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# A CASE STUDY OF ONE UNIVERSITY'S PRELIMINARY ATTEMPT TO UNDERSTAND MORE ABOUT ONE MARKET SEGMENT AT TWO STAGES OF THE COLLEGE SELECTION PROCESS

by

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B.A., Bemidji State University, 1983

Submitted to

The Faculty of the Political Science Department
of the University of North Dakota
in Partial Fulfillment of the Requirements
for the Degree of

Master of Public Administration

An Independent Study

December

1988

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#### **ACKNOWLEDGMENTS**

There are a number of people I want to thank in my student career and in producing this study. First, a big thank you goes to Rob and Mary Kweit for their support and for the challenges they placed before me as a graduate student. Thank you Irene Wagner for your attention to detail, and without whom this document would not pass muster. I would also like to thank the rest of the Political Science Department at the University of North Dakota.

Many people at Bemidji State University should also be thanked for their help. Many thank yous are proffered to Jim Rafferty for helping out on statistical questions. Thanks are also sincerely given to Dave Nordlie, who has critiqued many stages of many questionnaires. Dr. Jon Quistgaard, the Director of Admissions, Records, and Graduate Studies, also deserves a big thank you for giving me the idea for the study, and providing guidance when I needed it. Personnel in the Records Office, Admissions Office, and Graduate Studies Office also should be thanked for answering questions and providing the data I requested.

Final thank yous are given to Diane Williams who patiently types what I give her, and my husband, Charlie, who puts up with me when I need to work and loves me in spite of my faults.

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#### CHAPTER 1

#### INTRODUCTION

Among the activities of any organization is the maintenance of its structure and boundaries. Quantitatively, however, its activities are largely conversions of matter and energy into forms used by individuals and by other organizations, both inside and outside its boundaries, who contibute to it what it needs or wants in the same way that they receive from it what they need or want. The process is circular and, once started, goes on until something disrupts the exchanges or the acts of conversion. If either is interrupted the other soon stops also, and the boundaries disappear. Such interruptions, then, are the immediate causes of organizational death. <sup>1</sup>

Public organizations, according to many theorists, can be likened to a living organism; they are "born", they "live", and they "die". Some might cynically say that public organizations are born and live—on and on and on. As Herbert Kaufman points out, however, even in the public setting, organizations cease to exist. In order to stave off death, organizations survive "on the basis of a throughput of resources from the environment." This "throughput of resources" enables the organization to avoid the consequences of entropy all closed systems face as a result of the second law of thermodynamics.

Organizations, however, do not devote their entire stock of resources to produce a product. Each organization must devote part of its resource stock toward maintaining itself. Thus, public organizations, in the effort to preserve themselves and help guarantee a constant flow or resources, maintain in constant touch with their relevant publics and the environment.

Like all organizations, Bemidji State University, the focus of this study, must pay attention to all of the components of its environment. A realistic description of the university's environment needs to include at least three publics. First, BSU has both functional and allocational rivals. Anthony Downs describes an allocational rival as one which competes with the organization in question for resources. As the university is one of seven state universities in Minnesota that receive state funding, it is an allocational rival with each one with regard to financial resources. Downs describes a functional rival as an "[organizations] whose social functions are competitive with those of the [organization] itself." As BSU is only one of over 100 high education or training institutions in the state of Minnesota, it is an functional rival of each one of these institutions.

Two other relevant publics should be mentioned. One of these is the student constituency. Currently, BSU attracts 66% of the potential traditional college-age students from its 50,000 square mile service region. It attracts more of these students from its region than any of the other state universitites attract from their service regions. However, success in attracting this constituency still does not produce enough resources to meet budget

requirements—partly because of the final relevant public, the Minnesota State Legislature. BSU is supported financially by the state of Minnesota. That financial support is enrollment driven and covers two years. That is, the university's support for the next two years is based upon enrollment in the previous two years. Thus, besides grants and endowments from outside sources, BSU must constantly seek to maintain or increase enrollment from key geographical areas outside of its service region in order to guarantee enough resources to maintain itself and educate the students. This constant need to expand the constituency has not been easy in recent years.

Prior to the 1970s Kotler and Fox report that very few colleges and universities worried about attracting students to their schools. They enjoyed a "sellers" market—an overabundance of student consumers. National demographics, however, changed in the late 1970s—from a peak of 3.2 million in 1977, the number of high school graduates declined to 2.8 million in 1983. 10 This decline is expected to continue on into the 1990s. 11 In the face of this decline, many colleges and universities have been forced to utilize marketing concepts to attract prospective students to their schools. Thus, marketing for these schools, as well as for Bemidji State University, represents not just a tool, but is actually their means of survival.

Marketing is not simply promotion of the institution. Kotler and Fox outline what they consider to be a genuine marketing response and definition. They state that,

Marketing is the analysis, planning, implementation, and control of carefully formulated programs designed to bring about voluntary exchanges of values with target markets to achieve institutional objectives. Marketing involves designing the institution's offerings to meet the target markets' needs and desires using effective pricing, communication, and distribution to inform, motivate, and service the markets. 12

This complete view of marketing does not mean continually changing the curriculum to offer what is "hot", but rather, seeking out those potential students who are or could be interested in what the institution offers and adapting the institution to make it as attractive as possible, while still preserving and enhancing consumers' and society's well-being and long-term interests. 13

Before this college market exchange can take place, however, it is critical that institutions know the composition of the student market, including the composition of the present student body. Morris et al. state that knowledge of the student body should be extensive, and should include the following: knowledge of the geographical extent of the market, mean family income, religious preference, mobility patterns of families, the educational level of the parents, the social setting in which the prospective students live in or come from, their educational goals and aspirations, and their academic backgrounds. Analyzing the characteristics of the current student body enables each institution to identify places to recruit and the type of students the college is likely to recruit. 14

The Admissions Office at the college has identified the nine-county area surrounding the Minneapolis-St. Paul as one of its key sources of prospective students. In marketing jargon, BSU has

identified this geographical area as a market segment. Litten, Sullivan and Brodigan define a segment as "a group of people who exhibit characteristics, behavior, desires, needs, perceptions, or other phenomena that are similar within the group but are distinct from the rest of the market or from other groups in the market." 15 Marketers believe they can treat each segment in a particular way, and by so doing, "enhance the relationship between a given ... organization and the particular desires, perspectives, (and) behavior ... of a given segment." 16 In the past 10 years the enrollment participation of this area has declined by 12%. In order to ward off future declines and increase enrollment from this area, the Admissions Office is taking an in-depth look at this particular segment of the student body. 17

This in-depth view of the process involves looking at students at two stages of the college selection process—the beginning and the end. The beginning of the selection process is different for every person, but one of the first times high school students are "forced" to think about college is during their junior year when they take the Preliminary Scholastic Aptitude Test (PSAT). In addition to the actual test questions, students answer many demographic and socioeconomic questions, and also choose two schools to send their test results to. This decision point will serve as the beginning of the college selection process. The second stage of the process to be studied is at the end of the students' freshman year in college.

Comparing the students at each of these two phases will enable the Admissions Office to know what kinds of students are initially attracted to and what kind of students actually attend

Bemidji State University from the nine-county area. On a more practical level, this study will enable the university to know if the PSAT is any good as a predictor of attendance at BSU. Finally, this study will also point out what factors were important to students from this nine-county area when they were deciding what college to attend. Finding out this type of information will help the Admissions Office not only in deciding what types of things to stress when communicating information to high school students, but also the type of student to whom to send the information.

#### Literature Review

Research into academic marketing and college selection can take place in two major ways—from the buyer's or prospective student's perspective and from the seller's or institution's perspective. From the seller's point of view, the marketing process can be described as a funnel, with decreasing numbers of students interested in a particular university as they filter through the successive stages of the Admissions process. Very often, institutions utilize different recruiting activities at different stages of the process. 18

The buyer's perspective is quite different from the seller's perspective. Litten, Sullivan, and Brodigan state that the college selection process from the students' point of view "can also be likened to a funnel in which the student passes from having "all" postsecondary institutions as options in which to enroll to finally matriculating in a single institution. They consolidate this process into three basic stages. In the first stage, students develop a desire

to attend college and then make definite plans to go to college. Stage two involves students investigating institutions. During the final stage, students will fill out applications for admission, will be admitted into one or more institutions, but will finally enroll at only one institution. During this last stage, the students will also fill out applications for aid at various institutions and weigh the amount of aid granted in the decision regarding which college to attend. This study, will look at parts of the selection process from the both viewpoints.

Marketing studies of the college selection process vary considerably. Some studies depict only simple conceptual (nonempirical) models that lay out "all" the factors influencing students in the college selection process. 20 While these models do help people understand the college process, they have two major drawbacks. First, they are not institution-specific. While they broadly lay out "all" the factors that enter into the selection process, it is possible that certain factors are more important and others less important at certain universities. Second, there is no empirical basis for these assertions. Thus, while they give a broad understanding, each school must do further empirical studies to find out which factors are most important and by how much.

