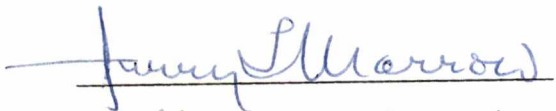
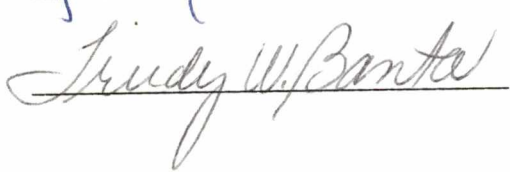


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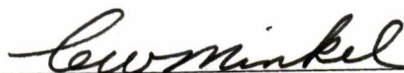
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A METHOD FOR IDENTIFYING EFFECTIVE MESSAGES FOR UNIVERSITY
RECRUITMENT COMMUNICATION STRATEGIES

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Amy A. James

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ABSTRACT

University recruitment efforts have become increasingly competitive because of a recent decline in the traditional college age population. Consequently, university admissions and public relations officers are realizing a new need to use formal research when planning recruiting message strategies. This study uses a formal research method to attempt to identify the messages The University of Tennessee, Knoxville (UTK) could most effectively use in communications with prospective students.

The innovative public relations and market research method, Galileo (TM), was employed for this investigation. Data were collected in two phases. First, 23 high school juniors and seniors state-wide answered open-ended questions about college life and college selection. Results from these data were compiled into a list of salient university attributes which retained the vernacular used by the high school students. A Galileo questionnaire was then constructed using eight of these salient attributes or concepts, plus the concepts "UTK," "your first choice college," and "yourself" (the respondent). In the second phase of data gathering, a sample of 52 high school students visiting the UTK campus for a conference volunteered to participate in the Galileo survey. The questionnaire asked respondents to make direct magnitude estimates of the distances between all possible concept pairs.

A multidimensional map was developed from the data that showed the relationships between all 11 concepts in cognitive space.

Additional mathematical calculations within the Galileo computer program's "Automatic Message Generator" produced the message strategies that would be most effective to attract these high school students to UTK. Several combinations of concepts were generated. The most effective strategy suggested was the combination of UTK with "high academic standards," "strong courses in your field of study," and "your first choice college." Other concepts found to be effective in some combination included: "pleasant surroundings," "opportunity for personal independence," "meeting new people," and "lots of extracurricular activities."

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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

College freshman classes can no longer be filled without considerable effort. Demographic changes in the United States population, in particular the passing of the baby-boom, have been cause for serious concern at institutions of higher learning. The number of high school graduates is predicted to decrease during the 1980's in most geographic regions (Cook & Zallocco, 1983). Hennessey (1985) warns that universities in the next decade must face the reality that "the traditional college-age population will decline by 18% between 1980 and 1990--from 17 to 14.5 million" (p. 15). As a result, competition for university applicants and enrollees is becoming increasingly intense.

Declining enrollments pose a serious threat because, as Treadwell (1973) explains, "the university's primary needs are money and bodies (which provide more money)" (p. 16). Admissions officers are typically held responsible for enrollment levels and, thus, go to great lengths to attract potential students. Erdmann (1983) reveals "it is not unusual for a college or university to invest \$800 or more in recruiting each student for its freshman class" (p. 3).

Today, a successful recruiting effort to attract students requires much more than admissions brochures. University admissions

officers realize that post hoc methods based on past experience and intuition are not sufficient. In order to be effective in this increasingly competitive market, it is essential to use extensive, empirical research when planning recruiting campaigns.

This study employs an innovative public relations and market research method called Galileo (TM) and explores its possible use as a tool for more effective university recruiting.

Statement of the Problem

Admissions officers who proceed with recruitment efforts without undertaking or consulting formal research take the risk that attractive publications and direct mailings will lack essential impact. Simply mailing information to prospective students will not guarantee attracting their attention or interest. It is important that the university's image and message correspond favorably with the desires and needs of the students whom the institution wishes to attract.

Effective recruiting campaigns are not conducted in a vacuum. The university must attend to its overall public image in order to establish a favorable foundation for recruiting efforts. As Dehne (1985) suggests:

You don't have to be a wizard to see that the recruitment process must begin long before the admissions office sends out its first mailing. These days, direct mail allows your college's message to get into the homes of most eligible college-bound students. Unfortunately, an institution's lack of visibility or credibility often makes the message meaningless (p. 29).

This suggests that recruiting should be conducted in the context of a more comprehensive public relations and communications strategy based on institutional image and market research. Messages communicated to external publics inevitably influence the university's image which, in turn, can determine the success of recruiting efforts.

University administrators have greater potential control over the institutional image than they do over the preferences and priorities of prospective students. But to exercise this influence, they must first understand the image they hope to maintain and enhance.

The ascertainment of public opinion about the institution can enlighten university administrators as to the positive and negative perceptions held by the institutions' many publics. The goal of subsequent public relations efforts, then, according to Mandell and Rosenberg (1981), is not so much to sell the university, as to present the university's image in the best possible light.

A high school student develops an image of a university on the basis of the totality of past experiences and the frequency of interaction he or she maintains with that institution (Huddleston & Karr, 1982). Potential college applicants align themselves with the universities that have institutional messages which more closely match their valued personal choice components. At this stage, the institution with a well-defined, consistent and believable mission and image is at a competitive advantage (Gorman, 1974; Ihlanfeldt, 1980).

A student's decision to attend a particular university often represents a choice among several alternatives. A systematic investigation of the institution's market position in relation to other schools may provide useful information about the characteristics with which students compare universities. However, an effective communications strategy often requires more specific information about the attributes and offerings that students consider most important in making a college choice and the extent to which they perceive a college to possess them.

Gaither (1979) emphasizes the importance of facilitating successful applicant-to-university matches:

In general, a college attracts or generates students by selling them on the idea that it can meet their needs. In short, institutional offerings and student needs and expectations are in close agreement. In order to meet students' expectations, however, an institution must know what these expectations are, whether the students' image of the institution is accurate, and whether it will "sell" students on attending and remaining (pp. 34-35).

An institution's public image can determine who will apply for admission. Therefore, the efforts of the admissions office and those of the public relations office should be coordinated. A consistent, targeted message is essential. Communicating that the institution is a specialized place for a special kind of person is more effective than trying to convey the impression that the university is all things to all people (Barton & Treadwell, 1978).

"The problem," as Ihlanfeldt (1980) points out, "is that every institution is a combination of several descriptive traits,

and the question is therefore what message should dominate to strike a position in the market" (p. 156). The challenge for university administrations is to identify the most effective message and ensure that it is communicated to the target publics.

Effective communication with high school students also requires that materials use language that is meaningful and comprehensible to them (Gorman, 1974; Johnson & Chapman, 1979; Smith, 1982). Recruitment publications must project a definite image with a message high school students will understand. As Dehne (1985) suggests, "if you want your institution to be viewed as 'intellectual,' you need to know what that term means to 18-year-olds. Then you need to devise a way to present the concept in their terms" (p. 29).

A recent innovation in public relations and market research promises to address these very concerns. Galileo theory and method applies special survey techniques and multidimensional scaling (MDS) procedures that have proven effective in recent marketing and advertising efforts (Woelfel & Fink, 1980). These techniques allow for (1) the derivation of multidimensional maps representing the students' image of the university in terms of attributes salient to them in making a college choice decision and (2) the generation of explicit, mathematically-derived prescriptions for maximally effective messages in the students' own language.

This study is designed to show how the Galileo research methodology can aid admissions and public relations officers to determine:

1. the institution's image as perceived by high school students,
2. the institution's market position in relation to the students' perception of the theoretically ideal university,
3. which college choice components or attributes are most valued by high school students,
4. which college choice components are most closely associated with the institution,
5. which message would be most effective for attracting targeted high school students to the institution.

CHAPTER II

REVIEW OF THE LITERATURE

Increased competition has made colleges and universities more reluctant to share information about their research methods and findings in the area of institutional image assessment and student recruitment. The reports available to the public tend to be rather general and address the characteristics and attributes that prospective students consider important in their college selection process. These reports indicate that previous researchers have used a wide variety of methods to arrive at rather similar conclusions.

Stark (1977) summarizes previous research on how high school students select a college or university to attend. He notes that tuition cost, the availability of financial aid, and programs and majors offered were found to be most important to students and influenced their college choice. Those criteria found to be least important include information about the attrition rate and what the current students are like.

Litten (1979) devised a graphic balance sheet to show the comparative strengths and shortcomings between one particular college and one of its competitors. Admitted applicants used three-point scales (poor, good, very good) to rate each school on 23 characteristics or attributes. Relative ratings between the two schools were then calculated and graphically displayed to show the strong and weak characteristics of each. The two schools were perceived

to differ most on the basis of their location, cost, and quality of library. Litten also found social atmosphere, graduate school acceptance rate, academic quality, quality of faculty, and the general educational emphasis to be important to prospective students.

