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SOURCES OF INFORMATION WHICH INFLUENCE ADULT STUDENTS
IN THEIR CHOICE OF A PROGRAM/CLASS IN
ADMINISTRATION/BUSINESS AT AN INSTITUTION OF
HIGHER EDUCATION:
A MARKETING INFORMATION STUDY OF ADULT STUDENTS

by

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ABSTRACT

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The primary purpose of this study was to explore the sources of information adults find useful in choosing a college, and which of these sources are most influential in adult decision-making processes. The study was conducted in the winter and spring of 1989. The survey sample consisted of approximately 160 adult students attending business/administration classes at eight higher education institutions in the Lansing, Michigan area. One of these was a local research university, one was a local community college and six were branches of out-of-town institutions. The questionnaire was completed during a class period at each of the schools.

Procedure of the Study

The data were grouped and tested. Each group was compared to the others using Bonferroni method tests for significance. Within each category each source was analyzed for value against

the other sources. For each component grouping, comparative statistics were developed that allowed pairing between, and within groups, to test significance at the 95% confidence level. From this comparison statements of item strength were made to determine sources of greatest influence.

Conclusions of the Study

Students did not spend much time in their college search nor did they use a wide array of information sources. Adults used sources familiar to them. School provided material was most useful to the respondents. This included both written material and personal interaction with individuals connected with the college. Individuals with first hand knowledge of the organization were most influential on adults choosing a college. Advertising media were not considered influential. Respondents sought information about the schools of which they were aware and which they felt could provide them with the means to accomplish their own personal objectives. Adults considered most useful information about where and when classes would be held. Cost was important but financial aid was not.

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1990

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TABLE OF CONTENTS

LIST OF TABLES	x
LIST OF FIGURES.	xii
Chapter	
I. PURPOSE OF THE INQUIRY	1
Introduction to the Problem	1
Statement of the Problem	3
Background	4
Research Questions	5
Definitions	6
Methodology	8
Survey Area	9
Assumptions and Limitations	11
Importance	12
Overview of the Dissertation	12
II. REVIEW OF THE LITERATURE	14
Introduction	14
Background	15
Studies of Traditional Undergraduate Students	16
Models	25
Chapman	25
Litten	27
Kotler-Fox	30
Ihlanfeldt	31
Studies of Graduate Students	33
Studies of Adult Students	38
Summary	40
III. DESIGN AND METHODOLOGY	42
Introduction	42
Questions to be Studied	42
Background	43
Survey Area and Institutions	44
Survey Population	49
Questionnaire	51
Items Used and Rationale	53

Data Collection	56
Data Analysis	57
Summary	59
IV. ANALYSIS OF THE DATA	60
Introduction	60
Overview	62
Section A: Research Questions 1 and 2	63
Items #1-#35 Introduction	63
Graph of the Study Data	66
Items #1-#35 Discussion	68
Bonferroni Method Tests for Significance	73
Data Analysis Using Kotler-Fox	83
Section B: Research Question 3 Item #39	86
Section C: Research Question 4 Item #56	89
Miscellaneous Information	92
Summary	98
V. CONCLUSIONS AND RECOMMENDATIONS	100
Introduction	100
Conclusions	101
Research Question 1	101
Research Question 2	102
Research Question 3	104
Research Question 4	105
Application of Study Data to Kotler-Fox	106
Recommendations for Further Study	107
Summary	109
APPENDICES	
A. QUESTIONNAIRE	111
B. ANALYSIS OF QUESTIONS WITH CHARTS	116
BIBLIOGRAPHY	134

LIST OF TABLES

Table	Page
1. Malaney's information sources	35
2. Summary table of the data sources which adult students surveyed found useful	63
3. Summary analysis of the sources of information and student self-designated perceptions of usefulness with statistical data	64
4. Major information source groups	75
5. Family information source group, Items #1-6 . .	77
6. Student information source group, Items #7-11 .	78
7. Job related information source group, Items #12-18	79
8. Media information source group, Items #19-25. .	80
9. Mail information source group, Items #26-27 . .	81
10. College information source group, Items #28-35	82
11. Completed Kotler-Fox data sources matrix . . .	84
12. Kotler-Fox statistical comparison	85
13. Responses for Items #1-#38, first twenty as ranked by frequency of response with percentage to total responses given	87
14. Useful information desired by respondents . . .	90
15. Item #43, number of colleges the adult student has attended	93
16. Parental higher education	94
17. Parents who influenced choice of college . . .	95
18. Age of respondents	96

19. Ethnic background	97
20. City/county of residence	97
21. Other colleges considered	98

LIST OF FIGURES

Figure	Page
1. Chapman model of traditional student choice . . .	26
2. Litten model of college attendance/choice	29
3. Source/Marketer matrix	31
4. Ihlanfeldt model of information sources	32
5. Chain of response (COR) model for understanding participation in adult learning activities . . .	39
6. College applicants	44
7. Information sources chart	67

CHAPTER I

PURPOSE OF THE INQUIRY

Introduction to the Problem

As the enrollment of traditional students in colleges and universities has decreased because of diminished birth rates in the 1960's and early 1970's, attendance of adults has increased. These older, non-traditional students are expanding the enrollment of colleges and universities. Little is known about the factors influencing these students' choice of educational institution or the sources of information that influences those choices (Cross, 1980; Hu, 1985; Kotler and Fox, 1985). This study is an exploration of the sources adults found influential and useful in making their college decisions, and the sources they would recommend to others. Learning what may attract more students and help maintain or increase enrollment promises to be beneficial information for institutions of higher education (Kotler and Fox, 1985).

This dissertation includes a discussion of where the non-traditional adult students obtained information in their search for higher education. Sources which were the most influential in selecting a college are also explored.

The highest concentration of these adult students is found in evening pre- and post-bachelors degree administration and

business curriculums. Using a single geographic area, data were gathered from surveys of adult students in administration and business programs. Individuals surveyed have made the decision to satisfy their needs through education and are currently attending classes. The majority of these students attend on a part-time basis. The survey results indicate education is a service, purchased by the student consumer, in a fashion similar to that employed in the purchase of other services and products. This is particularly true of adult students (Kotler and Fox, 1985). Administrators and marketers of education who seek to increase enrollments of non-traditional students may look at this dissertation to find what influences such students in their educational decisions.

This investigation contributes knowledge to help answer the question: How did the adult students learn about the institutions where they are currently enrolled?

The exploration takes multiple related perspectives:

1. What sources adults said were useful or influential in their decision to attend their current school.
2. What these students, now that they are enrolled and have experience with the educational system, feel should have been the most influential sources in their decision.
3. What sources of information would these adults recommend to others who are looking for a school to attend.

The question, "Why did the students apply and matriculate to the particular schools they are attending?" is related to the

questions to be studied here, but is not a subject of this study. The focus of this investigation is on the information sources helpful in making the decision, not the decision itself.

Statement of the Problem

The central purpose of this dissertation is exploration of sources of information an adult finds useful in choosing a college, and the influence of these sources on the adult's decision-making processes. This study is designed to contribute to the research, revealing information about adult sources, and supplementing what is known about traditional student choice processes.

Due to the low number of births in the 1960's and 1970's, there are not enough traditional-age students available to fill classroom seats. Administrators in higher education, knowledgeable in marketing to this type of student, must expand their goals to understand and satisfy the needs of non-traditional students if they wish to fill the void left by the diminishing populations of traditional-age students. Schools must adjust for the reduction, and plan accordingly. Three possible suggested alternative steps are; reducing the size of the institution, recruiting overseas, or appealing to adult students. There is great potential in recruiting adult students because the number of adults seeking education is growing rapidly (Kotler and Fox, 1985).

Recruiting adult students does not involve the same

strategies as recruiting traditional students. Adults have different data sources, interests, perceptions, information about and familiarity with higher education. Educators should know what information sources influence adults in their college decisions (Buchanan and Hoy, 1983).

Background

Although the number of adults in the United States between 1969 and 1984 grew by 33%, the number of people in adult education grew 79%, over twice the population increase. During this time, the percentage of job related courses, especially for business, increased 50%. In 1969 11% of the mid-career population were taking courses; by 1984 this had increased to 17% (Edmondson, 1988).

Models, developed in both the field of marketing and the field of education, are helpful in the process of analyzing the consumer's choice process for goods and services, including education. Most models developed in the field of education explain the traditional student's movement from secondary school to early undergraduate years. This study of the adult learner is based on models taken from the traditional student market (Kotler and Fox, 1985; Litten, 1983; Ihlanfeldt, 1980).

A model developed by Larry H. Litten depicts the college search process as a series of stages containing steps that proceed from desire to enrollment. In another model, Kotler and Fox distinguish the college choice information sources as

marketer-(college) controlled, and non-marketer-(non-college) controlled, as well as personal and non-personal. These models delineate the basis for analysis in this dissertation.

The Litten model has three stages. Stage 1 is the individual's actions prior to the Institutional Investigation. The first step is Desire to Attend. Desire to Attend is followed by either the Decision (Plans) to Attend step, or the termination process. Stage 2 is the most significant one for the current study, as it contains the Investigation of Institutions step, which entails information gathering. Following Stage 2, the information gathering step, are the Application, Admission and Enrollment steps, Stage 3. Not all individuals reach this Stage.