In a more advanced, yet relatively simple study of the process, researchers attempt to identify the criteria students deemed important when deciding which college or university to attend.<sup>21</sup> Many studies have been done on this topic.<sup>22</sup> Cook and Zallocco point out two drawbacks to this type of research. On the one hand, only one or a very limited number of factors or criteria are identified. On

the other hand, once they identify the selection criteria, rarely do they relate them to university preferences or choices.<sup>23</sup>

There are even more advanced types of research on this topic. Richards and Holland conducted a landmark study of the college selection process utilizing factor analysis, and Stordahl conducted a 3-factor factorial analysis of variance on each of four scales (Intellectual Emphasis, Practicality, Advice of Others, and Social Emphasis) to find whether student responses differed by sex, academic ability, or proximity to the particular university in question.<sup>24</sup> These two studies typify the first of the two more advanced types of college selection process research.

The most sophisticated research on the college selection process now has developed to the point of predicting college choice. Some studies have uncovered predictors of college choice. Others have developed models which help predict the probability of a student entering a particular university or college.26

Each of these various types of studies is helpful in understanding more about the college selection process. However, none of the studies researched indicated how the demographic and academic structure of the prospective student population of a specific school may change as the funneling process occurs. Nor did they compare students on demographic and academic differences early in the selection process. In order to track these changes and answer other relevant marketing questions, this study will analyze and compare students at the beginning of the selection process and who are from the nine-county area with each other based upon college choice. Then, the students from this nine-county area who

chose Bemidji State University at the beginning of the college selection process will be compared with students from that same geographical area who enrolled at the university to find out if there are any significant differences between the two groups.

Recommendations will then be made based upon the findings.

#### **ENDNOTES**

<sup>1</sup>Herbert Kaufman, <u>Time, Chance and Organizations: Natural Selection in a Perilous Environment</u> (Chatham, N.J.: Chatham House Publishers, Inc., 1985), p. 18.

<sup>2</sup>Ibid., p. 16.

<sup>3</sup>Ibid., p. 12.

<sup>4</sup>W. Richard Scott, Organizations: Rational, Natural, and Open Systems, 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1987), p. 82.

<sup>5</sup>Daniel Katz and Robert L. Kahn, "Organizations and the System Concept," in Classics of Organization Theory, eds. Jay M. Shafritz and Philip H. Whitbeck (Oak Park, III.: Moore Publishing Company, Inc., 1978), p. 165.

<sup>6</sup>Scott, Organizations: Rational, Natural, and Open Systems, p. 52).

<sup>7</sup>Anthony Downs, <u>Inside Bureaucracy</u> (Boston, Mass.: Little, Brown and Company, 1967), p. 10.

8lbid.

<sup>9</sup>Bemidji State University (Bemidji, MN: Bemidji State University, [1988]), pp. 3, 19.

10Philip Kotler and Karen F. A. Fox, <u>Strategic Marketing for Educational Institutions</u> (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1985), p. 8.

11Robert W. Cook and Ronald L. Zallocco, "Predicting University Preference and Attendance: Applied Marketing in Higher Education Administration," Research in Higher Education, 19 (1983), p. 197.

<sup>12</sup>Kotler and Fox, <u>Strategic Marketing for Educational</u> <u>Institutions</u>, p. 16.

13Kotler and Fox, <u>Strategic Marketing for Educational</u> <u>Institutions</u>, p. 10.

14Darrell R. Morris et al., "Know Your Student Market Before You Start to Market," <u>College and University</u> 52 (Summer 1977): pp. 607-610.

15Larry Litten, Daniel Sullivan, and David Brodigan, <u>Applying</u> <u>Market Research in College Admissions</u> (New York: The College Entrance Examination Board, 1983), p. 28.

16lbid., pp. 15-16.

17Interview with Dr. Jon Quistgaard, Director of Admissions, Records, and Graduate Studies, Bemidji State University, Bemidji, Minnesota, 27 February 1987.

<sup>18</sup>Litten, Sullivan, and Brodigan, <u>Applying Market Research in College Admissions</u>, pp. 28-30.

19lbid.

20John W. Owen et al, "Marketing: Matching the Student to the College," College and University 52 (Summer 1977): pp. 591-604.

21Cook and Zallocco, "Predicting University Preference and Attendance," p. 198.

Youth, (Iowa City, Iowa: American College Testing Program, [1967]); Peter M. Blau, "Recruiting Faculty and Students," Sociology of Education 47 (1974): pp. 93, 113; Thomas A. Bowers and Richard C. Pugh, "Factors Underlying College Choice by Students and Parents," Journal of College Student Personnel 14 (May 1973): pp. 220–224; Robert H. Fenske and Joseph D. Boyd, "The Impact of State Financial Aid to Students on Choice of Public or Private College," College and University 46 (1971): pp. 98, 107; Denise Kandel and Gerald S. Lesser, "School, Family, and Peer Influences on Educational Plans of Adolescents in the United States and Denmark," Sociology of Education 43 (1970): pp. 270, 287; and Edward L. McDill and James

Coleman, "Family and Peer Influences in College Plans of High School Students," <u>Sociology of Education</u> 38 (1965): pp. 113, 126.

23 Cook and Zallocco, "Predicting University Preference and Attendance," p. 198.

24James M. Richards and John L. Holland, <u>A Factor Analysis of Student "Explanations" of Their Choice of a College</u>, (Iowa City, Iowa: Research and Development Division, American College Testing Program, [October 1965]); and Kalmer E. Stordahl, "Student Perceptions of Influences on College Choice," <u>Journal of Educational Research</u> 63 (January 1970): pp. 209-212.

25See John Maguire and Robert Lay, "Modeling The College Choice Process - Image and Decision," <u>College and University</u> 56 (1981): pp.123, 129; and David W. Chapman, "A Model of Student College Choice," <u>Journal of Higher Education</u> 52 (5): pp. 490-505.

<sup>26</sup>See Frederick L. Dembowski, "A Model for Predicting Student College Choice," <u>College and University</u> 55 (2): pp. 103-112; and Cook and Zallocco, "Predicting University Preference and Attendance," pp. 197-211.

#### CHAPTER II

#### METHODOLOGY

#### Sample Selection and Questionnaire Administration

As was stated in Chapter I, the purpose of this descriptive research project is to answer a series of marketing questions specific to Bemidji State University. These questions are as follows:

- 1. When looking at the beginning of the selection process (high school students who have taken the preliminary Scholastic Aptitude Test (PSAT)), are students who choose to send their scores to other schools significantly different from students who choose to send their scores to Bemidji State University?
- 2. When comparing students at the beginning of the selection process with students at the end of the process, are students who choose to send their scores to Bemidji State University significantly different from students who end up enrolling at the university?
- Is selecting Bemidji State University on the PSAT a good indicator of eventual attendance at the university?
- 4. What can current BSU students from this geographical area tell the Admissions Office about the college selection process?

In order to answer these questions, two data sets from two different stages in the college selection process were analyzed. The first data set was extracted from an existing set of 1984–1985 PSAT data consisting of all of those students who took the test in the Fall of 1984 and were from the nine county area surrounding Minneapolis/St. Paul. (The nine counties are Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Sherburne, Washington, and Wright.) Since this nationwide test is not mandatory in all schools, the results will be somewhat underrepresentative of all high school juniors in this geographical area. Those students who chose either Bemidji State University or one of the schools deemed to be BSU's competition for this pool of students as a first or second choice on the PSAT test—the University of Minnesota at Duluth and Moorhead State University—were selected from the tape for analysis. <sup>1</sup>

The second data set consisted of a population of 121 students from the nine county area who were enrolled at Bemidji State University during Fall Quarter 1986. The university Records Office provided a list of these students. With the aid of the Admissions Office each person on the list was sent a letter inviting him or her to the university dining hall to fill out a questionnaire, offering a special dessert as an enticement. (See Appendix A) The letter instructed the students in this population to call the Admissions Office stating which of two nights they wished to attend, or if they chose not to participate. Students were also given a "coupon" to cash in when they came to fill out the questionnaire. (See Appendix B) This was done in part to prevent anyone from walking in either to

eat the dessert and/or fill out the questionnaire. Follow-up phone calls were made to all who did not call the Admissions Office.

Some difficulties arose during the questionnaire administration phase of the project. The list of 121 students obtained from the Records Office was from Fall Quarter 1986, and contained addresses from that period of time. Letters were sent to each of the students at that Fall Quarter address. However, since the survey was conducted during Spring Quarter of that same academic year, some of the students had moved and did not receive the letter, while others had quit school. To further complicate matters, only two students called to say which evening session they preferred to attend. The researcher thus ended up making follow-up phone calls to the remaining 95 students on the list who were still in school. Even with this effort, only 35 students showed up to fill out questionnaires.

In order to get a better sampling, the researcher contacted all of the students who did not show at the evening sessions and made appointments to meet them so they could fill out the questionnaire at a place of their choosing. An additional 21 respondents answered the questionnaire in this way. While the students answered the questionnaires in different settings, it was not seen as a factor that would bias the results obtained from the survey. The important fact is that all respondents who eventually filled out the survey did so on a voluntary basis. Thus, the final response rate was 58% (56 of 97).

#### Variables

In order to study the "beginning" of the college selection process, a time that is not the same for all individuals, an artificial point in time was selected—when high school juniors take the PSAT. As was stated previously, students are asked on that test to choose two schools to which to send their test scores. This is one of the first times these students are formally asked to make that kind of college selection decision. In addition to measuring students' verbal and mathematical abilities, the PSAT contains a variety of questions pertaining to demographic and interest factors which may influence their college selection decision.