Douglas, Powers, and Choroszy (1983) investigated what academically gifted high school seniors considered highest priorities when selecting a college. Respondents were asked to rate on a six-point scale (very unimportant to very important) the importance of 29 possible reasons for choosing an institution to attend.

The highest priorities in college choice were: quality of course instruction, training in your career interest, professional competence of professors, and overall training. The underlying dimensions of students' reasons were then identified using factor analysis. The four factors which surfaced were, in order of importance: academic quality, special institutional features, social life, and socioeconomic forces.

Huddleston and Karr (1982) compared a specific university's image with that of a theoretically ideal institution to identify general factors of importance for college selection. A series of semantic differential scales was modified to include pairs of descriptive phrases rather than adjectives and served as the conceptual basis for this study. The scales were constructed to represent 12 components or dimensions of institutional image mentioned frequently by students as important when selecting a college.

These scales were incorporated in questionnaires that were administered to students visiting the admissions office. The students were first asked to use the scales to evaluate their perception of the ideal university. They were given a campus tour and later asked to evaluate the university using the same components. The ideal university was most closely associated with the following components: superior academic reputation, large number of social programs, attractive campus, personal atmosphere, attractive neighborhood and city, near to home, strong graduate and professional school preparation, and active career placement programs.

Erdmann (1983) included the views of high school guidance counselors, as well as those of high school seniors, in his study of the importance of pre-determined factors which influence college choice. Selection was examined as a three-stage process: first, reading of unsolicited mailings; second, selection of colleges; and third, selection of first choice college.

A mail questionnaire instructed respondents to identify and rank the most important factors in each stage of selection. The consistency of the rankings through all three stages led Erdmann to conclude that "the availability of specific academic programs is the single most important factor to students in the college selection process" (p. 6).

He also found that the institution's reputation, location, and size consistently outweighed all other remaining factors examined. Another factor influential in the third stage, selection

of a first choice college, was "suitability"--whether or not the student believed he or she would "fit in."

Cochran and Hengstler (1983) devised a model to assess the image of a university using multivariate analytic procedures. High school seniors were asked to make all possible pair-wise comparisons among a university and its main competitors, using a nine-point, similar-dissimilar scale. In a second phase, nine-point Likert scales were used to rate each of these institutions on 15 descriptive characteristics. These characteristics were similar to those identified by other researchers.

The data were analyzed in three stages using multidimensional scaling, factor analysis, and discriminant analysis. The spatial representation of the universities studied revealed three dimensions: first, the level and type of degree awarded; second, the perceived educational philosophy; and third, the reputation of the school. Factor loadings defined four underlying constructs: overall reputation of university, commuter emphases, social environment, and academic reputation.

Discriminant analysis results showed five important items separating the institutions; distance from home, size of school, prestige of school, personal attention to students, and cost of attending the institution.

Cook and Zallocco (1983) used a multi-attribute attitude model to determine whether a multicriteria scale could be used to predict students' university preferences and attendance decisions.

Freshmen attending five state universities were asked to weight the importance of 18 selection criteria and evaluate seven universities using those criteria.

The list of attributes originated from a review of educational literature and administrators' answers to open-ended questions, and was later refined with student input. The attributes which were generally rated as most salient were high admission standards, close to home, excellent academic reputation, existence of a specialized program of study exactly suiting my needs, excellent physical facilities, little university regulation of my personal life, appealing size and makeup of surrounding city, and active social life.

The research and results strongly supported "the position that university preferences and attendance can be predicted based on the beliefs about and relative importance of attributes and characteristics of the universities themselves" (p. 205). Student perceptions of specific characteristics of the institution could be pinpointed, potentially allowing the university an opportunity to promote those factors found to be most appealing to prospective students.

The published research reviewed here attempts to identify the attributes which are most important to students when they make a college choice as well as those which comprise their images of various universities. With the exception of Cook and Zallocco (1983), little of this research attempts to match these two sets of

attributes or components, as is necessary for an effective communications strategy.

There appears to be some consensus among the cited studies with regard to the university attributes or characteristics valued by prospective students. However, there was sufficient variability in the attributes mentioned to warrant ongoing research by individual institutions to investigate the preferences of their particular target publics.

Even greater differences can be expected with regard to the public image of diverse institutions. This university image may provide the key for successful recruiting because it is more susceptible to change via public communication than are the preferences and priorities of prospective students.

In short, ongoing research is necessary to identify what specific attributes and offerings make a particular university attractive to its prospective students. One of the advantages of the Galileo method to be examined here is that it enables researchers to investigate student preferences and university image components simultaneously to suggest ways they can be matched for effective communications and more competitive student recruiting.

CHAPTER III

METHODOLOGY AND PROCEDURES

Galileo Methodology

Galileo method is rooted in the assumptions of symbolic interactionism, a theoretical point of view in the social sciences that emphasizes the symbolic nature of human social relations. From this point of view, human social interaction is assumed to take place at a symbolic level. Humans do not passively respond to stimuli in their environment but, rather, they act toward objects in terms of the values which are obtained through the symbolic meanings they attach to those objects (Cuzzort & King, 1976; Mead, 1934).

Symbolic interactionists suggest that individuals not only have the ability to interact at the symbolic level with others, but also can interact symbolically with themselves by assuming the role of others. In doing this, an individual has the ability to interpret stimuli and to select appropriate, purposive responses because he or she is able to associate action with its likely consequences or effects based on earlier observation.

When constructing and conveying communication messages, the individual often takes the role of others by means of anticipating the interpretation and response of the planned receiver. The receiver, in turn, is able to interpret both the communicative action and its intent before formulating an appropriate, purposive

response. Meaning is created and shared through this integration. The symbols used to communicate do not elicit a particular response in and of themselves, but must be interpreted by those engaged in this symbolic exchange.

Galileo method assumes that symbols for objects of perception and cognition can be identified and that their meaning can be determined relative to the meanings of other symbols. These objects of perception may include the self, activities, human emotions, physical entities and their attributes.

It is assumed that human cognitive processes can be represented by a multidimensional Riemann space in which these symbols are located as points. As Woelfel (1980) suggests, "any concept in the language has a meaning that is given by its pattern of similarities and differences to the other concepts" (p. 98). The meaning of these symbols or concepts is defined and represented by their location relative to other symbols in the multidimensional cognitive space.

Galileo method first identifies salient concepts in a cognitive domain by using open-ended interview techniques. Then it asks respondents to assess the interrelationships among these concepts by estimating the difference or distance between each of all possible non-redundant pairs. These comparisons are made relative to a designated unit standard, or "ruler," drawn from the set of concepts to be measured.

The association between concepts is represented by the distance between them. Concepts that are perceived to be similar in meaning have small distances between them. The more different the concepts are perceived to be, the greater the distance. The numerical estimates resulting from the series of ratio (pair comparison to measurement standard) judgment scales are arranged in dissimilarity matrices and entered into Galileo's multidimensional scaling (MDS) computer program (Woelfel & Fink, 1980). These direct magnitude estimates of interpoint distances are aggregated to derive a multidimensional map of the cognitive space in which the concepts reside. Woelfel (1980) adds, "the definition of a concept is given by its location in the reference frame, which in turn is given by its position vector" (p. 107). A change in location or a change in the position vector indicates changes in the meaning of the concept.

This multidimensional map may be interpreted as providing the cultural meaning for the symbols of communication. As a result, the Galileo method has several marketing and public relations applications. Products, objects, or organizations may be mapped to determine those which are perceived to be closely associated and those which are not. The attributes that a public uses to discriminate between these things are suggested. Also, Galileo allows for the mapping of the product, object, or organization and its attributes in order to determine its image.

There are several distinct advantages of using the Galileo method over other MDS and traditionally used measurement methods.

One of the most notable advantages is that it consistently yields precise, reliable data. Woelfel (1980) points out that the fineness of gradation of the measures is usually two or more orders of magnitude better than that of traditional theories and that the quantity of information yielded is proportionately higher. This high degree of precise and reliable data is accounted for in Galileo's unique application of ratio judgment scales.

Additional advantages of the Galileo method are:

- it uses modest sample sizes making it very cost effective relative to conventional survey methods;
- it yields visually interpretable graphic maps, and,
- it generates explicit recommendations for message content that can be used by policy makers and communicators to reach specified goals (Miller & Hurd, 1984, p. 3).