Kotler and Fox say students, as all purchasers of goods and services, find useful both personal and non-personal sources of information. Some of these are controlled by the marketer, and the balance are substantially beyond the direct control of the marketing persons (Kotler and Fox, 1985). The results are a matrix into which the various information sources fit. This matrix will be discussed, in detail, in later chapters. It is used as a basis for analyzing the data found in this study.

Research Questions

This investigation is an exploration of the usefulness and influence of sources of information adults encounter in choosing a college. The resulting data may provide marketing information for the adult educator. The data can help determine where adults

search for information prior to enrolling in an educational program, as Litten's model suggests.

This study is not guided by a hypothesis, but four research questions assist in determining what sources are useful, and the influence of those sources.

1. What sources of information do adult students find useful in their college choice plans, decision and actions?
2. Which source(s) do adults find most influential?
3. Would the adult student who is now in school be influenced by the same sources, at the same magnitude, if the individual had to undergo the choice process all over again?
4. What things do adults consider most useful to know about a school?

Definitions

Adult students in this study are those who are at least age 25, attending school full- or part-time, or at least 22 and part-time students.

Consumer behavior can be defined as the actions and decision processes of individuals and organizations involved in discovering, evaluating, acquiring, consuming and disposing of products and services (Harrell, 1986).

Influence is the power or capacity to cause an effect in an intangible way, to have an effect on the condition

or development (Webster, 1981). In this dissertation influence is the strength (power or capacity) of a source to precipitate an action which affects an individual's choice of a school. That is, how motivating, as measured by the indication on the Likert scale of the survey instrument, did an individual or aggregate of individuals find a source listed on the survey form.

Marketing is the analysis, planning, implementation, and control of carefully formulated programs designed to bring about voluntary exchanges of value with the target market to achieve institutional objectives. Marketing involves designing the institution's offerings to meet the target markets' needs and desires, using effective pricing, and communicating to inform, motivate and service the markets (Kotler and Fox, 1985).

Search refers to seeking to learn about the attribute values which characterize colleges. Relevant college attributes might include cost, academic quality, future career prospects and opportunities (upon graduation), quality of life while a student is at the college, and related considerations that might be of interest to students in the ultimate college choice decision (Chapman, 1986).

Useful refers to the frequency that the respondents marked a source on the Likert scale to indicate they found the source of some value in their college search process.

Methodology

The data were obtained through a survey of a sample of the adult population currently attending classes at various higher education institutions in the Lansing, Michigan area in early 1989. A survey instrument was developed, and several pilot trials were used to develop the questionnaire's content and structural validity as well as its rational equivalence reliability. After further development and approvals the instrument was finalized. Permission to give the questionnaire was obtained from administrators and class room instructors at the chosen schools. The forms were delivered to each selected class for completion. Approximately one hundred and sixty survey responses were collected at eight institutions. A computer program was used to tabulate and analyze the data. From this information the analysis was made and final reports prepared.

Students primarily in business or administration courses are studied because this is an area which has attracted a large body of adult learners. Carla Shere, in a study of the demographics of adult part-time students in higher education, found that the largest student group was composed of those taking business courses. Another significant group was in health care programs. This finding was applicable to both credit and non-credit

students (Shere, 1988). Many of the adult students in higher education in Lansing are part-time, studying business.

Students in evening classes generally were surveyed because they typically have a higher proportion of adults than day sections. For consistency, general business or marketing classes were given first preference, as were Tuesday evening sessions. Classes were selected by the researcher from the available offerings, and proposed to the schools for approval. Only groups whose instructors agreed to have their sections polled were utilized in the survey. Those persons in class at the time of the survey were requested to complete the survey.

The data were grouped and tested using the Bonferroni method tests for significance which can compare, analyze and predict from a small number of statements within a group. This statistical method is advantageous because it can compare groups containing different sample quantities. For each component grouping, comparative statistics were developed that allowed pairing between, and within groups, to test significance of the statements at the 95% confidence level. From this comparison statements of item strength were made to determine sources of greatest influence (Miller, 1966).

Survey Area

Lansing is the capital city of Michigan. Population of the metropolitan area is just under 500,000. The area, like most of southern Michigan, is heavily industrialized. Automobile-related

industry predominates.

Data were collected from students attending classes in this single urban area. The sample group consisted of a class from each of the eight schools offering substantive business or administration classes in the Lansing region. The eight schools included two main campus educational institutions and six branches of colleges whose main campuses are located outside the area. Represented in the sample are schools which are public and private, large and small, two- and four-year, graduate and undergraduate, low tuition and high tuition. Some have predominantly traditional students and others mostly adults. Seven of the schools welcome part-time students and one discourages them. The most significant higher education institutions available to the adult business or administration student in the Lansing area are:

Aquinas College, a small private religious school from Grand Rapids, 50 miles northwest.

Central Michigan University, a public university from 60 miles north in the town of Mt. Pleasant.

Davenport College, a private business school of 1,000 students. This school is part of a group which is headquartered in Grand Rapids.

Lansing Community College, the local community college, second largest in the state.

Michigan State University, a local research university with approximately 40,000 students.

Northwood Institute, a private school from Midland, north of Saginaw, 100 miles northeast of Lansing.

Spring Arbor College, a small, church-supported college whose campus is 30 miles south near Jackson.

Western Michigan University, a public university from Kalamazoo, 75 miles west, towards Chicago.

Assumptions and Limitations

This study is of adult students in one metropolitan area with two main campuses and several branches of colleges from outside of the area. Only evening classes were studied, and one section from each school represented that school. The total sample from all of the schools provided the data from which conclusions were drawn.

Assumed are:

The adults sampled are representative of all adult students in this area.

The adults in this area are representative of those in other areas.

Adult students studying business do not differ in their college search from adult students studying other subjects.

The adults in the study search for information with the same fervor as adult students in other subject matter areas.

Importance

The purpose of this study is to provide facts on the sources of information adults actually find influential and useful, or feel would have been useful, in choosing a college. There is substantial information on sources traditional students use in their choice of a higher education institution, but the minimal data available on the adult student's use of information sources creates a need for a study like this one which is designed to contribute information to help administrators' decisions when marketing programs or classes for adult students.

In preliminary discussions between the researcher and several area educational managers, the researcher heard initial comments indicating the administrators knew their markets, and what influences potential students in their choice decision. Further discussion with these personnel revealed that this knowledge is limited. They believed their schools needed and would like additional facts.

Overview of the Dissertation

In Chapter I the study was introduced with the background, research questions and methodology to be followed. Research questions, assumptions, purposes, and importance were stated. Chapter II contains a review of the literature pertaining to student choice and consumer behavior. In Chapter III the methodology used in the study is discussed. In Chapter IV data is analyzed, and important areas and findings expanded. In the

final chapter conclusions which may be drawn from the information found in the study are presented along with recommendations for further research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

There are approximately 3000 institutions of higher education in this country, but individual students consider only a small number of them to satisfy their personal education needs (Carnegie, November/December 1986). The literature reviewed in this chapter examines studies of the sources of information that influenced, and were useful to students in their choice of higher education. Studies of traditional and graduate student searches predominate in the literature, and serve as background for the adult study.

The studies demonstrate that students are influenced by interpersonal factors, and find school affiliated sources of information useful. The bulk of the evidence suggests that undergraduates, as well as graduates, depend on familiar sources: parents and friends are often mentioned. These are some of the same sources used by adults looking for institutional information. Prospective students look first for image and reputation, and then, to a lesser extent, for location and funding (Maguire and Lay, 1981).

The review of the literature also includes models of college choices for the undergraduate student. Randall Chapman's is the

basic model, which was been expanded and further developed by other writers, especially Larry Litten. Kotler and Fox provide a transition model between the academic and the marketing arenas.

Background

Schools, especially the smaller, lesser known ones, or those less able to offer financial aid, are feeling the dearth of traditional students (Kellaris, 1988). One method of offsetting these declines is marketing to adults (Hu, 1985; Kotler & Fox, 1985). The schools experiencing or anticipating enrollment declines view the rising number of people in the 25 to 64 age group as a viable alternative market.

According to the National Center for Education Statistics, the traditional college-age population (ages 18-24) in 1988 was 26,907,000 and has been decreasing at approximately 1.7% per year over the past eight years (Malaney, 1987; Strayer, 1988). This group has historically provided the bulk of the students in higher education in the United States (Malaney, 1987).

In contrast, the adult population most prone to college attendance (ages 35-44) is increasing at a rate of approximately 2.6% per year (Cross, 1980; Malaney, 1987; Miller, 1980). In 1979, one in every four American adults was involved in some form of organized instruction. Adult participation in education is said to be increasing twice as fast as the number of adults is increasing (Iovacchini, 1985; Strayer, 1988; Cross, 1980).

There is considerable research and material available to

describe traditional students and their search/choice behavior. There is relatively little information available on adult search and choice.

Customer or consumer behavior is defined and described by Gilbert Harrell as:

The actions and decision processes of individuals and organizations involved in discovering, evaluating, acquiring, consuming and disposing of products and services. When businesses understand how and why consumers make purchase choices, they are better able to address the needs and wants of consumers and to generate greater customer satisfaction (Harrell, 1986, p. 2).

Institutions are developing a pattern which tends towards considering students as both consumers and products (Litten, 1983). The student consumes the educational output of the school to become a product of that school. This attitude can encourage offerings that meet the needs, and respond to the educational interests of the students (Litten, 1975; Litten, 1983).

