
Average of Individual MONANOVA Importance	.43	.37	.1	.1
Overall MONANOVA	.37	.44	.09	.11
Overall ANOVA [F (1,208)]	.43 [139]	.38 [110]	.09 [6.4]	.10 [8.3]

Intensive Program in Management

	<u>Internship</u>	<u>Lower Tuition</u>	<u>Flexibility</u>	<u>2-Year Duration</u>
Average of Individual MONANOVA Importance	.46	.19	.24	.11
Overall MONANOVA	.41	.23	.26	.10
Overall ANOVA [F (1, 176)]	.45 [272]	.21 [56.0]	.26 [86.7]	.08 [9.3]

For YEP the most important feature was the trip. This was more important than a large tuition increase from \$10,000 to \$13,000. Both the internship and flexibility were more important than tuition for the IPM. It is interesting to note that in the specialist program there is a preference for a longer (2 year) program. This is consistent with what we would have expected from the specialist segment. These results imply that in terms of preference the job internship and trip are important features to implement for the IPM and YEP programs respectively and that premium tuition can be supported if these features are present.

These findings were substantiated when the respondents with first

preference for IPM rank ordered combinations of features using perceptions of "job outcome" as the criterion, and those with first preference for YEP rank ordered combinations of features using perceived "realism" as the criterion. Table Four shows the results. All coefficients in the ANOVA were significant at the 10 percent level. The trip is most important in establishing the perception of the positioning claim of realism in the YEP and the internship is most important in establishing a perception of job success for the IPM.

TABLE FOUR:  
RELATIVE IMPORTANCES IN ESTABLISHING PERCEPTIONS

Realism Perception in YEP

	<u>Trip</u>	<u>Computer Game</u>	<u>Intensive Group Sessions</u>
Average of Individual MONANOVA	.45	.37	.18
Overall MONANOVA	.45	.37	.18
Overall ANOVA [F(1, 104)]	.47 [72.8]	.37 [45.6]	.16 [8.1]

Job Opportunities in IPM

	<u>Internship</u>	<u>Flexibility</u>	<u>2-Year Duration</u>
Average of Individual MONANOVA	.61	.33	.06
Overall MONANOVA	.57	.32	.11
Overall ANOVA [F(1, 88)]	.59 [112]	.31 [31.2]	.09 [2.8]

While the perceptual mapping research helped develop a unique and differentiated psychological positioning, the conjoint analysis linked specific features to the positioning to assure that the instrumental variables substantiated the positioning claims of career success and realism.

Implementation

In the period between the initial research report in January 1976 and the completion of the features research June 1976, the general commitment to the program was mapped into an evolutionary change strategy. In July 1976 the

Sloan brochure was revised to establish two programs called the Accelerated Masters Program (AMP) and the Sloan Masters Program (SMP). The AMP is a 12-month generalist program similar to the YEP concept, and the SMP is a specialist program similar to the IPM concept. The brochure establishes the key positioning claims of realism and career success and specifies the critical features of the trip and intensive group sessions for the AMP and the internship and learning cells for the SMP. A new dean has been appointed to coordinate the implementation of the programs. In the 1976/1977 school year, the components of the plan will be tested and in June 1977 the brochure will be revised to strengthen the segmentation and to describe the features in detail as they will be implemented. Expanded promotion and public relations efforts then are scheduled to take place. In September 1977 the first classes are scheduled to begin for the new programs.

#### SUMMARY AND FUTURE RESEARCH

Based on the research done at MIT it appears that a marketing methodology for the design of new education programs has potential to help universities attract good students at increased tuition levels while maintaining leadership through program innovation. These new programs can help meet the need for more revenue and profit without sacrificing the excellence of the institution. This research has shown that the methodology can be extended to consider the multiple clientele groups which characterize an educational institution and to include the use of conjoint analysis to link features to the positioning and implementation of the new programs.

While the methodology was applied to a management school, we feel it could be applied to many other service industries such as health, banking, transportation and financial services. The ability to understand the desires of consumer and

providers is critical in all service industries. The unique aspect of services is that they are provided by people, so the utility function of the provider as well as the consumer must be considered if the final benefits are to be created. For example, a new health program may not be enthusiastically implemented by a doctor unless it fulfills his utility function, as well as the patient's desires and needs.

Although this paper describes each of the clientele groups' preferences and informally addresses the issues of tradeoffs, research could be undertaken to formally model the organizational and market interaction of these groups. Utility theoretic [6] and organization theory [2] represent bodies of knowledge to draw upon in the future research. Research could also be done to more completely link features to perception. This paper indicated the feasibility of such a research effort. If a complete linkage could be established, the space of design alternatives could be expanded by an automated search with a computerized model. A final research task is to integrate the marketing approach of program innovation with the financial and operational considerations to produce a comprehensive planning model.



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