Perhaps the most important advantage is Galileo's ability to generate explicit recommendations for effective communication strategies using the "Automatic Message Generator" (AMG) routine of the Galileo computer program. Concept interrelationships, represented graphically, are used to deduce these message strategies by identifying the vector which will induce two selected concepts, "start" and "target," to converge.

Messages asserting a relationship associating concept x with concept y will move those concepts closer together. Further, by asserting that concept z is related to concepts x and y, concept z can be moved through space to some optimal position between x and

y (Barnett, Serota, & Taylor, 1976). The Galileo AMG routine will "try" and will evaluate all possible combinations of concepts. All effective concept combinations will be listed with an estimate of how effective each would be in a message associating it with the target concept.

Desired shifts in public attitudes can result when the prescribed message content is employed in communications. The estimate given by the AMG indicates the percentage closer the start concept will be to the target concept after an effective communication campaign (Miller & Hurd, 1984).

The theoretical assumptions and specialized survey techniques of the Galileo method are fully described by Woelfel and Fink (1980) in The Measurement of Communication Processes: Galileo Theory and Method. Other scholarly discourses which attest to the strengths of this method as a multidimensional model for measuring cognitive theory are available (Gillham & Woelfel, 1977; Serota, Cody, Barnett, & Taylor, 1977; Woelfel, 1980; and Woelfel, Cody, Gillham, & Holmes, 1980).

The Galileo method is being directly applied for marketing and advertising strategies by several American corporations such as R. J. Reynolds, Hanes Clothing, Chrysler, General Motors, and General Electric. The proprietary research conducted by these corporations, however, is not generally available for critical review due to the companies' concerns about competition.

Some scholarly applications of the Galileo method include political campaigns and university public relations. Barnett, Serota, and Taylor (1976) measured political attitude change during a 1974 congressional election using the Galileo method. They advised a political newcomer of the optimal set of messages he should send to the electorate in order to move himself closer to the location of the average voter's position. Consequently, the candidate's campaign had the desired effects. He defeated an incumbent congressman winning nearly 60 percent of the vote.

Miller and Hurd (1984) ascertained the image of The University of Tennessee, Knoxville (UTK), relative to other selected universities and generated message strategies for improving that image using the Galileo method. Enrolled UTK students and Tennessee adults state-wide were interviewed.

For the student population, five concepts were found effective alone or in any other possible combination. These salient concepts were: diversity of courses, career preparation, good academics, good reputation, and cultural opportunities. The set of concepts that generally worked with the adult population were: good teachers, extension services, career preparation, individual attention, and research and development. The effectiveness of recommended message strategies identified in this study have not yet been evaluated.

Miller and Hurd (1984) suggest further research aimed directly at high school students and their parents is needed to provide more

precise information for developing effective recruitment communication strategies. The study involved in this thesis serves as an initial attempt to investigate the perceptions of Tennessee high school students toward UTK.

Procedures

The research investigating high school students' perceptions of UTK and the attributes they believe important when making a college choice consisted of two data-gathering phases. In the first phase, teachers in four Tennessee locations administered an open-ended questionnaire to a small sample of high school juniors and seniors in order to ascertain the students' perceptions and attitudes about college life and making a college choice. The responses to these open-ended questions were used to identify a list of salient attributes or characteristics commonly used by high school students to describe these perceptions.

A structured questionnaire, developed using the list of most mentioned salient attributes, was administered to a larger sample of Tennessee high school students in the second phase of data gathering. The questionnaire consisted of a list of all possible pairs of attributes. The students were asked to make direct magnitude estimates of the perceived distance between the two attributes or concepts in each pair. From these data, a multidimensional map of the perceived relationships among concepts was derived. Aggregate student perceptions about college life and college choice were represented by this cognitive map.

Phase I--Identification of Salient Attributes

An appreciation for the vernacular used by targeted high school students is essential when developing effective communication strategies for university recruiting. The actual mode of expression used by these students to describe college life was identified using the open-ended questionnaire. Completed questionnaires were compared to select the most frequently mentioned and widely shared concepts and the manner in which students expressed these concepts or attributes.

Four schools that are members of the Tennessee High School Press Association provided sites for this phase of data gathering. Juniors and seniors in yearbook or newspaper classes were administered questionnaires by the classroom teacher. Each teacher received instructions and six questionnaires in a mailed package. The four high schools were selected according to Tennessee location so each of the three major parts of the state (east, middle, and west) would be represented. Twenty-three completed questionnaires were returned.

Respondents were asked to indicate (1) what came to mind when they thought about college life and college academics, (2) whether they had decided to go to college and with whom they had talked about this decision, (3) what things they were looking for in a college and the concerns they considered when comparing colleges, and (4) where they had applied and where they planned to attend college (see Appendix A).

Questions specific to The University of Tennessee, Knoxville (UTK) also were asked. Students who had visited the campus indicated what they most liked and disliked about UTK. All respondents provided reasons why they would or would not consider attending the university.

A sample of 23 respondents was ample for identification of the attributes perceived most salient. Several concepts and exact words used by the high school students to describe their perceptions were repeated throughout most of the responses.

A list of eight salient concepts was derived from the open-ended questionnaire results. The respondents' exact wording was preserved, as closely as possible, to provide greater assurance that it would be meaningful to other high school students sampled.

The concepts identified as salient to the students when making a college or university selection were: (1) high academic standards, (2) strong courses in your chosen field, (3) a variety of classes, (4) meeting new people, (5) athletics, (6) lots of extracurricular activities, (7) pleasant surroundings, and (8) opportunity for personal independence.

Three additional concepts, (9) The University of Tennessee, Knoxville, (10) your first choice college, and (11) yourself, were added to the list for the purposes of this investigation. "Your first choice college," concept 10, represents each respondent's ideal first choice above all others. Concept 11, "yourself," represents the respondent.

This list of attributes is similar to those which surfaced in other recruitment studies. The list compiled by Huddleston and Karr (1982) included superior academic reputation, large number of social programs, and attractive neighborhood and city. Cook and Zallocco (1983) included: excellent academic reputation, existence of a specialized program of study exactly suiting my needs, little university regulation of my personal life, appealing size and makeup of surrounding city, and active social life.

As the literature suggests, location of the institution and tuition cost were indicated by the surveyed students as important concerns when making a college selection. These concepts were not included in the salient concept list because they are things over which the university public relations and admissions officers have no message flexibility. Location and cost concerns were documented with conventional data, however, in the second data gathering phase.

Phase II--Administration of Galileo Questionnaires

For the second phase of data gathering, high school students visiting the UTK campus to attend a Tennessee High School Press Association conference were asked to volunteer for a special research participation session. Three male communications doctoral students administered the questionnaires in three regular conference session locations. After an extensive explanation of informed consent, 52 students--36 females and 16 males--consented to complete the questionnaire.

It was anticipated that most of the respondents would be minors, so much care was taken not to coerce them into involuntary participation. Consequently, the modest response rate can be partially attributed to a particularly warm, sunny day in early March and the lure of mixing with university students outside. Fortunately, because of Galileo's methodological precision and its multidimensional properties, only small samples are required.

Survey respondents participated in a brief instruction and training session prior to completing the questionnaires (see Appendix B). To familiarize them with the direct magnitude separation estimate procedures, the respondents were told that "an apple and an orange differ by 100 units" and were asked to use that "ruler" to estimate the difference or distance between other fruits.

Respondents were instructed to use a number less than 100 if the difference between the paired concepts was perceived to be a smaller distance than the ruler. For differences larger than the given ruler, a number greater than 100 was used. A difference perceived to be equal to the ruler was 100 units and no difference between two concepts was zero units.

For example, respondents were asked to indicate the difference between a lemon and a lime if "an apple and an orange are 100 units apart." Since a lemon and a lime are similar fruits, a perceived difference of about 30 units would be an appropriate response. Conversely, the difference between a grape and a watermelon would be a greater difference, about 150 units, since a grape and a watermelon are more different than an apple and an orange.

The list of salient attributes derived from the open-ended responses in the first phase of this research provided the basis for constructing the college choice Galileo questionnaire. Each concept was paired once with each other concept yielding 55 non-redundant attribute pairs. Respondents were asked to use the arbitrary ruler of 100 difference units between "meeting new people" and "a variety of classes" to make the direct magnitude difference estimates between all pairs of concepts. The questions were phrased in the following form:

If meeting new people and a variety of classes differ by 100 units, how different are . . . (for example) high academic standards and lots of extracurricular activities?

These procedures yielded ratio level data in the form of perceived distances and relationships among all 11 concepts in the cognitive domain of making a college or university selection.