Studies of Traditional Undergraduate Students

Murphy made a marketing study of the influences on students and parents in their choice of colleges. Because Murphy employed the group-buying-center perspective, he studied the parent as well as the student viewpoints and compared them. Student and parent answers differed significantly only in the area of perceived influence of friends on the individual's choice of college; the students felt friends were a greater influence (Murphy, 1981).

The student portion of the study was comprised of seniors

from six high schools in Milwaukee, Wisconsin. In order to obtain a sample of perceptions of all socio-economic strata, the study included parochial, public, city and suburban, all-male and coeducational schools. Murphy provided questionnaires to guidance counselors at each school. The questionnaires were administered to a class selected by the guidance counselor.

In the parent study Murphy sampled randomly from a list of parents of Milwaukee area students who had applied and were accepted at Marquette University in Milwaukee. Parents were interviewed by telephone. In addition to the questions on choice, the parents were asked for information about other items of interest to the school or the researcher, such as financial aid, and attitudes towards area colleges.

The first part of the study concerned parental versus student perceptions of decision timing, and influence to attend college. The second part, more relevant to this dissertation, concerned the factors which affected college choice. The research found the family has the largest influence in the student choice process. In addition, Murphy found that academic reputation was important with cost, location and distance from home following in that order. The conclusions imply that college marketing personnel need to reach students at an early period, make them aware of the school, promote it to friends and parents, and develop and maintain a high level of academic reputation for their college.

A study published by the Carnegie Foundation for the

Advancement of Teaching in early 1986 provided data on the sources of information 1,000 high school seniors found useful in the process of choosing a college. The respondents were requested not only to provide data on information used, but also to rank the usefulness of this information. In addition parents were asked to rate the materials received from colleges, plus other materials provided by the surveying agency. One thousand college-bound seniors, and a number of parents, were mailed a survey with both ranking questions and open ended requests for perceptions and feelings (Carnegie, January/February 1986).

It was determined in the study that college publications were the most useful source of information. Personal letters from the school were followed by guidebooks sent by the colleges and, then, visits to the campus. But, as a result of asking respondents to rank sources according to importance, the study found the visit was first with publications, college representatives and guides following.

Students found many sources useful, but when they made an effort to visit, they were close to a decision. A trip to a campus was a memorable occasion of substantial magnitude. On-the-spot impressions influenced the prospective student (Carnegie, January/February 1986; Kellaris, 1988).

The late 1986 Carnegie study of influences on individuals involved in the college decision found parents dominated the high school senior student's choice. Fifty-one percent of the students polled cited parents as the source of most influence in

selecting their college. Friends were most influential to 23% of the students, counselors to 16% and teachers to 10% (Carnegie, November/December 1986).

In this Carnegie study it was found that: Parents who did not themselves graduate from college appear to exert the most direct influence on .. this choice. Parental persuasion may be more subtle in families where going to college is accepted as a normal part of life (Carnegie, November/December 1986, p. 31).

Where students reported "much influence" by parents in making a decision to go to college, 80% were from homes where at least one parent had not earned a college degree (Carnegie, November/December 1986).

The Maguire and Lay study, published in 1981, was taken from material collected in a survey which is administered annually to accepted applicants at Boston College to assist the College's marketing program. The 1977 survey encompassed over 2,500 students. This study is of both acceptees who attended and those who did not.

Conclusions reached by the authors were relevant for Boston College, and useful in the school's recruiting. Financial aid was most important to the matriculated students. Parental preference and academic programs were also important to the Boston College student. The study concluded that having students perceive improvements in these areas would increase enrollment more than perceived improvements in other factors (Maguire and Lay, 1981).

Gorman evaluated promotion and consumer behavior with a study which was administered to a random sample of freshmen at

the University of Tennessee at Martin. The study was of traditional students who were attending classes. The questionnaire was developed for a student project in a Consumer Behavior class. Each of twenty students personally interviewed ten freshmen using the survey instrument. The sample was randomly computer selected from a population of 878 full-time, first-quarter freshmen. If a person could not or would not be interviewed, another individual was randomly selected from the same population so that a total of 200 respondents was studied. The study was hand-tabulated and analyzed. It was believed the population was too small and questions not complicated enough to warrant computer analysis.

Gorman found image and competitive edge are necessary for educational institutions in the changing marketing era which necessitates new recruiting and retention efforts. Institutional features must be matched to the existing and potential student target market. Strategies necessary include Product Differentiation with differential advantage of the school promoted, and Market Segmentation to adjust the product offering to specific target markets, such as socio-economic profiles of prospective students. Tactics to carry out these strategies would be good taste advertising, direct mail to the geographic area, sampling techniques such as visits and athletic camps, and special emphasis on specific areas of high visibility to potential students (Gorman, 1976).

An all-school assembly of new students early in the first

term was utilized in the Kellaris and Kellaris study of student college choice. This study was made using a sample of freshmen and transfer students. The setting was a small private church-related college of a major Protestant denomination. The goal was to gather empirical evidence to test Chapman's original model of pre-search behavior, search behavior, application decision, choice decision and matriculation decision. All students in this sample had completed all of the steps in the model and were in-fact attending the school. A questionnaire was given to everyone at the assembly. The usable response was 76.4%. Other demographic statistics included 41% males, average age 18.8, 74% in-state residents, and over 50% members of the church. College majors reported in the sample were business 29.8%, liberal arts 20.2%, education 13.8% and religious studies 12.8%, which reflected the population (Kellaris and Kellaris, 1988).

In the study, activities where the student took a proactive stance were perceived as more influential in the student's decision. Material which has a high opportunity for "selective screening" by the student, such as magazines and other media, was less influential. Counselor and other school personnel must be trained, evaluated, and controlled to insure they are providing a proper image. Multi-purpose meetings are tangential influences. This study found, as opposed to others, that unsolicited mail and telemarketing were strong influences. The conclusions were:

1. Students prefer to evaluate experientially.

2. Recommendations of others are important.
3. Proper information must be given by school personnel.
4. Each student reacts differently (Kellaris and Kellaris, 1988).

Sevier studied enrolled freshmen at selective liberal arts schools in the Midwest and Northwestern United States. These schools recruit high school seniors with high indicated achievement. The schools studied also met other parameters including private, well-endowed, high reputation, enrollment of 750-1,300 and a history of accepting well-qualified applicants. The written survey instruments were provided to samples derived from non-honors freshmen English classes with over eleven students in attendance. Another companion study was made by personal interview with juniors and seniors at three New England high schools, one rural public, one urban public and one private.

Parents were found to be a powerful influence on the student while the high school counselor was of little value. Friends were important, especially if they had attended the school. Parents were more interested in knowing about drug and alcohol on campus than financial aid or costs. Recruitment publications were examined by the prospective students and utilized, if personal and informative. The mailings were a decidedly negative influence if they were cold, impersonal, full of busy typography, bombarded the prospect, and/or were irrelevant to the student's interests (Sevier, 1987).

Sheffield studied sources of college information, and the

usefulness of those sources. The sources could be classified in five major categories into which students placed sources of information they found useful (Sheffield, 1985).

1. Friends and relatives
2. The college and its representatives
3. Location of the college close to home
4. Campus visits and other direct campus exposure
5. Other.

These findings were also shown by Strayer's 1988 study. He found that the literature showed traditional students rely on personal sources, such as friends and campus visits, as well as advertising and sales promotion literature, such as catalogs and brochures. Strayer reported that the Carnegie foundation, in 1986, concluded publications were the most frequently used, but least relevant and accurate source of school information. Although students seemed to enjoy receiving this material, they found it questionable. Students comments were: "I was delighted by all the attention I was getting," "Recruiters and pamphlets never tell you about the bad things," and simply "Recruiters are dishonest" (Carnegie, January/February 1986; Strayer, 1988).

Strayer concluded that when students are actively involved in the selection process, individual sales promotion communications can be used by colleges. Students reported receiving, on the average, materials from over 100 colleges. Mass communications including advertisements as well as articles/stories about the institutions were not remembered nor

found useful. Most students had a predisposition towards a school. Where this predisposition was obtained is not explained (Strayer, 1988).

In addition, it was found that students employed the mailings and promotion media for two purposes, after they had focused on and/or selected an institution:

1. To keep them informed about the institution. Through the media the students felt the school was interested in them.

2. The students utilized the media for decision reinforcement. As happens with physical products, the advertising served to convince the person they had made the correct choice (Strayer, 1988; Kotler, 1988; Maguire and Lay, 1988; Carnegie, January/February 1986; Kellaris, 1988).

The college choice process of traditional-age undergraduate matriculants is thought of in two ways:

1. As a process spanning many years, resulting in the image the person develops from childhood.

2. The appraisal leading to the final decision.

In making the final choice, the student makes a selection based on his or her actions and reactions to various available information sources. If the information does not match the image perceived by the student, the information will not be used. The image can be modified given other affectants, such as institutional or applicant characteristic changes, which enter into the picture as the student approaches the decision stage (Maguire and Lay, 1981).

Models

Models have been developed, in both the field of marketing and the field of education, to help analyze the consumer's choice process for goods and services, including education. Most models developed in the field of education seek to explain the traditional student's movement from the secondary school setting into the early undergraduate years.