As was addressed in Chapter I, previous research indicates that a number of factors weigh in to the decision process. For instance, William Ihlanfeldt states that the economic background of the students' families influences mobility. Families with higher incomes (except for families in the East and Midwest) tend to have sons and daughters who are more willing to travel further distances to attend college. Additionally, the family background, the geographical area where the student lives, the ethnic background of the students, the student's career aspirations and his or her prior educational performance all influence the eventual decision. Thus, for the purposes of this study, information concerning the following factors was selected from the computer tape: PSAT verbal and mathematical test performance, high school rank, students choice of major and occupation, father's and mother's occupation and education, gender and ethnic background, the students' expected source of finances while in college, and the county and high school

of the student. Appendix C shows some of the questions that were asked on the PSAT test and all of the variables selected from the tape.

The "end" of the college selection process is also different for each individual. A fairly obvious end to the process occurs when students actually enroll at a particular college or university. It is possible for students to apply and be accepted at a university and then not attend. Thus, using enrollment is a more tangible and accurate way to mark the end of the process.

In order to make the two ends of the process comparable, questions students answered on the PSAT appeared in similar form on the questionnaire they answered at the end of their freshman year of school. (See Appendix D for a copy of the questionnaire.) As some of the answers to these questions were in student records, permission was obtained from the Admissions and Records Office to utilize this information. Students were also asked other questions concerning the middle stages of the decision making process, a time when all students are investigating the relative merits of a varying number of institutions, in order to more fully understand it as a whole. Questions used asked for the following information: the items students wanted to know about a college before they applied for admission; the important factors in the decision process; the important people, publications or activities; and, whether or not a parent or close relative had attended BSU.

Three other groups of questions were included on the questionnaire in consultation with the Director of Admissions. One group of two questions were concerned with BSU's image. One

question asked students to describe the image they had of the university before they enrolled, and another asked students what they would emphasize if they were in charge of recruiting students from the Minneapolis/St. Paul area. Information obtained from image questions help Admissions personnel understand how prospective students perceive the university, and what kinds of things Admissions needs to stress to other students in this market segment.

A second group of three questions asked students about the moment of decision. Students were asked why they chose BSU over any other college or university. They were also asked if they would have attended another college or university in Minnesota if they had not attended BSU. As a follow-up question, they were also asked which school they would have attended in Minnesota.

The third group of two questions concerned the students' majors. One question asked students if they had a major when they started BSU, and if so, what was it. Another asked students if they had changed their major since they had first come to BSU, and if so what was their current major.

#### **ENDNOTES**

<sup>1</sup>Due to a coding error, the researcher obtained information from the PSAT tape that was not planned. Originally, the researcher wished to get information from all students who had selected either the University of Minnesota at Duluth, Bemidji State University, Moorhead State University, St. Cloud State University, and Mankato State University. These are schools deemed to be BSU's competition. However, the error resulted in selecting information on the University of Minnesota at Duluth, those who chose private junior colleges or were undecided, Bemidji State University, Southwest State University, and Moorhead State University. The researcher attempted to correct the coding mistake, but computer center personnel had inadvertantly erased the computer tape with all of the original information to create room for other information. The researcher decided to continue the project using three of the schools -Moorhead State University, Bemidji State University, and the University of Minnesota at Duluth.

2William Ihlanfeldt, <u>Achieving Optimal Enrollments and</u> <u>Tuition Revenues</u> (San Francisco: Jossey-Bass, 1981), pp. 19-27.

<sup>3</sup>Darrell R. Morris et al., "Know Your Student Market Before You Start to Market," <u>College and University</u> 52 (Summer 1977): p.607.

<sup>4</sup>Larry Litten, Daniel Sullivan, and David Brodigan, <u>Applying Market Research in College Admissions</u> (New York: The College Entrance Examination Board, 1983), pp. 29-30.

51bid., p. 30.

<sup>6</sup>Interview with Dr. Jon Quistgaard, Director of Admissions, Records, and Graduate Studies, Bemidji State University, Bemidji, Minnesota, 22 April 1987.

#### CHAPTER III

#### ANALYSIS

# Analysis of Students at the Beginning of the College Selection Process

Information was obtained from 1025 high school juniors who took the Preliminary Scholastic Aptitude Test (PSAT) in the fall of 1984 and selected either Bemidji State University, Moorhead State University, or the University of Minnesota at Duluth. These students answered demographic and interest questions as a part of that exam. All statistical tests were conducted on the total population. Thus, results are representative of this group. Admittedly, not all high school juniors are required to take the exam. While some schools require the test, others allow its students to take the exam on a voluntary basis. Additionally, students are charged a minimal fee if they wish to take the exam. Since this is the first pre-college entrance exam, most high school students who want to attend college take the PSAT. This fact helps ensure that the results of this analysis are representative of this body of students in the nine county area surrounding Minneapolis/St. Paul.

Three variables, the PSAT verbal score and math score and the students' high school rank, on the PSAT data were measured at the

interval level. A one-way between subjects analysis of variance was run for each of these variables. The three different universities, Duluth, Bemidji, and Moorhead served as the categorical variable on which the dependent variables were factored. The results indicate that Bemidji State University was not significantly different at the .05 level of significance from either of the schools on any of the three variables. This was the case for those who chose one of the three schools as a first choice (high school rank: F(2,507)=.25, p>.05; PSAT mathematical score: F(2,517)=1.46,p>.05; and PSAT verbal score: F(2,517)=2.57, p>.05) as well as for those who chose one of the three schools as a second choice (high school rank: F(2,525)=.49, p>.05; PSAT mathematical score: F(2,543)=.63, p>.05; and PSAT verbal score: F(2,545)=.29, p>.05).

Four other variables were measured at the ordinal level of analysis. These were the students' expected number of years of education, their family income, and their fathers' and mothers' level of education. Because only ordinal level data were available, a Kruskal-Wallis rank test for three or more independent samples was used with the three universities serving as the three different groups, and the four variables mentioned as the variables to be ranked. This test is the nonparametric counterpart of the one-way analysis of variance, and is typically used under the following conditions: when the dependent variable is quantitative and continuous in nature (but has been reduced to ordinal data), when the independent variable is between-subjects in nature, and when the independent variable has three or more groups.<sup>2</sup>

Results from the Kruskal-Wallis test show that out of the eight tests computed (one test each for the first and second choice of the students), five produced significant results. When looking at the first university choice, the students' expected years of education, fathers' education, and income all were significant at least at the .05 level of analysis. This means that for each of these variables at least one of the groups is significantly different in rank. To see which colleges differed in rank from the other schools, separate Mann-Whitney U tests were conducted. Duluth was first paired with Bemidji and then with Moorhead. Then Bemidji was paired with Moorhead. The significant results of the Mann-Whitney U tests on those pairs is shown below.

Those students choosing Duluth tended to desire significantly more schooling than students choosing Bemidji. This was true for both the first and second choice of school. Additionally, those students choosing Duluth tended to have fathers with significantly more schooling than did the fathers of students choosing BSU. This was also true for both the first and second choice of school. Finally, students choosing Duluth tended to come from families with significantly higher income than did students who chose BSU.

Bemidji and Moorhead appear not to be significantly different on either family income or the expected years of education.

Additionally, results from the tests run on the variable "father's education" produced mixed results. For students choosing either of the schools as a first choice, students choosing BSU tended to have fathers with significantly higher education than did students

23 TABLE 1

## MANN-WHITNEY U RESULTS FOR SIGNIFICANT ORDINAL LEVEL VARIABLES

Variable Name	<u>U</u>	N	<u>×</u> 2	р
Expected Years of Education (First Choice	ce)	513	8.72	.01
BSU (m.r.**=211) and UMD (m.r.=248)	15324	480		.00×
UMD (m.r.=210) and MSU (m.r.=212)	6292	419		.89
MSU (m.r.=72) and BSU (m.r.=61)	1294	127		.07
Father's Education (First Choice)		489	8.50	.01
BSU (m.r.=222) and UMD (m.r.=233)	15995	461		.45
UMD (m.r.=204) and MSU (m.r.=141)	3542	398		.00×
MSU (m.r.=47) and BSU (m.r.=64)	923	119		.02*
Family Income (First Choice)		321	11.30	.00
BSU (m.r.=123) and UMD (m.r.=160)	5597	304		.00×
UMD (m.r.=133) and MSU (m.r.=98)	1513	260		.06
MSU (m.r.=38) and BSU (m.r.=40)	494	78		.76
Expected Years of Education (Second Cho	oice)	542	9.72	.01
BSU (m.r.=218) and UMD (m.r.=247)	16974	481		.02 <del>×</del>
UMD (m.r.=225) and MSU (m.r.=190)	9724	440		.02 <del>*</del>
MSU (m.r.=80) and BSU (m.r.=83)	2984	163		.57
Father's Education (Second Choice)		506	13.61	.00
BSU (m.r.=183) and UMD (m.r.=235)	12606	447		.00 <del>×</del>
UMD (m.r.=205) and MSU (m.r.=207)	9602	409		.87
MSU (m.r.=87) and BSU (m.r.=67)	1889	148		.01*

Designates significanceMean rank

choosing Moorhead. The reverse was true for students choosing either school as a second choice. For the most part, differences between these schools are not significant or are inconclusive.