The questionnaire also included conventional survey questions to measure such variables as plans to attend college, familial influences on college attendance, location and cost concerns, field of study, and general demographic data.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Results

The results of this study show how the Galileo research methodology can aid admissions and public relations officers to determine:

1. the institution's image as perceived by high school students,
2. the institution's market position in relation to the students' perception of the theoretically ideal university,
3. which college choice components or attributes are most valued by high school students,
4. which college choice components are most closely associated with the institution, and
5. which message would be most effective for attracting targeted high school students to the institution.

Included within the following discussion are results pertaining to these five areas as specifically related to The University of Tennessee, Knoxville.

Conventional Survey Data--Description of the Sample

Frequency distributions and selected variable crosstabulations were used to examine data yielded by the conventional survey

questions. The modest size and self selection of this sample prevented attempts to make inferences about a larger population. The conventional data do offer a detailed description of the high school students sampled for this study.

The sample of 52 high school students was fairly homogeneous. Sixty-nine percent of the respondents were from high schools in the eastern part of Tennessee and the remaining 31 percent were Middle Tennessee residents.

Twenty-five of the high school students were in the eleventh grade. Sixteen of the respondents were seniors and 11 were sophomores. A majority of the respondents indicated they were above average students. Ninety-two percent of the students sampled stated that they were planning to go to college.

Tuition cost was not viewed as an overwhelming concern by respondents in this sample. Twenty-five percent of the students responded that tuition cost was not a problem when making a college choice, while another 54 percent considered tuition cost "somewhat" of a problem. Meeting tuition cost was considered a big problem by 11 of the 52 students.

When asked where they would prefer to go to college, half of the high school students sampled stated they would rather attend school "away from home, but not too far." Eighteen respondents indicated they preferred to stay close to home and seven stated they preferred to go to college far from home.

A variety of desired fields of study were identified by the students. Not surprisingly, 40 percent of these Tennessee High School Press Association conference delegates hope to study in the areas of communications or liberal arts. Other majors indicated included business, engineering, education, home economics, nursing, pre-law and pre-medicine. Four respondents indicated preferred majors not available at UTK.

Twenty respondents named a first choice college located outside the state of Tennessee. Of these 20 respondents, 15 were students from eastern Tennessee, where UTK is located. Eleven other respondents chose UTK as their first choice college. Six of these students were eastern Tennessee residents. The other first choice colleges selected were in various Tennessee locations.

Of the sampled high school students who do plan to attend college, 10 plan to go to schools outside Tennessee. Eleven indicated plans to attend UTK and 12 planned to attend other eastern Tennessee schools. The other college-bound respondents stated intentions to attend college in western or middle Tennessee. Five of the 11 students planning to attend UTK also selected UTK as their first choice college.

Of the 48 college-bound students, 60 percent indicated that their fathers had attended college and 42 percent indicated that their mothers had attended college. A smaller percentage, about 37 percent, of the students had siblings who had attended or were currently attending a college or university. Few of the students,

planned to attend the same college or university that a family member attended.

Galileo Data--Derivation of Aggregate Cognitive Map

The data from the Galileo survey questions were submitted to the Galileo computer program. Extreme responses were eliminated by trimming the possible maximum means value to 300. This data yielded a cognitive map with 11 dimensions. The map in Figure 1 presents the location of the 11 concepts in the first three of these dimensions.

Some important information is lost with this visual representation of the data, because only three of the 11 dimensions can be graphically presented. Yet these first three factors account for most (89 percent) of the total real variance within this data set.

General relationships between concepts can be visually investigated from this three-dimensional map. The concepts that appear the greatest distance apart are "high academic standards" and "athletics." The concepts "yourself" and "your first choice college" are each a great distance from both "athletics" and "UTK."

Concepts that appear the closest to one another are the pairs "yourself" and "your first choice college," and "yourself" and "pleasant surroundings." The concept "your first choice college" also is closely associated with "pleasant surroundings."

The relationships between all 11 concepts are even more apparent when they are mapped in two dimensions. Some information

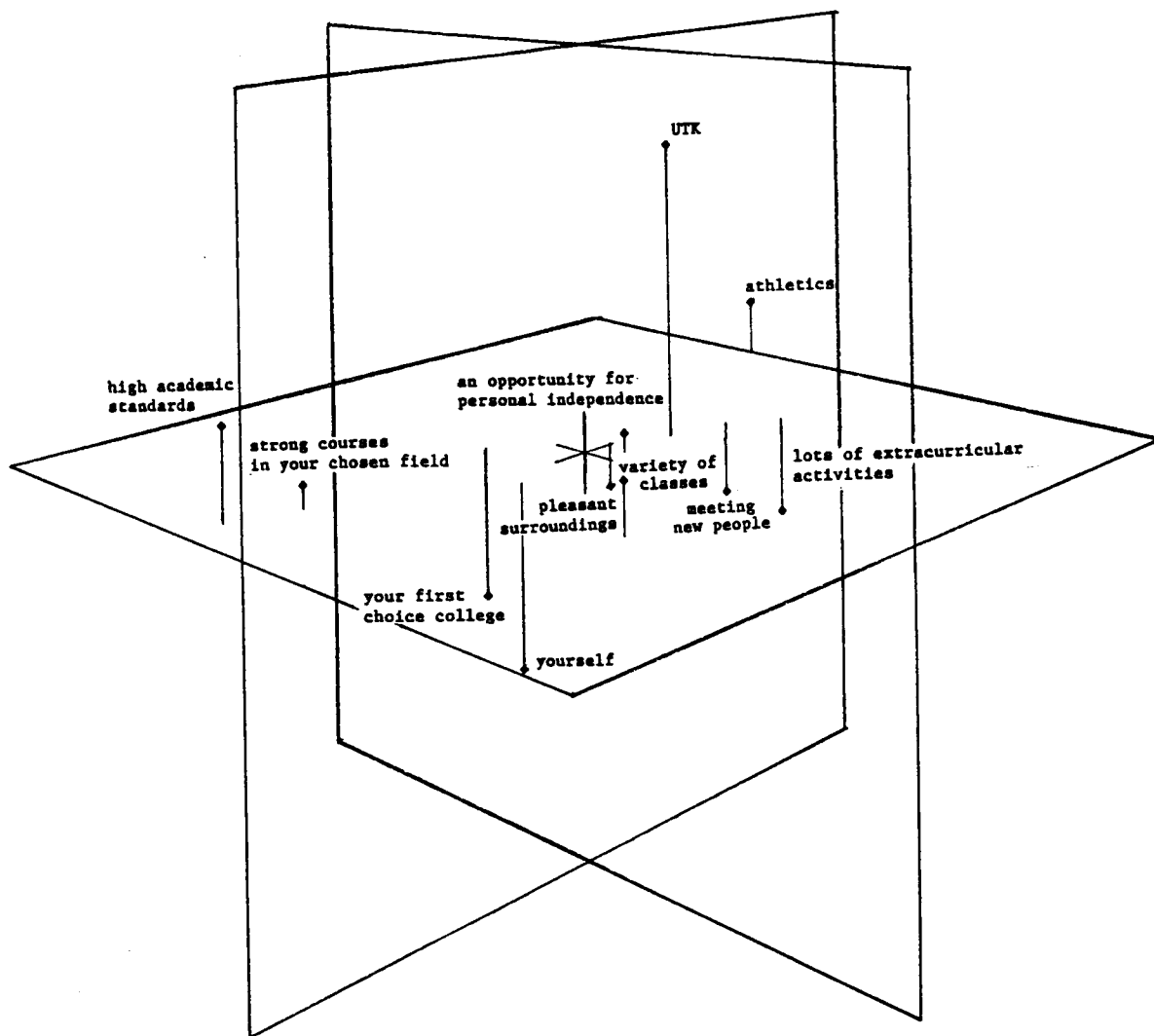


Figure 1. The Aggregate Cognitive Space in Three Dimensions.

is lost when the dimensionality is reduced, but the two dimensions are easier to read. The two-dimensional map (x and y axes) in Figure 2 was derived from two factors which account for 73 percent of the total real variance.

The plot locations of the concepts along the x-axis suggest much information about concept relationships. "High academic standards" and "athletics" are again the greatest distance apart. "Strong courses in your chosen field" and "a variety of classes" are most closely associated with the concept "high academic standards." The concepts "meeting new people" and "lots of extracurricular activities" are located close to the concept "athletics."

The concepts located near the middle, between "high academic standards" and "athletics," include: "UTK, personal independence, pleasant surroundings, your first choice college, and yourself." Plottings along the y-axis show "UTK" to be the greatest distances from the concepts "yourself" and "your first choice college."

Figures 3 and 4 show the location of the 11 concepts on the remaining two principal planes, along the y and z axes and the x and z axes, respectively. The map in Figure 3 was derived from two factors which account for 28.3 percent of the total real variance. Sixty-four percent of the total real variance was accounted for in the latter two-dimensional map.