A student, adult or traditional, chooses a school using a decision-making process. Steps in this decision process have been studied in diverse ways. The issues studied are the sources of information individuals, within the major market groups, find influential in making their final decisions to purchase (to attend college), as well as what to purchase (the particular college to attend) (Kotler and Fox, 1985).

A model developed by Randall G. Chapman, modified and expanded by Larry H. Litten, is often used in the higher education choice literature. Kotler and Fox describe a grouping of college information sources, that they have used with Ihlanfeldt's Marketing Molecule which illustrates the relationships between the school's professional staff and other groups that affect the student's choice.

Chapman

The Chapman model (Figure 1) has two components, SEARCH and CHOICE.

SEARCH includes three steps: Pre-search Behavior, Search Behavior and the Application Decision.

CHOICE contains two steps: the Choice Decision and the Matriculation Decision.

	Pre-search Behavior
(SEARCH COMPONENT)	Search Behavior
	Application Decision
(CHOICE COMPONENT)	Choice Decision
	Matriculation Decision

Source: Chapman, Randall G. "Toward a Theory of College Selection: A Model of College Search and Choice Behavior." Advances in Consumer Research Volume XIII (Association for Consumer Research, Provo, Utah) (1986): 246-250.

Figure 1.--Chapman model of traditional student choice.

SEARCH COMPONENT

Search refers to the actions of students as they seek to determine the characteristic attributes of various schools. Included among these attributes are items of cost, academic quality, transferability of credit, time, student life quality, and other things of interest to the student prospect. Search concludes with the decision to apply to certain schools.

PRE-SEARCH BEHAVIOR

In Pre-search the student recognizes the possible need or want for higher education. This step may last for many years, especially in the case of the adult. Chapman said:

Given the recognition of the possible need for a college-level education, a student implicitly and perhaps continually scans a range of possible

information sources, to learn about the availability of those information sources, their content, and some information about various college options, and even specific colleges (Chapman, 1986, p. 246).

SEARCH BEHAVIOR

The student who reaches the Search Behavior step has concluded that higher education is viable and desirable. In this step, Chapman suggests that some of the research questions to be asked by scholars or students would include how extensive a search the student makes, plus the influence of personal circumstances. He suggests knowledge of the information sources a potential student uses is needed. In addition he asks, "What influences are interacting on the potential student." Other questions include what activities occur, what materials are collected, what attributes are viewed as important, and what colleges are known to the student.

APPLICATION DECISION

At the Application Decision step, the student decides to which college or colleges he or she will apply for admission. At this point, their information gathering has been substantially completed, except for specific information needs, such as financial aid and school conditions, that must be met after the student has chosen a particular school to attend. The final two steps, Choice Decision - choosing the specific school from the list accepting the student - and the Matriculation Decision have only minor information gathering requirements.

Litten

Litten's six-market study mailed a questionnaire to seniors

in six metropolitan areas (Washington, Chicago, Minneapolis, Dallas, Denver and San Francisco). All the recipients had received scores of more than 100 on the PSAT. A response rate of 50% was obtained (Litten, Sullivan and Brodigan, 1983).

These investigations were performed under the auspices of the College Board which used Carleton College of Minnesota as the coordinating facility for the Board committee. Issues addressed included:

- * Objectives of the marketing strategy
- * Tactics in marketing strategy
- * Market research objectives (listed by priority)
- * Models, hypotheses and specific questions to be addressed in the research
- * Formulations of hypotheses, models and modes of analysis
- * Listing of tables and other analyses to be produced from the research (Litten, Brodigan and Sullivan, 1983).

Prior to the explanation of the six-market study, Litten wrote of the evolution of educational marketing. A key descriptor is the model which depicts the process a student transits in the journey from desire to attendance. This model (Figure 2) has been expanded further by both Litten and other writers (Litten, Brodigan and Sullivan, 1983).

STAGE 1

The Litten model has three stages. Litten's Stage 1

encompasses the individual's actions prior to the Institutional

Desire to----->Decision----->
 Attend to Attend
 |_____Stage 1_____|

Investigation of Institutions----->
 (Information Gathering)
 |_____Stage 2_____|

Application----->Admission----->Enrollment
 |_____Stage 3_____|

Source: Litten, Larry H., Sullivan, Daniel, and Brodigan, David L. Applying Market Research In College Admissions. College Entrance Examination Board, New York, 1983: 30.

Figure 2.--Litten model of college attendance/choice.

Investigation. The first stage is Desire to Attend which he calls College Aspirations in his later modification of this model. Desire to Attend is followed by either a Decision (Plans) to Attend step or a Decision to Start the Process, which is carried out by some of the individuals who desire college before they reach their Decision to Attend step.

STAGE 2

Stage 2 applies to the current study because this stage contains the information gathering step, which he calls Investigation of Institutions. In a latter expansion of this model Litten adds two influences: that of the college actions, and that of the actual influences and media useful to the

student.

STAGE 3

Following the information gathering step comes Stage 3, the Application for Admission, where the students pursue the issue past the information step. College actions of admission (or denial), financial aid and other activities result from the application, and are separate from the student actions. The final step is enrollment.

Kotler-Fox

Kotler and Fox provide a description of college student choice sources (Figure 3) that were useful in conjunction with the William Ihlanfeldt model (Figure 4), described later. Kotler and Fox's discussion revolves around four consumer groupings. Students, as all purchasers of goods and services, find useful both personal and non-personal sources of information. Some of these are controlled by the marketer, the balance are substantially beyond the direct control of that marketing person (Kotler and Fox, 1985).

The four information sources which Kotler and Fox say act on the student are:

1. Personal, Non-marketer Controlled sources which include family, friends, and acquaintances.
2. Non-personal, Non-marketer Controlled settings, especially publicity and public relations, which may be influenced, but not controlled by covert and overt actions of the school. These include mass media reporting and stories.

3. Personal, Marketer Controlled sources are the sales representatives/counselors/admissions personnel, who have direct contact with the public and particularly the students.

	MARKETER CONTROLLED	NON-MARKETER CONTROLLED
PERSONAL SOURCES		
NON-PERSONAL SOURCES		

Figure 3.--Source/Marketer matrix.

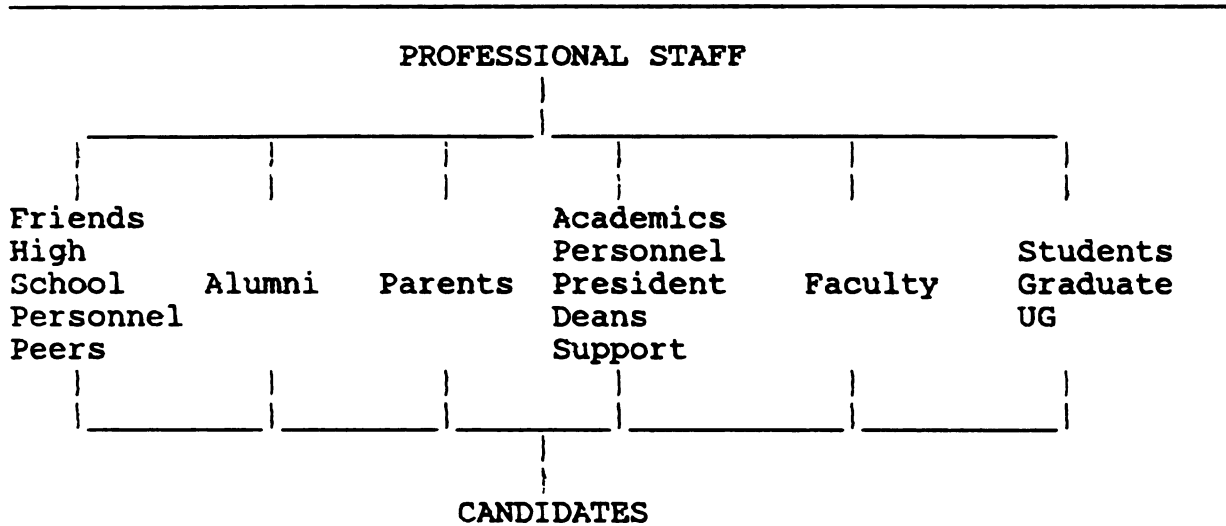
4. Non-personal, Marketer Controlled sources are advertising and sales promotion. These would include catalogs, advertisements, mailings, brochures, pens, file folders, scarfs, etc.

Ihlanfeldt

Ihlanfeldt (Figure 4) looks at marketing information from the institution's professional staff perspective, to show sources in the communications network that assist the institution's efforts. He calls this figure the "Marketing Molecule."

The total communications program of an institution should include outsiders as well as the school admissions staff. Ihlanfeldt calls this role interaction the "Communications

Network," and sees them all as integral parts of the total marketing team, for the institution's recruitment effort.



Source: Ihlanfeldt, William. Achieving Optimal Enrollments and Tuition Revenues. Jossey-Bass, San Francisco, 1980: 129.

Figure 4.--Ihlanfeldt model of information sources.

Some of the roles include the faculty who represent their disciplines, the students who believe in the school, and alumni who work with the school. For example, the current student can provide substantive, credible reasons, in the candidate's perception, for his attendance. The potential student is indirectly influenced by the school's professional staff, but directly influenced by students. The alumni are directly influenced by the staff, but their influence on candidates is indirect and oblique. The staff may, but should not, influence the faculty. Faculty are influential only in their area of

disciplinary expertise.