Differences between Moorhead and Duluth are also not quite as pronounced as those between Duluth and Bemidji. For students choosing either of the schools as a first choice only, students choosing Duluth tended to have fathers with significantly higher education than did those students who chose Moorhead. For students choosing either one of the schools as a second choice, those expressing an interest in Duluth desired significantly more education than those expressing an interest in Moorhead.

An attempt was made to conduct a chi square test of independence on the remaining variables, but too many cells had too few cases, thus precluding the use of the statistic. This was true even when the variables were collapsed. Thus, what follows is a simple description of each of the indicators by school choice. For the purposes of this section, first and second choice have been combined. It is thus possible for some individuals to have been counted twice. (i.e., If a student first chose one of the schools in the study, and then chose another school in the study. Thirty-eight students are in this situation.)

As is shown in Table 2, all nine counties were represented at this stage in the process; however, students in Anoka and Hennepin counties make up almost 50% of the interest for Duluth, Bemidji, and Moorhead.

TABLE 2

#### COUNTY OF ORIGIN FOR STUDENTS TAKING THE PSAT

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County	Du <u>N</u>	lluth <u>%</u>	Ве <u>N</u>	midji <u>%</u>	Mod <u>N</u>	rhead <u>%</u>
Anoka	117	15	49	25	21	22
Carver	16	2	4	2	3	3
Dakota	66	9	21	1 1	10	11
Hennepin	273	35	47	24	26	28
Ramsey	115	15	23	12	7	7
Scott	37	5	10	5	1	1
Sherburne	13	2	6	3	1	1
Washington	118	15	29	15	18	19
Wright	19	2	9	<u>5</u>	7	7
	774	100.%	198	100.%	94	100.%

Table 3 shows that with regard to gender, for two of the three schools there were only small differences in percentages of students interested. It also shows that more males than females wanted their scores sent to Duluth and Bemidji, but that the opposite was true for Moorhead.

Predominately white students express an interest in attending the three universities. Table 4 shows that Duluth, Bemidji, and Moorhead were chosen by 93–94% white students. Since there wereso few minority students, all of the minorities have been lumped into one category, "other". This category includes students who are American Indian or Alaskan Native, Asian, Black, or Hispanic.

TABLE 3

GENDER AND SCHOOL INTERESTED IN

Sex	Du N	luth %	Ber N	midji %	Moo	rhead %
307.		10	11	10	17	10
Males	396	51	102	52	43	46
Females	378	49	96	<u>48</u>	51	54
	774	100.%	198	100.%	94	100.%

TABLE 4

ETHNIC ORIGIN AND SCHOOL INTERESTED IN

Ethnic Origin		iluth <u>%</u>	Ber <u>N</u>	nidji <u>%</u>	Mo <u>N</u>	orhead <u>%</u>
White	728	94.1	185	93.4	88	93.4
Other	10	1.3	3	1.5	3	3.2
Unreported	<u>36</u>	4.6	10	5.1	3	3.2
	774	100.0%	198	100.0%	94	100.0%

Some proportionate distinction exists between the fathers' occupations of the students who selected these four universities. Table 5 depicts that the two largest occupational categories for fathers of students choosing Duluth and Moorhead are business owner/manager and professional/technical worker, and for Bemidji

are skilled worker and business owner/manager. (See Appendix C for the occupations considered within each occupational category.)

TABLE 5

FATHER'S OCCUPATION AND SCHOOL INTERESTED IN

Father's Occupation	Du <u>N</u>	iluth <u>%</u>	Ber <u>N</u>	nidji <u>%</u>	Mo N	orhead $\frac{\pi}{8}$
Business Owner/ Manager	218	28.2	53	26.8	28	29.8
Clerical/Sales Worker	49	6.3	11	5.6	6	6.4
Factory Worker/Laborer	34	4.4	11	5.6	1	1.1
Farmer	4	0.5	1	0.5	2	2.1
Homemaker	0	0.0	0	0.0	0	0.0
Professional/ Technical	212	27.4	42	21.2	29	30.9
Skilled Worker	156	20.2	55	27.8	19	20.2
Unreported/Other	101	13.1	25	12.6	9	9.6
	774	100.0%	198	100.0%	94	100.0%

Table 6 shows that similar occupational information was also available for the mothers of the students taking the PSAT exam.

The two largest occupational categories for mothers of students choosing Bemidji or Moorhead are clerical/sales worker and homemaker, and for Duluth are clerical/sales worker and professional/technical worker.

TABLE 6

MOTHER'S OCCUPATION AND SCHOOL INTERESTED IN

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Mother's Occupation	Du <u>N</u>	lluth <u>%</u>	Ber <u>N</u>	nidji <u>%</u>	Mo N	orhead %
Hother 5 Occupation	14	70	14	70	14	70
Business Owner/ Manager	55	7.1	6	3.0	9	9.6
Clerical/Sales Worker	253	32.7	70	35.4	23	24.5
Factory Worker/Laborer	20	2.6	8	4.4	2	2.1
Farmer	0	0.0	0	0.0	0	0.0
Homemaker	137	17.7	46	23.2	23	24.5
Professional/ Technical	159	20.5	28	14.1	18	19.1
Skilled Worker	42	5.4	8	4.4	6	6.4
Unreported/Other	108	14.0	32	16.2	13	13.8
	774	100.0%	198	100.0%	94	100.0%

When students were asked if they would need help getting money to continue their education at least 64% of the students choosing each of the institutions reported they would need some financial help or would need help paying for all of their expenses. At least 69% of the students choosing each school stated they would need at least some financial help to continue their education. Almost 80% of the students interested in Bemidji said they would need financial help. A further breakdown is shown in Table 7.

TABLE 7

SOURCES OF FINANCES AND SCHOOL INTERESTED IN

	D	uluth	Ве	midji	Mo	orhead
Sources of Finances	N	8	N	8	N	<u>%</u>
Self or Parents	108	14.0	22	11.1	16	17.2
Need some help	447	57.8	133	67.2	55	58.5
Need help for all expenses	93	12.0	25	12.6	10	10.6
Not sure	126	16.3	18	9.1	13	13.8
	774	100.0%	198	100.0%	94	100.0%

The educational and occupational interests of the students often is an indicator of where students will eventually go to school. As is depicted in Table 8, however, at the high school junior level, very little distinction exists between the schools on this variable.

The same four categories of majors are among the top five for each school: business and commerce, health, social sciences, and education. The remaining category of majors for Duluth is engineering, for Bemidji is agriculture and conservation, and for Moorhead is communications. A business or business-related degree was the most highly selected major by at least 20% of the students selecting each of the schools.

The future occupations these students selected closely followed the majors they had selected with a few exceptions. For Duluth, communications replaced education on the top five list. For

Bemidji, a major in the public service field replaced education, and for Moorhead, engineering replaced social sciences on the same list.

### TABLE 8

# EDUCATIONAL AND OCCUPATIONAL INTERESTS AND SCHOOL INTERESTED IN

<u>School</u>	Majors chosen	Occupations chosen
UMD	Business and commerce	Business and commerce
	Education	Communications
	Engineering	Engineering
	Health	Health
	Social sciences	Social sciences
BSU	Agriculture/conservation	Agriculture/conservation
	Business and commerce	Business and commerce
	Education	Health
	Health	Public services
	Social sciences	Social sciences
MSU	Business and commerce	Business and commerce
	Communications	Communications
	Education	Education
	Health	Engineering
	Social sciences	Health

Students selecting the universities in question come from a number of different high schools. This report only looks at the 10 most frequently reported high schools for each university. With this in mind, some interesting results can be noted. For instance, the same five high schools are listed on the top ten list of each university (Anoka, Apple Valley, Blaine, Coon Rapids, and Stillwater). Additionally, three other high schools are on the top ten list of two of the three universities (Hill-Murray, John F. Kennedy, and Woodbury). The high schools found on only one of the top ten lists are noted below:

- Duluth: Wayzata Senior High School, Plymouth
   Robbinsdale-Armstrong High School, Plymouth
   Park High School, Cottage Grove
   Mound-Westonka High School, Mound
- Bemidji: Prior Lake High School, Prior Lake
   Hastings Senior High School, Hastings
   Thomas Jefferson Senior High School, Bloomington
- Moorhead: Eden Prairie Senior High School, Eden Prairie
   Forest Lake Senior High School, Forest Lake

## Comparison of Students at the Beginning of the College Selection Process With Students at the End of the Process

Once the students at the beginning of the selection process had been compared with each other and significant differences noted, it was then necessary to compare students at the beginning of the process (high school juniors who chose BSU on the PSAT) with

students at the end of the process. Students at this final stage consisted of freshmen students from the same nine county area who were enrolled at Bemidji State University during Fall Quarter, 1986. This group of students was chosen because they are the same group of students who took the PSAT during fall 1984.