The calculated mean differences between selected major concepts which are used to create the multidimensional maps are presented in Table I. The smaller the number, the closer in

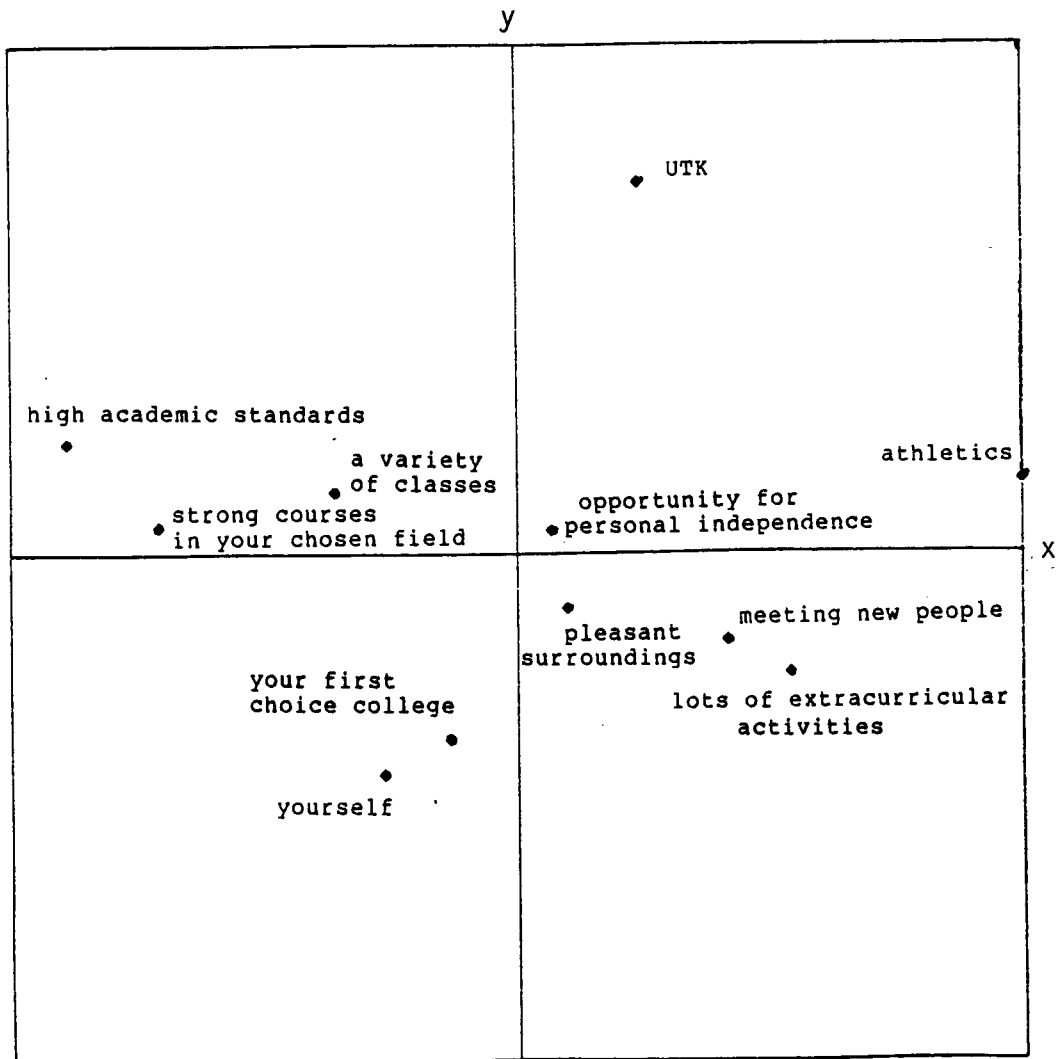


Figure 2. The Aggregate Cognitive Space in Two Dimensions (x and y axes).

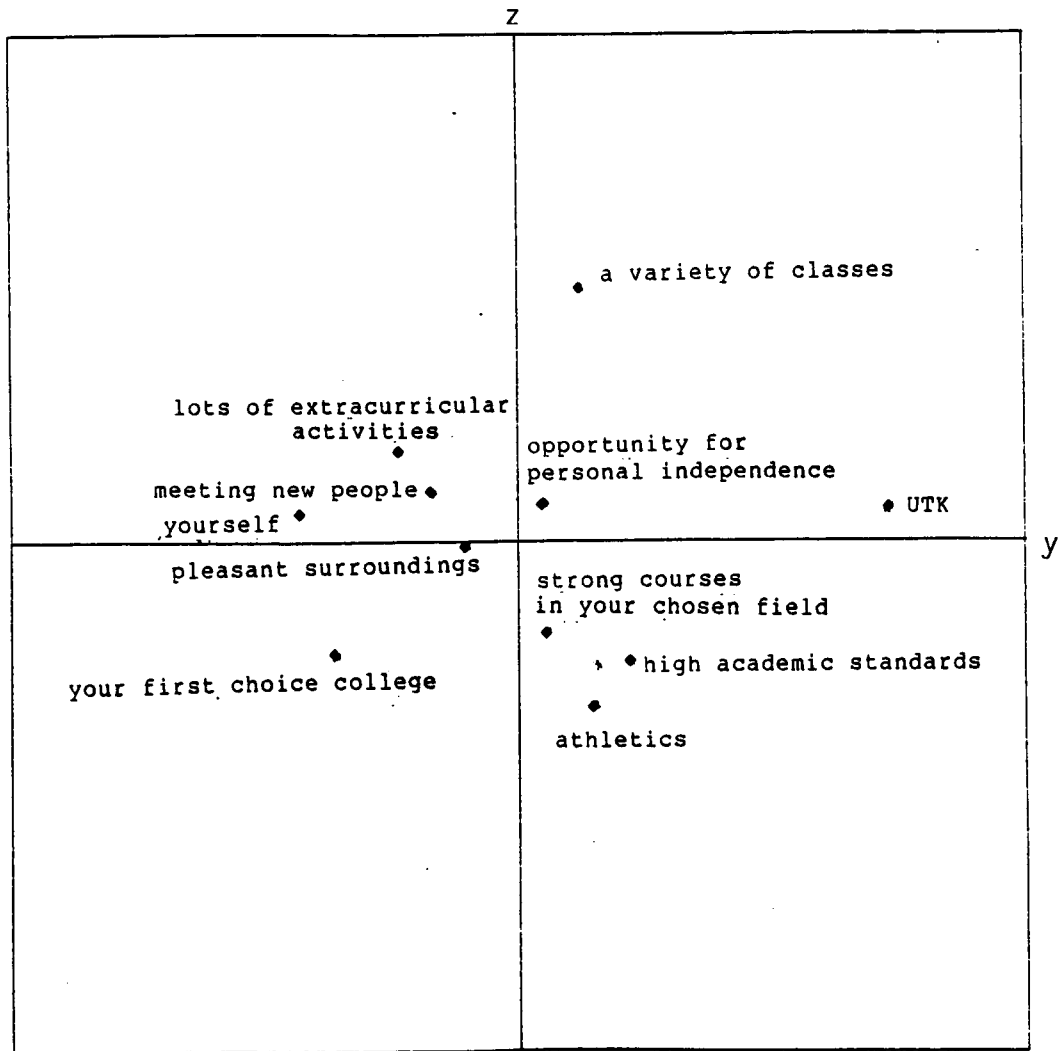


Figure 3. The Aggregate Cognitive Space in Two Dimensions (y and z axes).