Ihlanfeldt also says there are direct and indirect influences involved, both from the professional staff to the sources, and from the information sources to the candidates. The professional staff has a direct influence, and, often, control on the friends-high school-peer group, the alumni and the academic employees except the faculty. Indirectly, the school's staff influences the parents, faculty and undergraduates. Friends from high school or the peer group, professional staff and undergraduates all typically influence candidates directly. Indirect influence over candidate's information and thinking is exercised by alumni, parents, academic departments and faculty. Marketing personnel can learn to work primarily with sources which they directly influence because that is where efforts will yield the greatest returns (Ihlanfeldt, 1980).

Studies of Graduate Students

While graduate students are not the same as adults, discussing them is relevant to this study. Graduate students may be a bridge between traditional age and adult students, as they tend to be older and have many characteristics similar to those in the "adult" category. The constraints under which the graduate student functions are similar to those of the adult, according to Olson, and a study by Cooper, which Olson referenced. These may include the grade point average earned in previous schooling, grades on admissions tests, income given up

during the school period, education and living expenses, family and peer perceptions and lost employment opportunities (Malaney, 1987; Olson and King, 1985).

Malaney reported on graduate student choices. Students studied were new graduate students at a large Midwestern research university. There was no information given about the student majors, or which schools within the university the students were attending. While 20% of the student population was part-time, only 10% of the respondents reported part-time status. The total population was 2,385, with usable responses received from 45%. The questionnaire was designed by a faculty/student ad hoc committee in 1982. With modifications, the instrument was used for several consecutive years, including 1985, when this study was made. Each question was provided with several possible answers for the student to check. There did not appear to be a method of investigating strength of feeling.

The survey was tabulated for the total sample, with responses available for graduate school use in recruiting or related activities. Items studied included:

- * Why go to graduate school
- * Reasons to attend school
- * How information was received which affected the choice
- * Why attend this specific school.

Malaney found that older graduate students received information about the programs they attended from the sources

shown in Table 1.

Table 1.--Malaney's Information sources.

<u>Indicator</u>	<u>%</u>
Attended institution as an undergraduate	23.0
Department brochure	28.1
Department letter	10.0
Personal visit from faculty member of institution	5.1
Personal phone call from faculty member	3.4
Newspaper or other advertisement	3.4
Alumni	16.7
Career day at undergraduate institution	1.4
Recommended by professor	25.3

Source: Malaney, Gary D. "Why students Pursue Graduate Education, How They Find Out About a Program and Why They Apply to a Specific School." College and University Volume 62, #3 (Spring 1987): 248.

Women received their information more from alumni, while men received it from brochures. Younger students were likely to receive information from department brochures or letters, but older students obtained their information from professors, advertisements or alumni. Part-time students obtained information from alumni, while full-time students utilized professors (Malaney, 1987).

Olson and King studied choice of non-traditional age students, other than undergraduate students. The study's purpose was to look at the choice process of individuals who would fill the seats vacated by the lack of traditional-age graduate students.

The study looked at:

- * initial consideration of institutions
- * ultimate decision to enroll at a particular institution (Olson and King, 1985).

The instrument was sent to current graduate students at a large Midwestern state university, which offers doctoral degrees in 46 fields, and masters in 68. The population consisted of 3,350 United States citizens. The sample was randomly selected, with attempts made to stratify by major and degree. This stratification was difficult because many departments were small, and/or had large proportions of foreign students. The resulting total sample was 750, with a response rate of 40.4%. The questionnaire had two sections, one to investigate student initial school considerations and the other, ultimate enrollment decisions. Factors studied in the first section included reputation, personal involvement with college personnel, costs, financial aid and communications with the university. Questions in the second section of the instrument concerned the financial aid package, application processing speed, enrollment, employment, personal involvement with university personnel at the decision point, and personal reasons for enrollment.

This study found that location was the most important consideration in the choice decision. This result occurred because the student population came primarily from the surrounding area, even though the school did enroll students from all the states, and 50 foreign countries. Other influential

factors were personal contact with faculty and other university personnel, previous undergraduate attendance at the school, and cost of the education. The authors concluded that graduate student recruiting should not be patterned after undergraduate methods as graduate students are influenced by different variables.

The 1977 study made by Michael Houston at the University of Wisconsin-Madison provided data on the decision process of graduate students, with applications to the marketing decisions of the educational institution. Areas studied included the information search efforts and usage patterns. While most studies of college student search and choice are made by educators and published in educational publications, this study was made by a business oriented professor and published for the consumer research practitioner. In addition, the study was made of business graduate students at the university.

The study instrument was a questionnaire mailed to accepted, but not enrolled students in the masters program in the business school. A follow-up mailing was sent to the entire sample ten days after the initial mailing. The combination of these inquiries resulted in a return rate of 64.7% for the total 371-person sample. The researcher was concerned that only people who actually planned to enroll would return the questionnaire, but the response was typical of the population, including both enrollees and those who did not enroll.

A Likert type scale with three responses provided a gauge of

importance. Information source items surveyed were 22 attributes relating to student choice, including reasons to attend, as well as sources of information useful in the choice decision.

Houston found that the respondent behavior was conditioned by prior experiences. For those recently out of school, useful sources included individuals associated with their undergraduate institutions. For those graduated a longer time useful sources would be current friends and associates, plus publications. In addition, persons with working experience gave less effort to their college search (Houston, 1977).

Studies of Adult Students

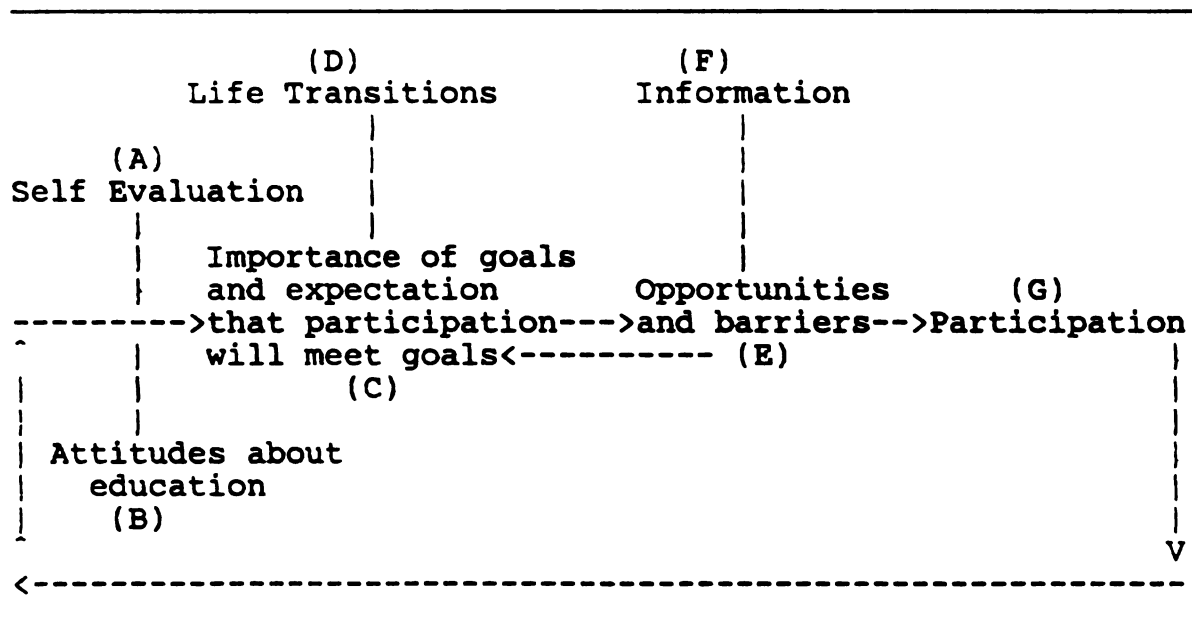
Iovacchini states greater attention is now paid to investigating differences between the older and the more traditional age student. His study investigated:

1. demographics
2. motivation to obtain a degree
3. selection of the college
4. college plans
5. academic characteristics of students.

Academic and socioeconomic characteristics of adult students differ from those of traditional students. For example, adults in degree programs have more working-class backgrounds. The students are usually first generation college students, as opposed to traditional-age students whose parents tend to be better educated (Cross, 1981). Older students often have better

educations, and hold full time jobs at higher levels than their peers in the general population (Iovacchini, 1985; Shipp, 1981). These same adults tended to be in business or health program areas - 28% and 15% of the total as compared to the next highest bracket, the social sciences at 9% of the total (Miller, 1980).

Cross has written extensively about the adult learner, but she has written little about information sources. The COR model (Figure 5) has an information link, which may affect the adults as they travel the route from self-evaluation to participation in education. Information provides knowledge of opportunities and



Source: Cross, K. Patricia. Adults As Learners. Jossey-Bass, San Francisco, 1981: 124.

Figure 5.--Chain of response (COR) model for understanding participation in adult learning activities

helps overcome barriers. In her material on this model Cross

discusses the market mentality of adult educators and makes comparisons with non-marketers (Cross, 1981).