Three variables, the PSAT verbal score and math score and the students' high school rank, were measured on an interval level. A two-group independent t-test was run for each of these variables<sup>5</sup>. Those 12 students who were in both groups were assigned to be in the college freshman group. Table 9 illustrates the results of the t-test. There is no significant difference between these two groups on any of the variables at the .05 level of significance.

TABLE 9
T-TEST RESULTS FOR INTERVAL LEVEL DATA

<u>Variable</u>			Degrees of <u>Freedom</u>		Two-tail probability
Verbal Score Math Score	38.22 43.92		230 230	50 20	.62 .84
High School Rank	62.64	61.47	233	.33	.74

The two groups of students were also compared on four ordinal level variables—the students expected years of education, their fathers' and mothers' educational level, and their families' income level. Mann-Whitney U significance tests were conducted on these four variables, and only on income was their a significant finding at the .05 level. Students who chose Bemidji on the PSAT had families

with significantly higher incomes than those freshmen who enrolled at BSU. Table 10 shows the results of all the Mann-Whitney U tests.

TABLE 10

MANN-WHITNEY U RESULTS FOR ORDINAL LEVEL VARIABLES

<u>Variable</u>	Mean Rank PSAT*	Mean Rank BSU*	Degrees of <u>Freedom</u>	<u>U</u>	<u>Z</u>	Two- tailed <u>Probability</u>
Expected years of education		125.05	233	4449	-1.59	.11
Father's level of education	113.24	120.45	229	4539	73	.47
Mother's level of education	115.83	112.43	229	4700	35	.72
Income	83.90	98.90	176	3733	-2.10	.04

<sup>\*</sup> Due to coding, the higher the mean rank, the lower the value

As was mentioned earlier, the original intent was to run chi square tests of independence for the nominal level variables. However, some cells had too few cases to conduct a meaningful test. Thus, what follows is a simple description of each of the variables according to the stage in the selection process. For the purposes of this section, the 12 individuals who exist in both sets of data, will show up in both columns.

Table 11 shows the counties the students were from.

COUNTY OF ORIGIN FOR STUDENTS INTERESTED IN OR ENROLLING AT BSU

	Р	PSAT		BSU
County	N	<u>%</u>	N	<u>%</u>
Anoka	49	24.7	14	25.0
Alloka	49	24.7	1 -	23.0
Carver	4	2.0	0	0.0
Dakota	21	10.6	9	16.1
Hennepin	47	23.7	21	37.5
Ramsey	23	11.6	3	5.4
Scott	10	5.1	1	1.8
Sherburne	6	3.0	3	5.4
Wahington	29	14.6	2	3.6
Wright	9	4.5	3	5.4
	198	100.0%	56	100.0%

When comparing the beginning of the process with the end of the process, proportional gains were made in two counties, Dakota and Hennepin. A proportional decrease in the percent of students first interested in and then attending BSU occurred in Scott, Ramsey and Washington counties. The remaining counties stayed about the same.

Data show in Table 12 that a greater percent of females are first interested in BSU than eventually enroll at the university.

35 TABLE 12

#### GENDER FOR STUDENTS INTERESTED IN OR ENROLLING AT BSU

	Begi	nning	E	End		
Sex	N	<u>%</u>	N	<u>%</u>		
Male	102	51.5	33	58.9		
Female	96	48.5	23	41.1		
	198	100.0%	56	100.0%		

There were no real differences in the beginning of the process and the end of the process with regard to ethnic status. Of those who selected BSU on the PSAT, 93.4% (185) were white, and of the respondents on the freshman questionnaire 96.4% (54) were white. Only two of the respondents were nonwhite. One of the individuals was an American Indian or Alaskan Native, and the other person was Asian or a Pacific Islander.

With regard to the occupations of the parents of the two groups, there were some differences as is outlined in Table 13.

With regard to the father's occupations, the top two categories of occupations for those interested in BSU are business owner/ manager and skilled worker, but for those fathers of students who enrolled at BSU are business owner/manager and professional/ technical worker. When looking at the mothers' occupations, a much higher percentage were reported as professional/technical workers, and much fewer were reported as clerical or sales workers.

PARENTS' OCCUPATIONS OF STUDENTS INTERESTED IN OR ENROLLING AT BSU

	_		ners	011	Mothers			2011
Occupation	N	SAT <u>%</u>	<u>N</u>	SU <u>%</u>	<u>N</u>	SAT <u>%</u>	<u>N</u>	3SU <u>%</u>
Business Owner/ Manager	53	26.8	14	25.0	6	3.0	4	7.1
Clerical or Sales Worker	11	5.6	6	10.7	70	35.4	12	21.4
Factory Worker/ Laborer	11	5.6	7	12.5	8	4.4	2	3.6
Farmer	1	.5	2	3.6	0	0.0	0	0.0
Homemaker	0	0.0	0	0.0	46	23.2	12	21.4
Professional/ Technical Worker	42	21.2	14	25.0	28	14.1	18	32.1
Skilled Worker	55	27.8	10	17.9	8	4.4	6	10.7
Unreported/Other	25	12.6	3	5.4	32	16.2	2	3.6
	198	100%	56	100%	198	100%	56	100%

As previously mentioned, the educational and occupational interests of the students often is an indicator of the school they eventually choose. Toward that end the top selections of majors and occupations at both stages of the selection process were examined. As only 13 students reported what their beginning major was when they started college, this comparison was not done. Since the

students did report the occupation they were interested in when they first started college, a comparison of the top five categories of occupations for each stage of the selection process is reported in Table 14.

TABLE 14

#### COMPARISON OF TOP FIVE CATEGORIES OF MAJORS

PSAT respondents	BSU respondents
1. Business and Commerce	1. Business and Commerce
2. Health	2. Health
3. Agriculture and Conservation	3. Public Service
4. Public Service	4. Communications
5. Social Sciences	<ol><li>Biological Sciences and Social Sciences (tie)</li></ol>

Business and commerce, public service, and the social sciences were in both lists. Education, communications and biological sciences made it to the top five categories in the final stage of the selection process, while health and agriculture and conservation did not.

The high school the students come from may also serve as an indicator of future college selection. The respondents who filled out the survey were from 37 different high schools in the nine county area. The high schools yielding the highest number of freshmen are Anoka Senior High School (5), John F. Kennedy Senior High School (4),

Coon Rapids Senior High School (3), and Robbinsdale-Armstrong Senior High School (3). All of these schools except for Robbinsdale-Armstrong were listed on the top ten list of those students who took the PSAT exam. Only one of the 198 students who selected BSU on the PSAT exam was from this high school.

#### Further Analysis of the College Selection Process

As was stated in Chapter II, students were asked 11 additional questions covering four topic areas, the middle of the selection process, BSU's image, the moment of decision, and the importance of a major in the college selection decision.

The four questions which were asked to understand more about the factors weighing into the decision process encompassed a variety of topics. In one question students were asked what the three most important things they wished to know before they applied for admission to a college. The three responses were combined and categorized to produce an overall list of items and have been ranked from most frequently reported to least frequently reported. They are:

# Number reporting 1. Financial considerations\* 2. Variety and availability of programs, courses and majors 3. Beautiful northwoods setting 4. School size 5. Reputation of academic programs and the university 16

6. Distance from home	10
7. Certain sports and athletic programs	10
8. Recreational activities and the social life	8
9. Relatively small class size	3
10. Attractiveness of the campus	3
11. General feeling of the campus	3
12. Housing accomodations	2
13. Helpfulness of the faculty	1
14. Community size	1
15. To get away	1
16. Coeducational	1
17. Could receive personal help	1

<sup>\*</sup> Financial considerations included the relative low cost of attending the university and receiving financial aid or a scholarship to attend the university.

Cost and academic questions topped the list followed closely by the beautiful northwoods setting.

A second question designed to get a more complete view of the decision process asked students to state how important each of 29 items/factors were to them in their decision to attend BSU. Choices ranged from Very Important (1) to Not Important (4). Table 15 shows these factors which have been ranked according to their mean responses. A mean rank of 1 signifies very important; 2, important; 3, somewhat important; and, 4, not important.

#### 40

#### TABLE 15

## IMPORTANCE OF VARIOUS FACTORS IN THE COLLEGE SELECTION PROCESS

Factor	Mean rank
Cost of attending BSU	1.91
Existence of a specific program or major that you were interested in	1.93
Small class size	2.04
To get away from home	2.20
Availability of outdoor recreational activities	2.20
Attractiveness of the campus	2.21
Size of the student body	2.25
Academic reputation of BSU	2.27
Opportunities for socializing	2.27
Rural nature of the area	2.29
Good preparation for a job	2.32
Variety of course offerings	2.37
On-campus housing facilities	2.38
Coeducational	2.45
Availability of student support services	2.52
Extent of academic support facilities/equipme	nt 2.55
Large variety of programs/majors	2.61
Received financial aid to attend BSU	2.84
Closeness to home	2.86
Availability of part-time jobs	2.87

Factor	Mean rank
Extracurricular activities like Music/Drama/Intramurals	2.89
Type of community in which BSU is located	2.89
Received a scholarship from BSU	2.98
Special academic opportunities (Honors Program/Study Abroad)	3.13
Opportunity to participate in varsity athletics	3.16
Reputation of the athletic programs	3.22
Good preparation for graduate school	3.27
Went to a camp at BSU when younger	3.90
Availability of ROTC	3.95

The cost of attending BSU, the existence of a specific program or major that the students were interested in and the small class size, were the top three choices. Fourth place went to those who wanted "to get away from home." The remaining top ten factors were related to size, beauty of the campus/location, academics, and the opportunities for socializing.