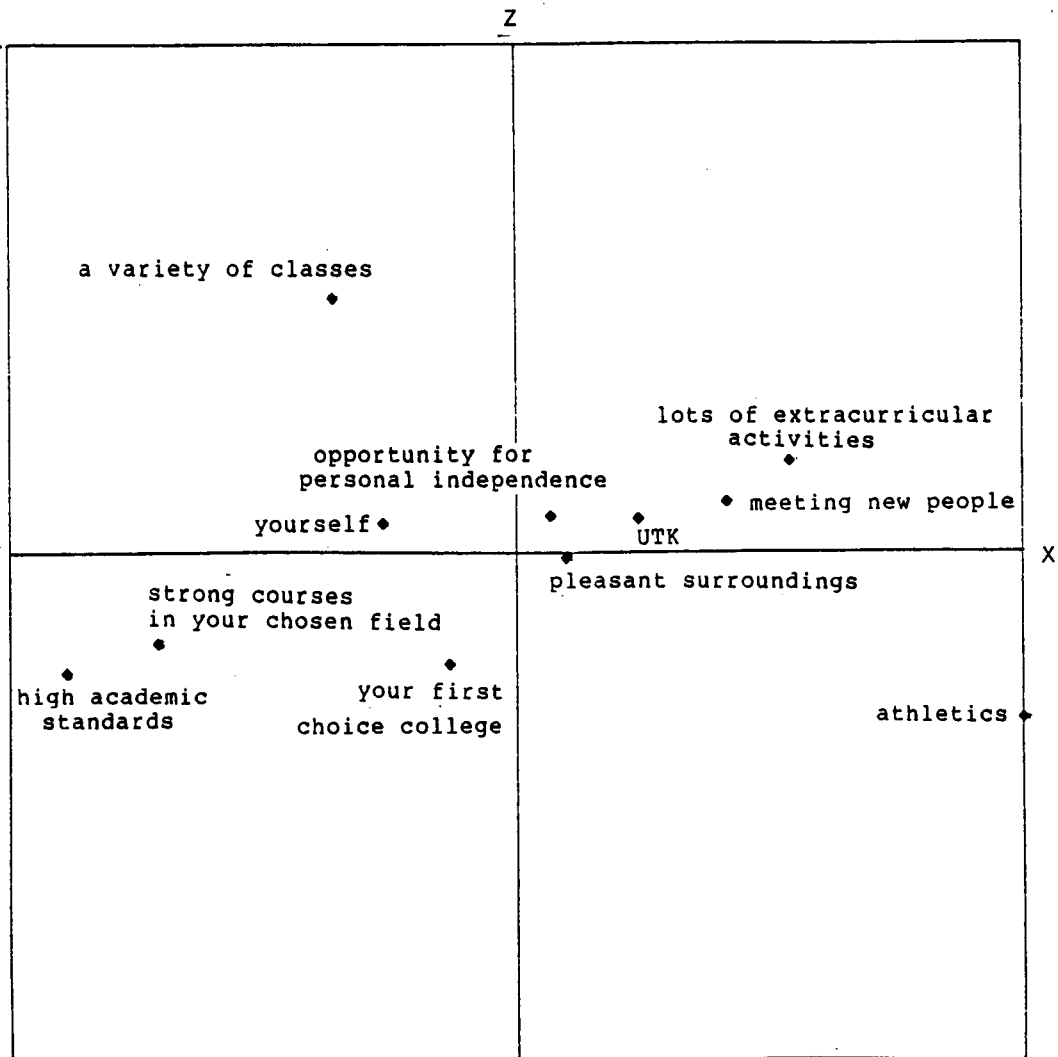


Figure 4. The Aggregate Cognitive Space in Two Dimensions (x and z axes).

TABLE I
MEAN PERCEIVED DIFFERENCES BETWEEN SELECTED MAJOR CONCEPTS

University Attributes	UTK	Your First Choice College	Yourself
High academic standards	62	32.7	32.5
Strong courses in chosen field	62.9	26.9	26.4
A variety of classes	48.8	38.6	41
Meeting new people	39.5	24.8	28.3
Athletics	44.3	68.9	93.3
Lots of extracurricular activities	43	34.7	33.9
Pleasant surroundings	40.3	25.4	23.4
Opportunity for independence	30.1	29.8	26.2

association the concepts were thought to be by the sample of high school students. A large number shows a large perceived distance between concepts.

The concepts perceived to be most closely associated with "UTK" combine to form these students' image of the university. These concepts include "opportunity for personal independence," "meeting new people" and "pleasant surroundings." Other concepts perceived close to "UTK" are "lots of extracurricular activities" and "athletics."

These high school students perceive the image of the theoretically ideal or first choice college to include all of the same concepts as UTK, except athletics. In addition, the first choice college is much more closely associated with "strong courses in your chosen field," "high academic standards," and "a variety of classes" than is UTK.

All of the college choice attributes, except "athletics," were considered important to these students. The concepts located closest to the students were "pleasant surroundings," "opportunity for personal independence," and "strong courses in your chosen field."

Automatic Message Generator

Since only three dimensions can be graphically represented, analysis of these data should not consist only of visual interpretations of the cognitive maps. The Galileo program has the capability

to interpret all 11 dimension, using its "Automatic Message Generator" (AMG) routine, to mathematically derive effective message solutions for specific communication strategies.

Data from the Galileo questionnaire were submitted to the AMG in order to generate the most effective messages to move the start concept, "UTK," closer to the target concept, "yourself." The concept, "yourself," represents the high school students who were survey respondents.

All possible concept combinations were evaluated by the AMG routine before it listed the most effective combinations for moving "UTK" closer to "yourself." The AMG suggested a total of 19 effective combinations of up to four concepts. The seven best message combinations are shown in Table II. Each of these combinations theoretically has better than 60 percent of expected effectiveness.

The strongest suggestion for an effective message strategy is the combination of "high academic standards," "strong courses in your chosen field," and "your first choice college." The concept, "your first choice college," would be effective in some combination with each of the other concepts, particularly with "pleasant surroundings" and "opportunity for personal independence." None of the other concepts are similarly effective when combined with each of the remaining concepts.

It is important to remember that the concepts listed as the most effective are among those salient university attributes

TABLE II
THE MOST EFFECTIVE CONCEPT COMBINATIONS LISTED BY THE
AUTOMATIC MESSAGE GENERATOR

Rank	Concept(s)
1	The University of Tennessee, Knoxville is . . . high academic standards, strong courses in your chosen field and your first choice college
2	The University of Tennessee, Knoxville is . . . pleasant surroundings and your first choice college
3	The University of Tennessee, Knoxville is . . . an opportunity for personal independence and your first choice college
4	The University of Tennessee, Knoxville is . . . strong courses in your chosen field and your first choice college
5	The University of Tennessee, Knoxville is . . . meeting new people and your first choice college
6	The University of Tennessee, Knoxville is . . . lots of extracurricular activities and your first choice college
7	The University of Tennessee, Knoxville is . . . high academic standards

identified in the first phase of data gathering--open-ended interviews with high school students. It was essential to retain the vernacular used by these students to describe these attributes in order to generate maximally effective messages.

Results from the AMG suggest that an effective communication strategy for recruiting high school students to UTK would be to emphasize the idea that UTK is, or could be, a student's first choice college. This message strategy is strongest when combined with messages stressing the high academic standards and strong fields of study available at UTK.

The staff at UTK's Learning Research Center recently gathered data from UTK freshmen using the American Council on Education (ACE) freshman survey and the data provided by American College Testing (ACT) to the Admissions Office. These data confirm the findings in the Galileo study. Those criteria considered important to UTK freshmen when making their college selection were the university's good academic reputation and the availability of a strong program in their chosen field of study (Banta & Bowker, 1985; Schneider, 1985).

Results of research conducted in various parts of the country also are congruent with these findings. In these studies, students indicated that a high academic reputation and the availability of strong courses in their chosen field were important deciding factors when making a college choice (Cook & Zallocco, 1983;

Douglas, Powers, & Choroszy, 1983; Erdmann, 1983; Huddleston & Karr, 1982; Stark, 1977).

Another strong message for UTK would combine "your first choice college" and "pleasant surroundings," particularly since both "yourself" and "your first choice college" were closely associated with the concept "pleasant surroundings." Effective UTK recruiting messages might incorporate the proximity of the Smoky Mountains to UTK, your first choice college.

The AMG results also suggest that stressing athletics when communicating with these high school students would weaken university recruiting messages. The UTK Image Study, conducted in 1984, also revealed that the concept "athletics" was a poor selection for UTK message strategies. That Galileo study focused on two populations, current UTK students and adults in Tennessee state-wide (Miller & Hurd, 1984).

Limitations of the Study

Limitations of this study may have reduced its internal and external validity. Two such limitations were the characteristics of the surveyed sample and the omission of two salient concepts.

Characteristics of the Sample

The most limiting element of this research was the small sample size. The Galileo method can yield reliable and valid results with modest samples because of its methodological precision.

However, a sample of 52 respondents is lower than the 75 that are usually required to make inferences about the population from the Galileo output.

In addition, this sample of high school students was not selected randomly. It is a convenience sample of volunteers who were visiting campus for a conference. This presents obvious limitations on the generalizability of results beyond the small group sampled. Also, the sample was largely female (69 percent) and this might have biased findings.

Omission of Concepts

The decision to omit the salient concepts "tuition cost" and "university location" from the Galileo questionnaire may have limited the study's results. The input of these concepts could have resulted in the production of additional information about possible message strategies.

Results of the ACE freshman survey administered at UTK in Fall 1984 showed that 22 percent of UTK freshmen indicated proximity to home as an important reason for attending UTK (Schneider, 1985). The report also included information about financing tuition cost. Schneider reports, "whatever their financial circumstances, UTK freshmen more frequently express no concern about financing their education than do students in general at public universities (43 percent vs. 33 percent)" (p. 2). Therefore, omission of these two concepts might have limited the AMG-produced message solutions that would have been effective with prospective UTK students.