The sixth item (F) in the path to education is the information the adult uses. In this 1981 publication are indications of the emergence of outside sources, such as brokers. This diverse group could appeal to a wide range of potential student motivations and expectancies. The recruiters were marketer-controlled in two ways. They were students, and they attended indoctrination meetings with the school staff. These meetings provided the student recruiters with detailed information about the school, and they supplied input to the institution. Methods used to provide information to potential students included posters, flyers, catalogs, schedules, enrollment forms, and news stories of their efforts. Seniors meetings, AARP, senior meal sites, Sierra Club meetings, Pen-women's Association and a Christmas party sponsored by a local department store were some locations the recruiters visited while successfully enlisting new students for the school (Gunn and Parker, 1987).

Summary

A review of the literature on college choice, and influences on that choice has been presented in this chapter. The studies of sources of information that influenced and were useful to potential traditional, graduate and adult students were described. Models to describe student choice were provided.

Relevant literature on graduate student and adult choice were furnished.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

A research design and method were chosen to determine the sources of information influencing adult students in their choice of a post-secondary program or class in administration or business at an institution of higher education. The exploration takes a dual perspective:

1. What sources adult students said were useful and influential in the decision to attend their current school.
2. What the same students feel, now that they are enrolled and have further experience with the educational system, should have been the most influential.

Questions to be Studied

Four research questions guide the collection of data in this exploration study. Responses answer the following questions.

1. What sources of information do adult students find useful in their college choice plans, decisions and actions?
2. Which source(s) do adults find most influential?
3. Would the adult student, who is now in school, be influenced by the same sources, at the same magnitude, if he/she

had to undergo the choice process again?

4. What would be useful for adults to know about a school.

This study was a descriptive comparative exploration, with ranking of responses and counts. The major goal was to determine what sources of information are useful and influential in adults' choices of colleges and what strength of influence those sources have on each person. Individuals were surveyed to determine the sources they found useful, or the ones that influenced them in choosing the college they are currently attending. From this comparison, higher education marketing personnel can extrapolate marketing information to assist in making informed decisions and minimizing risk in their market planning.

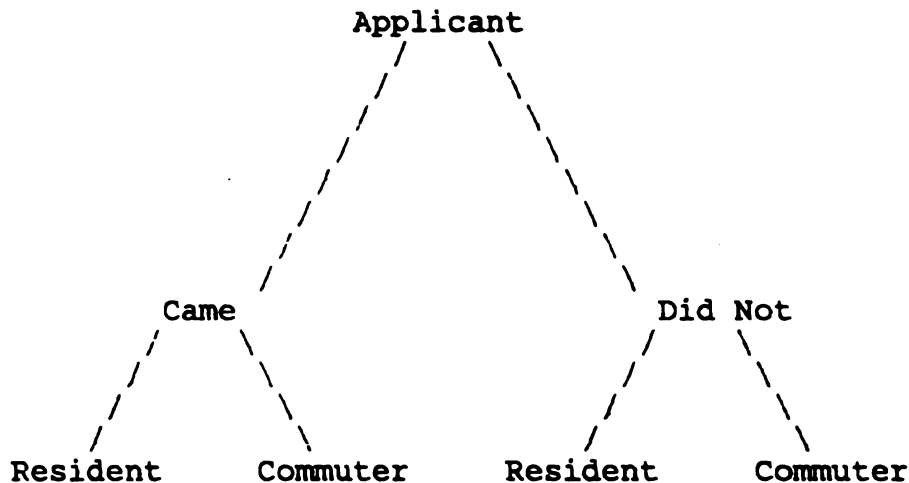
Background

Huddleston, in his study of marketing and the applicant questionnaire, uses a model applicable to this report (Figure 6). In the model the applicant is the subject and two questions are asked: Did the applicant come or did he not?

This dissertation is a study of students who made the decision to attend (applicants who "came"). Those who completed the survey were in the classroom at the time of completion.

Huddleston divided applicants into residents and commuters. Although this current study does not consciously segment the market in this way, it does in fact. It is assumed that the majority, except the Michigan State University pool, are commuters, students who live at home and have responsibilities

away from the school.



Source: Huddleston, Thomas, Jr. "Marketing: The Applicant Questionnaire." College and University Volume 51, #2 (Winter 1976): 215.

Figure 6.--College applicants.

The current study was of students in a metropolitan area. The level in school was not an important factor, and comparison, by program level, was secondary. The community college students may be at any level, high school through Ph.D. The common bond was their desire for the course.

Survey Area and Institutions

A standard metropolitan statistical area of slightly less than 500,000 people was used to develop this study. The site is Lansing, Michigan, located in the central part of the state, about 100 miles north-west of Detroit and 250 miles north-east of Chicago, Illinois. It is the capital of Michigan with a

high-level professional/technical, tri-pointed employment base of government (State of Michigan), education (Michigan State University) and industry (especially the General Motors Oldsmobile/BOC complex).

This geographic area provides large numbers of people enrolled in education at all levels; literacy, technical, managerial and general. No accurate count has been found of potentially interested customer/prospects. Most of these people work, and their work hours vary around the clock.

Data from individual schools can be indicative of individual institutional profiles. A class at an institution, if properly chosen, can provide a sufficient sample to reflect quantitative trends, and qualitative conditions at that institution (Borg and Gall, 1983; Miller, 1966). In some cases, the numbers of adults attending a school is small, and/or class sizes are small. When this is true, the data analyzed is from a modest sample of the school population.

There are eight key higher educational institutions providing business/administration courses for students in the area; these eight are included in the study. Some are local, and some are branches of outside organizations. [Not studied were several schools of lesser importance to the student population.] Institutions available to the adult business or administration student in the Lansing area and included in this study are:

Aquinas College from Grand Rapids. This small, liberal arts school has implemented a Masters of Management degree program in

several locations in Michigan, including a Lansing middle school. There are approximately 50 students in the Lansing program; about one third work in the medical field, one third have engineering/technical jobs, and the balance are in other areas, or are not currently employed. Aquinas may be considered a small school expanding for survival, taking in small market segments, to supplement the income earned on the main campus. There are no employees on-site; all business is handled through an 800 telephone number. Most of the instructors are regular employees of the school, who come to Lansing to teach the classes. Tuition was almost \$200 per semester hour in the Summer of 1989.

Central Michigan University has a large and growing student body in classes at their Lansing Center in downtown Lansing. The school has one of the largest extension programs in the country, with classes in over 50 locations throughout the world. It is well-developed, professionally-staffed, and experienced at serving the adult student. For example, a full-time librarian is available for the southern Michigan area, and books can be located and delivered overnight from the main library in Mt. Pleasant. In Lansing one part-time person assists students and prospective students in the Masters of Science in Administration degree program. Instructors are both regular faculty and adjunct. Tuition is \$146.00 per semester hour.

Davenport College in Lansing has a traditional age student body. It offers two-year business/secretarial programs. The college is initiating a bachelors degree program in Lansing.

There are few evening classes, and very few adults currently attend this institution. The school was the Lansing Business Institute until purchased by Davenport, a large Grand Rapids private school which offers two-and four- year degrees, predominantly in business. Most faculty are full time employees of the school. Tuition cost is \$119.00 per quarter credit.

Lansing Community College is a large, local community college offering extensive, wide-ranging courses. Tuition is low. LCC will hold classes almost anytime, anywhere for anyone, if sufficient numbers enroll. A large proportion of the students are adults. Many of those, in business courses, hold bachelors or higher degrees, taking courses for specific purposes. A third-year Management Certificate degree is offered, and well subscribed. A faculty member, plus a part time assistant, coordinate an LCC transfer agreement with Northwood Institute, allowing LCC students to obtain a business bachelors degree by enrolling for three years at Lansing Community College and for one, final year at Northwood. LCC resident tuition is \$21.00 per quarter hour.

Michigan State University is a local Morrill land grant research university, offering degrees at every level, over a wide-ranging curricula. Business and administration courses are available from the College of Business, the School of Labor and Industrial Relations, and various other schools. Most students are on campus, full time. There are few evening courses or opportunities for the working adult. Summer, 1989, tuition was

\$56.00 per quarter hour for lower division undergraduate, \$61.50 for upper division undergraduate, and \$82.75 for graduate credits.

Northwood Institute is a private, Midland based, two- and four-year school, with various certificate programs. Lansing students can obtain a bachelors degree in business in one year with a combination of three prior years of credits and/or experience. Course work involves papers, on-campus weekend seminars, seminars in Lansing, usually at Lansing Community College facilities, and some traditional classes on weekends in Lansing. This program enrolls over 300 students in Lansing. A large number of graduates hold good jobs in the Lansing area, especially at the State of Michigan and General Motors, which are very supportive of Northwood and its graduates. Tuition varies by course type.

Spring Arbor College is a small, church-supported college near Jackson, which has several branches throughout Michigan. In Lansing there is an office, a classroom, and a full-time staff available in an office building near the Michigan State University campus. Over 300 students are involved. Spring Arbor uses a cohort system, where a group attends class together for one year. Graduates receive a business-type bachelors degree, Bachelor of Arts in Management of Human Resources. Multiple cohorts are in process at any one time. Students become very strong supporters, and graduates are well motivated. Many part-time faculty are employed. Tuition is \$6,500.00 for the one year

session, or as explained by the school, "two years in one."

Western Michigan University has had an office in Lansing for several years, predominantly offering courses in public or health administration to state workers. The office is staffed full time. Most faculty appear to be full time. There are many graduates, who form a strong support group in the state government. Bachelors, masters and doctoral degrees are offered. In addition, many students attend some or all classes in Kalamazoo, especially in special fields such as Library Science. Tuition is \$74.00 per semester hour for undergraduate, and \$91.25 for graduate courses, with no registration or other fees.