Respondents were also asked how important 12 types of people/ publications/activities were to them in the decision process. Again, choices ranged from Very Important (1) to Not Important (4). Based upon the mean responses from the students, the 12 items were then ranked from Very Important (1) to Not Important (4). The result of this ranking is shown in Table 16.

TABLE 16

## IMPORTANCE OF PEOPLE, PUBLICATIONS, AND/OR ACTIVITIES IN THE COLLEGE SELECTION PROCESS

People/publication/activity	Mean rank
Visit to the campus	2.18
Advice of someone who has attended BSU	2.27
Publication of BSU (catalogs, brochures, etc.)	2.70
Friends who attended or planned to attend BSU	2.78
Contacts with BSU recruiters	2.89
Parents or close relatives	2.93
High school counselor	3.20
High school teacher	3.20
Contacts with BSU faculty	3.43
Parent of current BSU student	3.53
Magazine or other advertisement	3.82
T.V./radio commercial	3.93

The item with the top rank was a "visit to the campus." Three of the top five items in the ranking involved talking with people—someone who had attended BSU, a friend who attended or planned to attend the university, or a BSU recruiter. The remaining item in the top five was a publication of BSU. None of the rankings, however, was between important and very important. Six of the twelve items ranked fell between important and somewhat important and the remaining six were between somewhat and not important.

Students were also asked if one or more of their parents or a close relative had attended BSU. The Director of Admissions felt that students attend a certain university because one of their relatives did so.<sup>6</sup> Of the 56 respondents, 28.6% (16) stated one of their relatives had attended BSU, and 71.4% (40) stated relatives had not attended BSU.

In order to more completely understand the moment of decision, respondents were asked why they chose BSU over any other college or university. Many of the respondents gave more than one reason for their choice, and the answers, since they varied widely, have been categorized as shown in Table 17.

The top three reasons students gave emphasized academics, location, and the size of the school.

Another question asked respondents if they would have attended another college or university in Minnesota had they not attended BSU. Of the 56 respondents, 85.7% (48) said they would have attended another such school, and 14.3% (8) said they would not have.

A follow-up question was addressed to those 48 students who said they would have chosen another college or university in Minnesota. In that question, students were asked to state which college or university they had considered attending the most. Table 18 shows the choices these 48 students made.

TABLE 17

#### REASONS WHY STUDENTS CHOSE BSU OVER OTHER SCHOOLS

Reasons why chose BSU	N
Academic reasons	20
Beautiful campus/location	17
Size of the school	13
To get away	11
Relatively low cost/received a scholarship	9
Others recommended it	6
Varsity Athletics Programs	4
Miscellaneous*	5

\* Includes the following reasons: used to live here, great campus life, am close to relatives, friendliness of people, and have friends who attend the university

The top three "second" choices for colleges, St. Cloud State
University, Mankato State University, and the University of
Minnesota at Duluth are all a part of the group that BSU considers to
be its strongest competition. 7

Students were also asked two questions in order to more fully understand how important majors are in the selection process. While some students do pick a college with a particular major in mind, many of these same students end up changing majors once they begin to take classes. Bata from this study is indicative of this.

TABLE 18

#### OTHER COLLEGES/UNIVERSITIES CONSIDERED

School Choice	N	<u>%</u>
Area Vocational Technical Institute/ Community College	3	6.3
Mankato State University	9	18.8
Moorhead State University	3	6.3
Private Liberal Arts College	3	6.3
St. Cloud State University	16	33.3
Southwest State University	1	2.1
University of Minnesota (Minneapolis/St. Pau	ul) 5	10.4
University of Minnesota (Duluth)	7	14.6
Winona State University	1	2.1
	48	100.2%*

<sup>\*</sup> Rounding error

Thirteen respondents (23.2%) started college with a specific major. It is not known how many of these 13 students changed their major during the first year of school, but 16 (28.6%) students in the total group of 56 had changed their major at least once during their freshman year.

Students were also asked what their current major was at the end of their freshman year. Table 19 shows the responses of the 40 who listed a major.

46 TABLE 19

#### REPORTED MAJORS OF BSU FRESHMAN STUDENTS

<u>Major</u>	N	<u>%</u>
Accounting	1	2.5
Aquatic Biology	1	2.5
Biochemistry	1	2.5
Business	1	2.5
Business Administration	8	20.0
Community Service	1	2.5
Criminal Justice	6	15.0
Education	1	2.5
Elementary Education	2	5.0
Physical Education	4	10.0
Secondary Education	1	2.5
English	1	2.5
Industrial Technology	1	2.5
Mass Communication	4	10.0
Mathematics	1	2.5
Nursing	1	2.5
Spanish	1	2.5
Technical Illustration	2	5.0
	40	100.0%

Of the 40 people who listed a major, 47.5% (19) were clustered in two categories of majors—Business/Business Administration and

Education (including Education, Elementary Education, Physical Education, and Secondary Education).

One final group of questions revolved around BSU's image. One question asked respondents what images of BSU they had before they attended. Table 20 shows the list of responses given and the number of times each is mentioned.

TABLE 20

IMAGES STUDENTS HAD OF BSU BEFORE THEY ATTENDED

Images reported by students	N
Beautiful campus/location	39
Size	16
Friendly	8
Good academic reputation	5
Isolated/rural atmosphere	4
Far away	3
Cost	2
Many extracurricular/recreational activities	2
Challenging	2
Nice atmosphere	1
Cold	1
Good general reputation	1
Independence and responsibility	1
Plenty of housing	1
Just the right distance from home	1

The most frequently mentioned image was one that depicted some aspect of the setting of the campus. Size and friendly atmosphere of the campus were the next most frequently reported images.

One final question asked students what characteristic(s) of BSU they would emphasize if they were recruiting students from the Minneapolis/St. Paul area. Answers varied widely. Thus, they have been categorized in Table 21 to aid interpretation.

TABLE 21

CHARACTERISTICS OF BSU THAT STUDENT WOULD EMPHASIZE

<u>Characteristic(s)</u>	N
Academic	29
Beauty of the campus/location	29
Friendly/helpful atmosphere	14
Size of the school	13
Many helping services	3
Relative low cost	3
Miscellaneous*	8

<sup>\*</sup> Includes the following responses: a variety of social opportunities, many compus activities, students can make a fresh start, availability of on-campus housing, good varsity athletics programs.

The two characteristics mentioned most frequently are academic characteristics and the beauty of the campus and surrounding area.

Some of the students even went so far as to suggest ways to improve current recruiting in this geographical area. One student stated BSU should distribute literature more widely. Another felt potential students should see the campus. Yet another felt a need for more student recruiters. Finally, one wished BSU had a film presentation it could show to potential students.

<sup>1</sup>James Jaccard, <u>Statistics for the Behavioral Sciences</u> (Belmont, California: Wadsworth Publishing Company, 1983), p. 207.

21bid., p. 316.

<sup>3</sup>lbid., p. 310.

4lbid., p. 292-293.

51bid., p. 161

<sup>6</sup>Interview with Dr. Jon Quistgaard, Director of Admissions, Records, and Graduate Studies, Bemidji State University, Bemidji, Minnesota, 27 February 1987.

71bid.

<sup>8</sup>Interview with David Carlson, Assistant Director of Institutional Research, Bemidji State University, Bemidji, Minnesota 25 March 1987.

#### CHAPTER IV

#### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

The purpose of this study has been to address four questions of particular interest to the Admissions Office at Bemidji State University. Each of these questions are addressed in the sections which follow.

1. When looking at the beginning of the selection process (high school students who have taken the Preliminary Scholastic Aptitude Test), are students who choose to send their scores to other schools significantly different from students who choose to send their scores to Bemidji State University?

In order to look more closely at students at the beginning of the college selection process, a one-way between subjects analysis of variance was run for each of three variables—the PSAT verbal score, the PSAT math score, and the students' high school rank. None of the results were significant. Thus, there is no significant difference in student ability for the three universities in question.

That is not to say, however, that there are no differences.

Results from a combination of Kruskal-Wallis and Mann-Whitney U statistical tests show that there are some significant differences in family characteristics and years of desired education. Data show

that comparisons of Bemidji and Moorhead and Moorhead with Duluth were not conclusive. However, in general, students from families with a higher socioeconomic status (family income, and father's education) chose Duluth over Bemidji on the PSAT exam.

Additionally those students choosing Duluth tended to desire significantly more education than do students choosing BSU.

2. When comparing students at the beginning of the selection process with students at the end of the process, are students who choose to send their scores to Bemidji State University significantly different from students who end up enrolling at the university?

In order to compare possible differences between students at the beginning and end of the college selection process, two-group independent t-tests were run for three variables—the PSAT verbal score, the PSAT math score, and the students high school rank. No significant results were obtained. Thus, there is again no significant difference in student ability between students who are merely interested in BSU and those who eventually enroll at BSU.