Suggestions for Further Research

The increasingly competitive nature of college recruiting necessitates exploring the use of research methods more sophisticated than those usually relied upon in the past. Within the limited realm of this study, the innovative Galileo method demonstrated its potential effectiveness in generating university recruiting communication message strategies. Further research is needed, however, to insure that the university's recruiting messages are maximally effective.

Replication of this study with a larger, randomly selected, state-wide group of high school students could overcome some of the limitations of the original study. The same instrument probably would be sufficient for the study, but the salient concepts concerning cost and location might be added. These two were among the attributes considered salient by the students during open-ended questioning.

Researchers also might investigate the effectiveness of selected message strategies for UTK by copy testing examples of recruiting literature using various messages generated by the AMG. This would assess the capability of the Galileo method to produce realistically effective messages.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Banta, T., & Bowker, J. (1985, March 28). Two reports on characteristics of UTK freshmen (Memorandum to Members of the Committee on the Freshman Year). Knoxville, Tenn.: University of Tennessee, Learning Research Center.
- Barnett, G. A., Serota, K. B., & Taylor, J. A. (1976). Campaign communication and attitude change: A multidimensional analysis. Human Communication Research, 2 (3), 227-244.
- Barton, D. W., Jr., & Treadwell, D. R., Jr. (1978). Marketing: A synthesis of institutional soul-searching and aggressiveness. New Directions for Higher Education, 21 (Spring), 77-84.
- Cain, P. P., & McClintock, J. (1984). The ABC's of choice. Journal of College Admissions, 105 (Fall), 15-21.
- Cochran, T. R., & Hengstler, D. D. (1983). Assessing the image of a university. Journal of College Admissions, 27 (Spring), 29-34.
- Cook, R. W., & Zalloco, R. L. (1983). Predicting university preference and attendance: Applied marketing in higher education administration. Research in Higher Education, 19 (2), 197-211.
- Cuzzort, R. P., & King, E. W. (1976). Humanity and modern social thought. Hinsdale, Ill.: The Dryden Press.
- Dehne, G. C. (1985). A student recruitment formula. Journal of College Admissions, 107 (Spring), 10-14.
- Dehne, G. C. (1985). Admissions needs you, make student recruitment a PR priority. Currents, March, 28-32.
- Douglas, P., Powers, S., & Choroszy, M. (1983). Factors in the choice of higher educational institutions by academically gifted seniors. Journal of College Student Personnel, 24 (6), 540-545.
- Erdmann, D. G. (1983). An examination of factors influencing student choice in the college selection process. Journal of College Admissions, 100 (Summer), 3-6.
- Friedman, R. (1984). Questions for high school students to think about when choosing colleges. Journal of College Admissions, 103 (Spring), 23-27.

- Gaither, G. H. (1979). Some tools and techniques of market research for students. New Directions for Institutional Research, 21, 31-67.
- Gillham, J., & Woelfel, J. (1977). The Galileo system of measurement: Preliminary evidence for precision, stability, and equivalence to traditional measures. Human Communication Research, 3 (3), 222-234.
- Gorman, W. P. (1974). Marketing approaches for promoting student enrollment in higher educational institutions. College and University, Spring, 242-250.
- Hennessey, H. D. (1985). Corporate marketing techniques for small colleges. Journal of College Admissions, 107 (Spring), 15-19.
- Huddleston, T., Jr., & Karr, M. B. (1982). Assessing college image. College and University, Summer, 364-370.
- Ihlanfeldt, W. (1980). Achieving optimal enrollments and tuition revenues. San Francisco: Jossey-Bass Publishers.
- Ingersoll, R. J., & Klockentager, J. W. (1982). The perfect match-- Research lets you help students choose the right college. CASE Currents, May/June, 24-26.
- Johnson, R. H., & Chapman, D. W. (1979). An assessment of college recruitment literature: Does the high school senior understand it? Research in Higher Education, 11 (4), 309-319.
- Kotler, P. (1975). Marketing for nonprofit organizations. Englewood Cliffs, N. J.: Prentice Hall.
- Litten, L. H. (1979). Market structure and institutional position in geographic market segments. Research in Higher Education, 11 (1), 59-81.
- Mandell, M. I., & Rosenberg, L. J. (1981). Marketing. Englewood Cliffs, N. J.: Prentice Hall.
- Mead, G. H. (1934). Mind, self and society. Chicago: University of Chicago Press.
- Meek, E., & Skelly, G. (1982). Defog with research, see where you're going in student recruitment with a program based on market research. CASE Currents, May/June, 19-23.

- Miller, M. M., & Hurd, R. E. (1984). University of Tennessee, Knoxville, image study technical report. Knoxville, Tenn.: University of Tennessee, College of Communications.
- Murphy, P. E., & McGarrity, R. A. (1978). Marketing universities: A survey of student recruitment practices. College and University, 53 (3), 249-261.
- Paul, R. D., & Stark, K. (1983). The mixmasters. CASE Currents, November/December, 24-26.
- Schneider, J. (1985). Characteristics of UTK freshmen: A comparative analysis of selected items from the fall 1984 ACE freshman survey. Knoxville, Tenn.: University of Tennessee, Learning Research Center.
- Serota, K. B., Cody, M. J., Barnett, G. A., & Taylor, J. A. (1977). Precise procedures for optimizing campaign communication. Communication Yearbook I, 475-491.
- Smith, R. M. (1982). Knowledge is power, research can help your marketing program succeed. CASE Currents, May/June, 8-14.
- Stark, J. S. (1977). The many faces of educational consumerism. Lexington, Mass.: Lexington Books.
- Topor, R. S. (1985). Going to market: How to create and implement a master marketing plan for your campus. Currents, March, 25-26.
- Treadwell, D. R., Jr. (1973, December 24). Kandy-colored catalogues don't fill empty classrooms. The Chronicle of Higher Education, p. 16.
- Woelfel, J. (1980). Foundations of cognitive theory: A multidimensional model of the message--attitude--behavior relationship. In Message--Attitude--Behavior Relationship: Theory, Methodology and Applications (pp. 89-116). New York: Academic Press.
- Woelfel, J., Cody, M. J., Gillham, J., & Holmes, R. H. (1980). Basic premises of multidimensional attitude change theory: An experimental analysis. Human Communication Research, 6 (2), 152-167.
- Woelfel, J., & Fink, E. (1980). The measurement of communication processes: Galileo theory and method. New York: Academic Press.

APPENDIXES

APPENDIX A

OPEN-ENDED QUESTIONNAIRE

COLLEGE CHOICE QUESTIONNAIRE

Please answer the following questions as thoroughly as possible. Do not write your name on this. All answers will be kept strictly confidential. Thank you for your assistance.

1. What words come to mind when you think about college life?
2. What words come to mind when you think about college academics?
3. Have you decided whether to go to college?
4. Who have you talked with about going to college?
5. What are you most excited about in going to college?
6. What kinds of things are you looking for in a college?
7. When you compare colleges, what things are you most concerned about?
8. What could keep you from going to college?

(over)

9. Have you applied to any colleges? If so, which ones?

10. Where do you plan to go to college?

11. What made you decide to go there?

12. What is/was your second choice?

13. Have you ever visited the University of Tennessee-Knoxville?
If so, what did you like about it?

What did you dislike about it? (Be honest!)

14. Have you considered going to the University of Tennessee-Knoxville?
Why or why not?

APPENDIX B

GALILEO INTERVIEWER INSTRUCTIONS, INFORMED
CONSENT FORM AND QUESTIONNAIRE

QUESTIONNAIRE INSTRUCTION PAGE

SAY:

In the first portion of this survey, you will be given two things and I want you to think about how different you think they are using numbers. If you think they are very different, they would be very far apart and you would use a large number. If you thought they were very similar, they would be close together and you would use a small number. If they were exactly the same, you would say "zero" because there is no difference between them.

Just for an example, let's talk about the differences between kinds of fruit. We'll say that an apple and an orange differ by 100 units. If that's true, how different are a lemon and a lime?
(THEY CAN WRITE IN THIS ON THEIR EXAMPLE SHEET...)

Most people would say that a lemon and a lime are less different than an apple and an orange. Since we said that an apple and an orange differ by 100 units, the difference between a lemon and a lime would be less than that — maybe 30 or 40 units.

Let's try another one. Remember, an apple and an orange differ by 100 units. If that's true, how different are a grape and a watermelon?
(THEY CAN WRITE IN THIS ON THEIR EXAMPLE SHEET...)