Survey population

The survey was conducted during regular class sessions conducted by each of the eight schools. Characteristics of participants, as concluded from observation, interview and the instrument questionnaire, include:

Aquinas College - These graduate students typically have engineering/technical, or medical related undergraduate degrees. Many of the students are in medical administration jobs including training, pharmacy and medical technician. There are, also, many students from the industrial sector, including engineers, industrial sales and logistics managers.

Central Michigan University - The graduate students, in this program, generally have liberal arts or business degrees. The job areas are in industrial and commercial organizations. Most

of the students indicated first and second level management on their survey form. Jobs generally are in personnel, sales or finance.

Davenport - These students are working on associate degrees, with some in the bachelors program. The students are in retail, or light industry; working as nurses aides, route work, other lower sales, and factory jobs (worker or supervisor).

Lansing Community College - The individuals surveyed reflect the diversity of the students at the college. They are in every kind of work, from manager to assembly line worker, including skilled trades. Purchasing is a typical office type job.

Michigan State University - These graduate students, in the Labor and Industrial Relations program, often come from human services/personnel type jobs. Department head and company owner are other titles.

Northwood Institute - Northwood students are working on bachelors degrees, with apparent desire to advance to better jobs. The students hold driving jobs, sales, bookkeeping and planning.

Spring Arbor - These students also are working on bachelors degrees. It is a hurry-up group, anxious to complete a degree, to get ahead faster. Purchasing, insurance claims and marketing jobs predominate.

Western Michigan - This program's recruitment effort is directed towards the State of Michigan worker. Jobs reflect this orientation. Students are in administration type jobs, such as

analyst or auditor.

Questionnaire

The questionnaire was the result of continual consultation with adult educators and marketing personnel familiar with the study and with questionnaires. Content and structure validity were obtained by testing and revision, plus advisors' comments in related areas. Reliability was verified by testing and analysis of individual questions. Consensus was obtained from faculty cognizant in the uses of questionnaires and the subject area. Approval was secured for research in the subject and question areas from the University Committee for Research Involving Human Subjects (Borg and Gall, 1983).

A survey form was developed from questionnaires in several other studies and dissertations in which student choice was investigated. Particular emphasis was placed on marketing information useful to the student. This served as a base for a project in a marketing class; as a result a second instrument was developed. The two questionnaires were combined. Similar and common questions related to the project were consolidated. Questions not pertaining to the subject area were removed. Another marketing class, of predominantly adult students, critiqued the resulting instrument in their marketing information session. This class answered the questions and then discussed the usage, relevance, reliability and validity. Time necessary to complete it was verified. This original version of the

instrument was free-form, with considerable writing required from the respondent. There were thirty numbered questions, but most questions had three to eight sub-questions. Check marks and rankings were added, with individual questions numbered. The Likert scale was reduced from seven to five choices (Ballian, 1982; Chadwick, 1981; Crosby, 1985; Manski, 1983; Shaink, 1985; Sheffield, 1975).

The instrument was next presented to a focus group of adult students from various schools in the area. The group was preselected by the researcher from those known for capability, interest and ability to critique programs and forms. They suggested substantial changes, such as rearrangement, placing the check marked source-of-information questions first, with demographics and fill in answers later. A question to allow the respondent to look at the choice sources from a detached position was suggested.

The survey was pre-tested a third time, with changes made. The revised survey form, and cover letter, were presented to professors in related areas. Each had some problems and several questions. The numbers were removed from the Likert scale headings and changed in the program from 5 being lowest ranking, to 5 being highest, for Very Useful, and 1 being lowest.

An expert in survey instruments critiqued the survey form, making many suggestions in both content and format. The letter had been in two sections, it was shortened to improve clarity, as well as adhere to anonymity requirements. The survey form was

tightened up to conform to analysis methods. Question areas were, again, rearranged to flow with the respondent's thought processes. Cogent suggestions on headings plus white space made the questionnaire easier to read, comprehend and complete.

A final trial test was performed, and checked for content, format, completion time, answers, validity and reliability. The instrument was presented to the Doctoral Guidance Committee, and revisions made. The instrument was printed in final form for data collection. A copy is included in the appendix of this dissertation.

Items Used and Rationale

Items #1 through #35, found in Table 3, form the central portion of this study. They were designed to answer Research Questions 1 and 2. These questions involve the items influencing adults in their search for an institution of higher education. The items were proposed, changed in trial, and modified, as found beneficial. They are arranged in major categories. These categories and detailed sources within them are:

A. "Family/friends" include Mother, Father, Other family members, Other relatives, Friends and High school classmates.

B. "Students" include Family member, this college; Graduate, this college; Former student, this college; Other students, this college; Any at other college.

C. "Job Related" sources are Co-workers; My union representatives; My supervisor; My company personnel

representative; Personnel Department, another firm; Managers, another firm; Other friends.

D. "Media" are Radio, Television, Newspaper advertisements, Newspaper stories, Magazines, Handouts/wall flyers and Billboards.

E. "Mail" was that which was College initiated or I (student) requested.

F. "College Related" sources included College guidebooks, College counselors, Private counselors, Educational brokers, College faculty, College admission person, Visit to college, and College provided materials not listed above.

Items 36, #37, #38, which are not found on Table 3, were added to give respondents an opportunity to express themselves with items not included in the other questions. Few people provided responses in these spaces.

Item #39, which asked a respondent to indicate sources they would recommend to someone else, had two purposes. It served as a check on the first thirty-five questions, and allowed the students to disengage themselves from the personal side of their choice process in order to give impersonal answers based on what they would do if they were making the choice again. This item was designed to answer Research Question 3.

Items #40 (number of credits being taken), #41 (number of credits completed) and #43 (number of colleges attended) gave information about the person's college attainment and activities. Items #42 and #48 (currently in college/currently working full-

or part-time) qualified a person as an adult if within traditional student age. Item #44 asked if the respondent is currently taking classes in another college to determine if the student was taking courses outside of the major school.

Northwood and Michigan State University have many students who take classes at Lansing Community College. Number #45 asked for sources of funds, and allowed analysis of several other questions based on the method the student used to pay for the classes.

Items #46 and #47 asked if either parent had attended college, and their influence on the present student. Question #49 requested the student's job function, to allow cross checking influences.

The demographics questions were designed to indicate student attributes.

Items #54 and #55 questioned where the student learned of the college, and from how many colleges the respondent received information. These items were included to determine the breadth of colleges the adult students in this area considered, enabling a school marketing manager to determine patterns and location spread of student search.

"What are the five most useful things you found out about this college before choosing to attend" (Item #56) was asked in order to tie in the influences of information sources to what information was found about an institution. Item #56 answered Research Question 4. This yielded information for the educational marketing person and allowed comparison with other

studies of traditional students.

Data Collection

An initial parameter of this study was to cover the business/administration programs in the Lansing area. Six schools were selected to include a cross section of the programs, graduate/undergraduate, public/private, junior/senior colleges. It was later decided to include two additional institutions in the survey. The following eight schools were contacted:

1. Aquinas College Director of the Graduate Management Program.
2. Central Michigan University, Institute for Personal and Career Development, Michigan Regional Director.
3. Davenport Lansing Academic Dean.
4. Lansing Community College, Business Division, Management Systems Program Director.
5. Michigan State University College of Business, later changed to School of Labor and Industrial Relations.
6. Northwood Institute coordinator at Lansing Community College, and the Midland extension director.
7. Spring Arbor, Lansing Director.
8. Western Michigan University, Lansing Director.

Seven expressed interest and desire to cooperate. In the eighth case, a higher level person later approved and located an instructor willing to help.

Data Analysis

Only those answers which indicate a source was useful (coded 3, 4, 5,) are applicable to this study, the not-useful answers (coded 0, 1, 2) are not relevant. The final analysis resulted in removal of answers indicating less than useful (no answers, not-applicable, 1 and 2) because they did not show students felt the source useful. This allowed the researcher to concentrate on the items the respondents found actually useful and influential. Discussion with the students, and the instructors who received the instrument, revealed that the respondents marked the right two columns when a source was not used interchangeably with not-applicable. Respondents used the 1 and 2 column to indicate items they did not use, not those which they used and did not find useful. Therefore included in this study are only those responses which were useful and influenced the students, coded 3, 4, or 5 on the Likert scale. Minimum usefulness would be 3.000 and maximum 5.000.

To analyze the data developed through the instrument, the average, frequency of response, variance and standard deviation were calculated. The average value (influence) was 4.080. The average frequency of response (that is, the number of people who found a source useful) was 34. Answers were clustered around the average.

Average, response count, standard deviation and variance for Items #1 through #38 were the most significant statistics. These were computed, and are in the appendix for the all-schools

composite, and for each individual school studied. Sorts were also made for other data required to produce information for analysis. The Research Questions could be answered from the data available. Analysis, such as comparative ranking, individual item count and other studies, were done to produce Chapter IV. Data are available for educational marketing personnel to use for future plans.

The questions were simultaneously tested against each other by major group, and within each major group, for significance, using the Bonferroni inequality method for t-distribution. Bonferroni was used for the distribution values, because many simultaneous significance tests were required, and the t-distribution is not appropriate for multiple tests that are not independent (Gill, 1989; Moses, 1986).