There were also fewer significant results with regard to family characteristics and years of desired education. Only one of the statistical tests was significant. Students who initially chose BSU came from families with significantly higher incomes than did students who eventually enrolled at the university.

Results from the frequencies reported on the other variables, report interesting, but inconclusive, results. One finding worth emphasizing is the fact that a greater percentage of females are first interested in BSU than eventually enroll at the university. An

earlier study conducted by the university reported that indeed a larger percentage of males from this nine-county area than females enroll at BSU. 1

3. Is selecting Bemidji State University on the PSAT a good indicator of eventual enrollment at the university?

In the past, the BSU Admissions Office had used the Preliminary Scholastic Aptitude Test as a marketing tool. All students who chose to send their scores to BSU received a packet of information about the school, in the hope that these same students would enroll at the institution. Results indicate that selection of BSU on the PSAT is not a good indication of future enrollment at the institution. Only 12 of the 198 students (6.1%) who chose to send their PSAT scores to BSU eventually enrolled at the university.

4. What can current BSU students from this geographical area tell the Admissions Office about the college selection process?

When asked to reflect back on the college selection process, students appear to have basic and practical questions in mind at the beginning of the process. Cost; the availability of programs, courses, and majors; the beauty of the campus and location; school size; and, the reputation of the university and its academic programs were all items students wished to know about universities before they applied for admission.

The image the respondents had of BSU appears to be somewhat consistent with the questions the respondents initially wanted answered. Students found the campus and location beautiful, and

school size to be to their liking. Students also reported an image of friendliness.

Practical considerations seem to be important throughout the process. The cost of attending BSU, the existence of a specific program or major that they were interested in, and small class size were listed as the top three factors in the middle of the decision process. A visit to the campus, and talking to someone who has attended BSU, were also important at this time.

Even when asked why they chose BSU over any of the other colleges and universities, students again mentioned academic reasons, the beauty of the campus and the location, and the size of the school. When asked what to emphasize when recruiting students from Minneapolis/St. Paul, students mentioned these same three factors or characteristics, and stated they would also stress the friendly and helpful atmosphere of BSU.

#### Recommendations

While a number of the conclusions presented earlier do not translate directly into recommendations for BSU and the BSU Admissions Office, a few suggestions can be made:

1. In general, the PSAT is a poor marketing tool for use with individual students. It does give a fairly good indication of the profile of interested students. Those choosing BSU tend to have the same academic abilities, but in some instances do come from families with lower socioeconomic status than students who choose the University of Minnesota at Duluth.

- 2. Roughly the same ability of student who initially chooses BSU ends up enrolling at the institution. However, more females are interested in than come to BSU, and those students who do come to BSU tend to come from families with lower incomes than those who send their PSAT scores to the university. Thus, depending upon the desired student profile, the Admissions Office may have to alter its recruiting strategies.
- 3. Students appear to choose a college based mostly upon practical considerations. Given this information, it may be wise to stress the cost of attending BSU, the school and class size, and academic-related questions students might have. The beauty of the campus and location was also important to the respondents, and should be stressed—perhaps through a visit to the campus. Another factor to stress through word and deed is the friendliness and helpfulness of the faculty and staff at BSU.
- 4. Bemidji State University, like all organizations in this day and age, suffers not so much from a lack of data or information as it does from too much information, and too much information that is not comparable. Toward achieving the goal of effective data, the university should strive hard to collect data from students at all stages of the selection process, using questions that are asked in the same format. This will aid data coding and analysis.

#### 56 ENDNOTES

<sup>1</sup>Lisa Hewitt, "Study of Females' University Preferences," (research conducted by a Bemidji State University student in conjunction with the Bemidji State University Admissions Office,) Bemidji, MN, May 1985, p.3.

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### APPENDIX A Bemidji State University

BEMIDJI, MN 56601-2699

OFFICE OF ADMISSIONS AND ORIENTATION 218-755-2040 MN TOLL FREE 1-800-652-9747

May 4, 1987

Dear BSU Student:

We are attempting to gain a greater understanding of those factors which are important to Twin Cities students in selecting BSU. Thus, I invite you to be the university's guest for a special dessert at the North Dining Room (Itza Pizza Room) of Walnut Hall. This special dessert will be served on both Tuesday, May 12th and Wednesday, May 13th from 5:30-6:15 pm. All you need to do is bring the enclosed coupon.

On the evening you attend, I will ask that you complete a brief questionnaire. The information you provide will enable us to better inform interested students from the Twin Cities area.

In order to help anticipate the number of students attending each evening, I would ask that you call LaMae at the Admissions Office by 4:30 pm on Friday, May 8th, and let us know which session you will be attending. She can be reached at 755-2040.

Thank you for thinking BSU!!!

Sincerely,

Jon E. Quistgaard, Ph.D. Director of Admissions

DG

#### APPENDIX B

#### COUPON SENT TO BSU STUDENTS ELIGIBLE TO COMPLETE QUESTIONNAIRE

The coupon sent to each BSU student in the population contained the following information:

This COUPON is good for one free special dessert on Tuesday, May 12th or Wednesday, May 13th at the North Dining Room of Walnut Hall, from 5:30-6:15 pm.

Sponsored by the Admissions Office.

#### APPENDIX C

#### INFORMATION SELECTED FROM THE 1984-1985 PSAT TAPE

The information selected from the 1984–1985 PSAT tape is listed below. If appropriate, the questions that were asked are also included.

#### VARIABLE/QUESTION

Social Security Number

County

High School

Institutional Choice 1

Institutional Choice 2

Sex

Ethnic Background

Verbal Score

Math Score

High School Rank

Field of Study/Major

Future Occupation

Fx	ne	ct	ed	Edu	ca	ti	on
L. /	$\sim$	~ 0	VV	LVV	VU	U 1	VI

education do you expect to achieve? )	
<ul> <li>High school graduation</li> <li>Vocational or technical certificate</li> <li>Two-year college degree (A.A.)</li> <li>Four-year college degree (B.A., B.S.)</li> <li>Masters degree (M.A., M.S.)</li> <li>Professional degree (M.D., Ph. D., J.D.)</li> </ul>	)
ion/Mother's education	
•	The state of the s
Did not complete grade school Completed eighth grade Some high school Graduated from high school Completed business or trade school Some college Graduated from college Completed post-graduate degree (M.A., Ph. D., Law, etc.)	Mother
	High school graduation Vocational or technical certificate Two-year college degree (A.A.) Four-year college degree (B.A., B.S.) Masters degree (M.A., M.S.) Professional degree (M.D., Ph. D., J.D.) ion/Mother's education highest level of education achieved by expenses the college of the completed eighth grade Some high school Graduated from high school Completed business or trade school Some college Graduated from college Completed post-graduate degree

#### Family Income

		v much income does yo h year? (Mark only one	our family (father and mother e)	r) earn
		Less than \$6,0 \$6,000 to \$8,0 \$9,000 to \$11 \$12,000 to \$11 \$15,000 to \$11 \$15,000 to \$11 \$18,000 to \$11 \$11 \$11 \$11 \$11 \$11 \$11 \$11 \$11 \$1	999 ,999 4,999 7,999 20,999 23,999 29,999 35,999 41,999	
Par	ents'	Occupations		
			ired, what was his or her occ ather and only one answer for	
	Father (or ma	le guardian)	Mo (or female guard	ther ian)
		gas station, hotel or newspaper, etc; or executive or dir	Manager – owner of store, r motel, cafe or restaurant, sales manager, contractor, ector in large company, nment official	
,		bookkeeper, sales cle secretary, stenogra keypunch operato	es Worker – bank teller erk, real estate salesperson, apher, typist, receptionist, er, switchboard operator, stal worker	

	factory Worker or Laborer – includes domestic worker, filling station attendant, car washer, janitor, etc.	***************************************
	Farmer – owner or manager of farm	
-	Homemaker	-
	Professional or Technical Worker — minister, priest, accountant, dentist, engineer, medical doctor, lawyer, teacher or professor, medical technician, librarian, nurse, pharmacist, social worker, computer programmer, photographer, officer in armed forces, etc.	
	Skilled Worker — chef, carpenter, factory supervisor, baker, machine operator, electrician, enlistee in armed forces, mechanic, bus or truck driver, meat cutter, plumber, repair person, beautician, barber, bartender, waiter, police officer, fire fighter, etc.	
	Other	**************
Source	s of Finances	
	Will you need help in getting money to continue your education?	
-	No, with parent's help and my own savings and ear expect to have enough.	nings I
-	Yes, though I can pay some costs, I will need help getting more money.	
-	Yes, I will need help getting money for all my exp	enses.
_	I am not sure.	

#### APPENDIX D

#### QUESTIONNAIRE GIVEN TO ELIGIBLE BSU FRESHMEN AND DATA SHEET ON EACH

		Student	. ID	
Social	Security	Number.		

Dear Student:

The BSU Admissions Office is currently evaluating factors associated with college choice. We are particularly interested in the opinion of students from the Minneapolis/St. Paul area. Since you are from the Twin Cities area, your answering this short questionnaire is greatly appreciated. Please answer each question as accurately as you can. Your individual answers will not be revealed in any report. Statistical summaries which do not identify specific individuals will be used.