Most of us would agree that a grape and a watermelon are more different than an apple and an orange. Since we said an apple and an orange differ by 100 units, the difference between a grape and a watermelon would be more than that — maybe 200.

(IF NECESSARY, try an apple and a pear = less than 100 AND
a banana and a peach = more than 100)

In general, that's how our questions work. You are given a ruler of 100 difference units and you compare other differences to that ruler.

For this survey, we'll say MEETING NEW PEOPLE and a VARIETY OF CLASSES differ by 100 units. Using that ruler, we would like for you to write in how different the following pairs of things are. You can use any number that you want. If you think the two things are more different than the ruler, then you would use a number larger than 100. If they were twice as different, you would say 200. If the two things were not as different as the ruler, you would use a number smaller than 100. And if you think the two things are exactly the same, you would say "zero."

There are no right or wrong answers — we just want to know your opinion.

I know these questions are a little unusual, but most people find them pretty easy after a little practice. You may turn the page and begin the questionnaire. When you finish, please give the questionnaire to one of us before you leave.

(NOTE: SUBJECTS WILL BE ASKED TO IDENTIFY THEIR "FIRST CHOICE COLLEGE" AT THE BEGINNING OF THE QUESTIONNAIRE....FOR THE YOUNGER STUDENTS THIS MAY BE DIFFICULT, BUT ENCOURAGE THEM TO THINK IN IDEAL TERMS AND TO SELECT A SCHOOL)

RESEARCH PARTICIPATION INFORMED CONSENT

We are conducting this research project to find out how high students feel about going to college. We would appreciate it if you would take about 20 minutes to complete this survey questionnaire. Your participation in this project is voluntary and you may quit at any time. But your cooperation will be very helpful to us.

The results of this research will be used to discover how students make decisions about where to go to college and might result in college recruiting information which better addresses the needs and concerns of high school students like yourself.

All of your answers will be kept strictly confidential and no embarrassing or sensitive questions will be asked.

If you would like more information about this research project or have any questions, please feel free to contact one of the project directors:

Dr. M. Mark Miller
Associate professor of journalism
P105 Andy Holt Tower, (615) 974-6871

Ms. Amy A. James, graduate student
Box 8323, Knoxville, TN 37996
(615) 974-8007

I have been informed of the voluntary and confidential nature of my participation in this research project and agree to participate with the understanding that I may discontinue at any time without any penalty.

Signature of participant _____

Date _____

COLLEGE CHOICE DECISION QUESTIONNAIRE

EXAMPLE QUESTIONS:

If an apple and an orange are 100 units apart, how different are...
a lemon and a lime?

If an apple and an orange are 100 units apart, how different are...
a grape and a watermelon?

REMEMBER: Small numbers (less than 100) go with small differences and
large numbers (greater than 100) go with large differences.
No difference between things = 0
The same difference between things as the "ruler" = 100

COLLEGE CHOICE SURVEY

For this survey, "meeting new people" and "a variety of classes" differ by 100 units. Using that ruler, please write in how different the following pairs of things are.

If they are more different than the ruler, you would use a number larger than 100. If they are less different than the ruler, you would use a number smaller than 100. If there is no difference between the two things, just write "0."

There are no right or wrong answers, we just want to know your opinion.

*First, what college is YOUR first choice above all others? _____

Remember, meeting new people and a variety of classes differ by 100 units.
How different are...

0102 high academic standards	and strong courses in your chosen field	_____
0103 high academic standards	and a variety of classes	_____
0104 high academic standards	and meeting new people	_____
0105 high academic standards	and athletics	_____
0106 high academic standards	and lots of extracurricular activities	_____
0107 high academic standards	and pleasant surroundings	_____
0108 high academic standards	and opportunity for personal independence	_____
0109 high academic standards	and the University of Tennessee-Knoxville	_____
0110 high academic standards	and your first choice college	_____
0111 high academic standards	and yourself	_____

Remember, meeting new people and a variety of classes differ by 100 units.
How different are...

0203 strong courses in your chosen field	and a variety of classes	_____
0204 strong courses in your chosen field	and meeting new people	_____
0205 strong courses in your chosen field	and athletics	_____
0206 strong courses in your chosen field	and lots of extracurricular activities	_____
0207 strong courses in your chosen field	and pleasant surroundings	_____
0208 strong courses in your chosen field	and opportunity for personal independence	_____
0209 strong courses in your chosen field	and the University of Tennessee-Knoxville	_____
0210 strong courses in your chosen field	and your first choice college	_____
0211 strong courses in your chosen field	and yourself	_____

Remember, meeting new people and a variety of classes differ by 100 units.
How different are...

0304 a variety of classes	and meeting new people	_____
0305 a variety of classes	and athletics	_____
0306 a variety of classes	and lots of extracurricular activities	_____

(please go to next page)

0307 a variety of classes	and pleasant surroundings	_____
0308 a variety of classes	and opportunity for personal independence	_____
0309 a variety of classes	and the University of Tennessee-Knoxville	_____
0310 a variety of classes	and your first choice college	_____
0311 a variety of classes	and yourself	_____
0405 meeting new people	and athletics	_____
0406 meeting new people	and lots of extracurricular activities	_____
0407 meeting new people	and pleasant surroundings	_____
0408 meeting new people	and opportunity for personal independence	_____
0409 meeting new people	and the University of Tennessee-Knoxville	_____
0410 meeting new people	and your first choice college	_____
0411 meeting new people	and yourself	_____

Remember, meeting new people and a variety of classes differ by 100 units.
How different are...

0506 athletics	and lots of extracurricular activities	_____
0507 athletics	and pleasant surroundings	_____
0508 athletics	and opportunity for personal independence	_____
0509 athletics	and the University of Tennessee-Knoxville	_____
0510 athletics	and your first choice college	_____
0511 athletics	and yourself	_____
0607 lots of extracurricular activities	and pleasant surroundings	_____
0608 lots of extracurricular activities	and opportunity for personal independence	_____
0609 lots of extracurricular activities	and the University of Tennessee-Knoxville	_____
0610 lots of extracurricular activities	and your first choice college	_____
0611 lots of extracurricular activities	and yourself	_____

Remember, meeting new people and a variety of classes differ by 100 units.
How different are...

0708 pleasant surroundings	and opportunity for personal independence	_____
0709 pleasant surroundings	and the University of Tennessee-Knoxville	_____
0710 pleasant surroundings	and your first choice college	_____
0711 pleasant surroundings	and yourself	_____
0809 opportunity for personal independence	and the University of Tennessee-Knoxville	_____
0810 opportunity for personal independence	and your first choice college	_____
0811 opportunity for personal independence	and yourself	_____
0910 the University of Tennessee-Knoxville	and your first choice college	_____
0911 the University of Tennessee-Knoxville	and yourself	_____
1011 your first choice college	and yourself	_____

(please go to next page)

Do you plan to go to college? (1) YES _____ (0) NO _____

Have other members of your family attended college?

Father? (1) YES _____ (0) NO _____

Mother? (1) YES _____ (0) NO _____

Brothers or Sisters? (1) YES _____ (0) NO _____

If you do plan to go, where will you attend college? (most likely)

Which members of your family, if any, attended (or now attends) that college?

Where would you rather go to college? _____ close to home
 _____ far from home
 _____ away from home, but not too far

How much of a problem will tuition cost be?

_____ big problem _____ somewhat of a problem _____ no problem

What field do you want to study, or major in, when in college?

What year are you now in school? 9th _____ 10th _____ 11th _____ 12th _____

What is your grade point average? A _____ B _____ C _____ D _____ F _____

Are you... (0) female _____ (1) male _____

Where do you attend high school?

THANK YOU FOR YOUR HELP WITH THIS RESEARCH!

VITA

Amy A. James was born in Pensacola, Florida on November 26, 1957. She lived in several towns in the South before her family settled in Greenville, South Carolina. She graduated with honors from high school in 1976 and entered Wake Forest University that fall. As an undergraduate, she was involved with student activities and event planning, and served as a writer and associate editor for the campus newspaper. In 1980, she graduated with a B. A. in sociology.

After graduation, she accepted the position of activities coordinator at Queens College in Charlotte, North Carolina. She was an active member of the National Association for Campus Activities and the Association of College Unions-International. She left Queens College in 1983 to attend graduate school.

She entered the graduate program in the College of Communications at The University of Tennessee, Knoxville, to pursue a master's degree in communications. Her emphasis of study was in public relations and she was a member of the Public Relations Student Society of America. The author received Bickel and Hodges scholarships and a graduate assistantship. In 1985, she was initiated into Kappa Tau Alpha, the national society for recognition of scholarship in journalism and communications.

Ms. James will be employed by Iowa State University in Ames, Iowa after graduation.