1.	When you were a high school student there were probably many things you wanted to know about the colleges you considered attending. Please list, if you can, the three most important things you wished to know before you applied for admission to a college.
	First:
	Second:
	Third:
2.	When high school students think of colleges or universities certain images or words come to mind. Before you came here,
	what images or words did you have that described BSU?
3.	If you had not attended BSU would you have attended another
	college or university in Minnesota? Please check either yes or no.
	1. No (skip to question 5)
	2. Yes (go to question 4)
4.	Which one of the following schools did you most consider attending? (Please check the appropriate response).
	1. University of Minnesota Duluth
	2. Mankato State 3. University of Minnesota
	4. Moorhead State
	5. St. Cloud State
	6. Private college or university (specify)
	7. Other (specify)
5.	Please state briefly why you chose BSU over any other college or university.

- 6. The following list contains items which may have helped you in your decision to attend BSU. After reading each item, please circle the number which reflects most closely the importance of the item. For example:
  - 1. Very important
  - 2. Important
  - 3. Somewhat important
  - 4. Not important
  - 5. Don't know

	Very Imp.	Imp.	Somewhat <u>Imp.</u>		Don't <u>Know</u>
Academic reputation of BSU Existence of a specific program	1	2	3	4	5
or major that you were interested in	1	2	3	4	5
Attractiveness of the campus	1	2	3	4	5
Large variety of programs/majors					
available	1	2	3	4	5
Size of the student body	1	2 2 2 2 2 2 2	3 3 3 3 3 3 3	4	5
Cost of attending BSU	1	2	3	4	5
Received financial aid to attend BSU	1	2	3	4	5 5 5 5 5 5
Coeducational	1	2	3	4	5
Good preparation for a job	1	2	3	4	5
To get away from home	1	2	3	4	
On campus housing facilities	1	2	3	4	5
Availability of outdoor					
recreational activities	1	2	3 3	4	5
Closeness to home (less than 350 miles	) 1	2	3	4	5
Type of community in which					
BSU is located	1	2	3	4	5
Opportunity for socializing	1	2	3	4	5
Extra-curricular activities like:					
Music, Drama, Intramurals	1	2	3	4	5
Good preparation for graduate school	1	2 2 2	3 3 3	4	5
Variety of course offerings	1	2	3	4	5
Extent of academic support facilities/					
equipment (library, labs, etc.)	1	2	3	4	5
Special academic opportunities					
(Honors Program, Study Abroad)	1	2	3	4	5
Rural nature of the area	1	2	3	4	5
Small class size	1	2	3	4	5

	Very Imp.	Imp.	Somewhat Imp.		
Availability of student support service (i.e., health center, personal	S				
counseling, etc.)	1	2	3	4	5
Availability of part-time jobs	1	2	3	4	5
Availability of ROTC	1	2	3	4	5
Reputation of athletic programs	1	2	3	4	5
Went to a camp here when I was younge	r				
(i.e., hockey, music, cheerleading, etc.)	1	2	3	4	5
Other (specify)	1	2	3	4	5

- 7. When you were making your decision to attend BSU certain people/publications/activities may have played an important part in the decision process. After reading each of the items below please circle the response that best reflects the importance of that person/publication/activity. For example:
  - 1. Very important
  - 2. Important
  - 3. Somewhat important
  - 4. Not important
  - 5. Don't know

	Very Imp.	Imp.	Somewhat <u>Imp.</u>		Don't <u>Know</u>
High school counselor	1	2	3	4	5
High school teacher	1	2	3	4	5
Contacts with BSU recruiters	1	2	3	4	5
Contacts with BSU faculty	1	2	3	4	5
Advice of someone who has attended	BSU1	2	3	4	5
Friends who attended or planned					
to attend BSU	1	2	3	4	5
Parent of current BSU student	1	2	3	4	5
Publication of BSU (catalogs,					
brochures, etc.)	1	2	3	4	5
Parents or close relatives	1	2	3	4	5
Visit to the campus	1	2	3	4	5
T.V./radio commercial	1	2	3	4	5
Magazine or other advertisement	1	2	3	4	5
Other (specify)	1	2	3	4	5

Ο.	Paul, what two things would you emphasize?	
	First:	
	Second:	
	next few questions are for background information. Please er them as best as you can and then you'll be finished.	
9.	How much education do you expect to achieve? Please check the appropriate response.	
	<ul> <li>1. Two-year college degree (A.A., A.S.)</li> <li>2. Four-year college degree (B.A., B.S.)</li> <li>3. Masters degree (M.A., M.S.)</li> <li>4. Professional degree (M.D., Ph. D., J.D., etc.)</li> </ul>	
10.	Please estimate the combined incomes of your parents and check the appropriate response.	
	1. Less than \$5,000 2. \$5,000 to \$9,999 3. \$10,000 to \$14,999 4. \$15,000 to \$19,999 5. \$20,000 to \$24,999 6. \$25,000 to \$29,999 7. \$30,000 to \$34,999 8. \$35,000 to \$49,999 9. \$50,000 and over	

11.	Next, w Is he a:	hat is your father's (stepfather's, etc.) occupation?
	1.	Business owner or manager? (owner of a store, gas station, hotel or motel, cafe or restaurant, newspaper, etc., or sales manager, contractor, executive or director in large company, government official)
	2.	Clerical or Sales Worker? (bank teller, bookkeeper, sales clerk, real estate salesperson, secretary, stenographer, typist, receptionist, keypunch operator, switchboard operator, postal worker)
	3.	Factory Worker or Laborer (includes domestic worker, filling station attendant, car washer, janitor, etc.)
	4.	Farmer (owner or manager of farm)
	5.	Homemaker
	6.	Professional or Technical Worker (minister, priest, accountant, dentist, engineer, medical doctor, lawyer, teacher or professor, medical technician, librarian, nurse, pharmacist, social worker, computer programmer, photographer, officer in armed forces, etc.)
	7.	Skilled Worker (chef, carpenter, factory supervisor, baker, machine operator, electrician, enlistee in armed forces, mechanic, bus or truck driver, meat cutter, plumber, repair person, beautician, barber, bartender, waiter, police officer, fire fighter, etc.)
	8.	Other (Specify)

12. And what is your mother's (stepmother's etc.) or she a:	cupation? is
1. Business owner or manager? (owner of station, hotel or motel, cafe or restaura etc., or sales manager, contractor, executative director in large company, government or	nt, newspaper, utive or
2. Clerical or Sales Worker? (bank teller, sales clerk, real estate salesperson, sec stenographer, typist, receptionist, keypu switchboard operator, postal worker)	cretary,
3. Factory Worker or Laborer (includes dor filling station attendant, car washer, ja	
4. Farmer (owner or manager of farm)	
5. Homemaker	
6. Professional or Technical Worker (mini accountant, dentist, engineer, medical d teacher or professor, medical technician nurse, pharmacist, social worker, compuprogrammer, photographer, officer in arrett.)	octor, lawyer, n, librarian, uter
7. Skilled Worker (chef, carpenter, factory baker, machine operator, electrician, en forces, mechanic, bus or truck driver, m plumber, repair person, beautician, barbwaiter, police officer, fire fighter, etc.)	listee in armed eat cutter, er, bartender,
8. Other (Specify)	

13.	etc.) has. Please check the number which corresponds with his highest level of academic achievement.	
	<ul> <li>1. Grade school or less</li> <li>2. Some junior high school</li> <li>3. Completed junior high school</li> <li>4. Some high school</li> <li>5. Graduated from high school</li> <li>6. Some vocational/trade school</li> <li>7. Completed vocational/trade school</li> <li>8. Some college</li> <li>9. Graduated from college</li> <li>10. Some graduate study</li> <li>11. Completed a graduate degree (M.A., Ph. D., Law, etc.)</li> </ul>	
14.	Please tell me how much education your mother (stepmother, etc.) has. Please check the number which corresponds with his highest level of academic achievement.	
	<ul> <li>1. Grade school or less</li> <li>2. Some junior high school</li> <li>3. Completed junior high school</li> <li>4. Some high school</li> <li>5. Graduated from high school</li> <li>6. Some vocational/trade school</li> <li>7. Completed vocational/trade school</li> <li>8. Some college</li> <li>9. Graduated from college</li> <li>10. Some graduate study</li> <li>11. Completed a graduate degree (M.A., Ph. D., Law, etc.)</li> </ul>	
15.	Was there an occupation you were interested in when you first came to BSU?	
	1. No 2. Yes	
	If yes, what is it? (Specify)	

16.	Did one or more of your parents or close relatives attend BSU?
	1. No 2. Yes
17.	Do you have a major?
	1. No 2. Yes
	If yes, what is it?
18.	Have you changed your major since you first started BSU?
	1. No 2. Yes
	If yes, what was your major when you first started BSU?

## DATA SHEET CONTAINING INFORMATION OBTAINED FROM THE BSU RECORDS OFFICE

Name	
ID number	
Social Security number	
Sex 1. Male 2. Female	
Race 1. American Indian or Alaska Native 2. Asian or Pacific Islander 3. Black 4. Hispanic 5. White 6. Other	
High School Code	
High School Size	
Percentile Rank1.	
PSAT Score	
Verbal	
Math	