The Bonferroni method formula for analysis of variance, followed by multiple comparisons among the means of major groups, and among the means of minor groups within each major group is:

$$95\% \text{ MSD} = (\underline{t}\text{-FWI}) \sqrt{\text{MSE} \left[\frac{1}{n_1} + \frac{1}{n_2} \right]}$$

t-FWI = Percentage point for the Bonferroni t-distribution with Family Wise Type I error rate for a set of tests

MSE = Mean Square Error from analysis of variance

MSD = Minimum Significant mean Difference between groups

n = Sum of the counts in each cell or group

When different groups must be tested against each other to

determine significance, the Bonferroni method test for significance controls the Type I error rate, i.e., the probability that a mean difference may be perceived as significant because of chance or because there were insufficient numbers.

When simultaneous intervals are compared, if the MSD is narrower than the difference between group means, then that difference is significant, and one can be 95% confident that there is a meaningful difference between the groups within the pair. The item which has the highest mean would be of most importance (Gill, 1989; Miller, 1966; Miller, 1981).

Summary

Presented in this chapter has been the research plan for this explorative study and the resulting dissertation. The population and sample subjects, schools and individuals were delineated. The questionnaire was described, including its use in this study. The data collection and analysis were given. The next chapter will report and analyze information from the study. Chapter V will present conclusions and recommendations.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

In this chapter, the research data are explored through various means. In the text is described the usefulness and influence of the sources used by the adult students who have made the choice to attend college. The statistical analysis indicates the significance of individual items in relation to each other, and to the groups. Data has established the sources students, who have made the choice, would use if they were repeating their search. A matrix ties together the education and the marketing aspects. What students wanted to know and miscellaneous information developed from the survey is presented.

Data were gathered from 157 adult students in business/ administration, in regular class sessions, in eight schools, in Lansing, Michigan. The schools included in the survey were Aquinas College, Central Michigan University, Davenport College, Lansing Community College, Michigan State University, Northwood Institute, Spring Arbor College and Western Michigan University. A survey instrument included thirty-eight sources where students could find information about a school. The respondents ranked the usefulness of these items, using a Likert type scale. Questions respondents answered covered topics on choosing a

college today, demographic information, and information about the schools they considered attending.

This study was not guided by a hypothesis, but used four research questions to assist in determining the useful sources, and their influence on the students. The research questions, as stated in Chapter 1, were:

1. What sources of information do adult students find useful in their college choice plans, decision and actions?
2. Which source(s) do adults find most influential?
3. Would the adult student who is now in school be influenced by the same sources, at the same magnitude, if the individual had to undergo the choice process again?
4. What do adults consider most useful to know about a school?

In Chapter III of this dissertation how the questionnaire was developed was presented. This chapter presents the data and analyzes of the research questions.

1. Research Questions 1 and 2, pertaining to usefulness and influence of information sources, are discussed in relation to the adult student responses to the survey instrument Items #1-#38. Analysis is made of total sample results, with comparisons among individual schools that note where patterns differ from the general results. The discussion of the questions is followed by an analysis of the statistical significance of the

responses, in relation to each other and each group.

2. Research Question 3 asked what sources of information an adult should find useful, and is answered by Item #39.

3. In the next section of the dissertation are the answers to Research Question 4 from data found in the questionnaire Item #56 which asked the respondent what they consider most useful to know about a school.

4. The miscellaneous questions in the survey are discussed.

5. Other indications from findings in the questionnaire responses are interspersed.

Overview

Average, frequency, variance and standard deviation for the first thirty-five questions were computed, using only the responses that indicated the adult student found the source useful. Table 2 reveals information on the average number of sources used by students at each school and the average value of those sources, the number of individual respondents, and the percent of the total responses from each school in the survey.

Average number of useful sources is the total sources marked in the useful columns, divided by the number of students who answered the survey. Average value is the mean Likert score computed (Likert Scale described in the Data Analysis section of Chapter 3). The typical student looked at only a few sources of

Table 2.--Summary table of the data sources which adult students surveyed found useful.

SOURCE SCHOOL	AVERAGE NUMBER OF SOURCES	AVERAGE VALUE	NUMBER OF RESPONDENTS	PERCENT OF TOTAL
Aquinas	5.5	4.1	17	11%
CMU	6.7	3.8	23	14%
Davenport	6.2	3.9	17	11%
LCC	8.6	4.1	28	18%
MSU	8.5	4.2	20	13%
Northwood	9.3	4.1	19	12%
Spring Arbor	7.2	4.0	20	13%
Western Mich	7.9	4.0	13	8%
Average	7.5	4.0	157	100%

information, usually variations of the same major source. Some students accepted the first school they perceived would provide a program meeting their requirements.

Of the 157 respondents, the average indicated they used 7.5 sources. One student reported finding 26 different sources of useful information. At the opposite extreme, four of the students surveyed said they did not find any of the sources listed on the questionnaire useful.

Section A: Research Questions 1 and 2.

What sources of Information Did the Respondent Find Useful and Influential?

Items #1-#35 Introduction

The first 35 items in the survey are listed in Table 3, grouped within the major categories as they appeared on the

Table 3.--Summary analysis of the sources of information and student self-designated perceptions of usefulness with statistical data.

CATEGORY				
Item # and Source	Average Count		Std. Dev.	Variance
FAMILY/FRIENDS				
1. Mother	3.828	29	.912	.832
2. Father	3.714	28	.881	.776
3. Other family members	4.085	47	.871	.759
4. Other Relatives	3.143	14	.515	.265
5. Friends	4.155	71	.833	.694
6. High School Classmates	4.000	11	.853	.727
STUDENTS				
7. Family member, this college	4.350	20	.910	.828
8. Graduate, this college	4.438	48	.704	.496
9. Former student, this college	4.128	47	.841	.707
10. Other student, this college	4.100	51	.823	.677
11. Any at other college	3.853	34	.733	.537
JOB RELATED				
12. Co-workers	4.158	57	.812	.659
13. My union representatives	4.333	3	.943	.889
14. My supervisor	4.000	32	.866	.750
15. My company personnel rep	4.095	21	.868	.753
16. Personnel Dept, other firm	4.167	6	.687	.472
17. Managers, another firm	3.714	14	.700	.490
18. Other friends	3.865	37	.844	.712
MEDIA				
19. Radio	3.692	13	.722	.521
20. Television	4.000	18	.817	.667
21. Newspaper advertisements	4.075	40	.877	.769
22. Newspaper stories	3.727	11	.445	.198
23. Magazines	3.375	8	.484	.234
24. Handouts/wall flyers	4.059	34	.873	.761
25. Billboards	3.429	7	.495	.245
MAIL				
26. College initiated	3.824	34	.857	.734
27. I requested	4.532	111	.695	.483
COLLEGE RELATED				
28. College guidebooks	4.087	69	.847	.717
29. College counselors	4.079	76	.774	.599
30. Private counselors	4.182	11	.936	.876
31. Educational brokers	4.167	6	.898	.806
32. College faculty	4.096	52	.741	.548
33. College admission person	4.035	57	.794	.630
34. Visit to college	3.958	48	.841	.707
35. College provided materials	4.192	26	.878	.771

survey instrument. After the name of each source of information appears:

1. The average value attributed to that source.
2. The number of students among the 157 who ranked this source 3, 4 or 5 on the Likert scale.
3. Standard deviation of the average Likert score.
4. Variance.

Family and friends are grouped in the first category. Those people who are described as students, when considering their information source role, are next. Job related sources are neither family, friends nor student sources. All media are grouped together. Mail is one group, whether requested by the student or sent at the volition of the school. Sources directly related to the colleges are grouped separately.

The categories were designed to allow respondents to group thoughts, and to provide the researcher with a means of data analysis. In the next section of the chapter is discussed the sources of information, according to relative position on a graph (Figure 7), locating each source according to the number of respondents indicating its usefulness (y-axis), and influence (x-axis).

Analysis, by Bonferroni methods, was made by the groupings, and within each group, to show tests for significant differences. Sources were also analyzed by placing each source into a quadrant of the Kotler-Fox matrix, then comparing the groups.

Graph of the Study Data

The results of the data are shown in the graph (Figure 7). By locating each source of information useful to the adult in its relative place on the X-Y axes, one finds the relative value of each factor. The factors located furthest from the zero point are the most important. The items have two dimensions: influence or the average ranking on the Likert scale (found on the horizontal line), and the count of individuals indicating that factor was useful (the vertical line).

Within this graph are indicated what college-related sources of information were found useful by the greatest number of respondents. "Mail I requested" was useful to 111 people. "College counselors," "Guidebooks," "College admissions," and "Faculty" are high on the chart. Interspersed with these college controlled sources are "Friends" and "Students" who are important to the respondent. Most of these sources cluster to the center, left to right, on the chart indicating that they were of moderate or slightly higher influence to the individuals.

"Visits" and "Family" were useful, but of low influence. "Graduates," "Former students," and "Newspapers" were useful, but of higher influence. In the lower portion of the chart are the balance of the queried information sources. Items like "News stories" and "Billboards" were of very low influence, and seldom useful. "Private counselors" and "Union representatives" were not useful to many respondents, but the values were high, indicating that those few who did employ these sources were strongly

influenced by them.

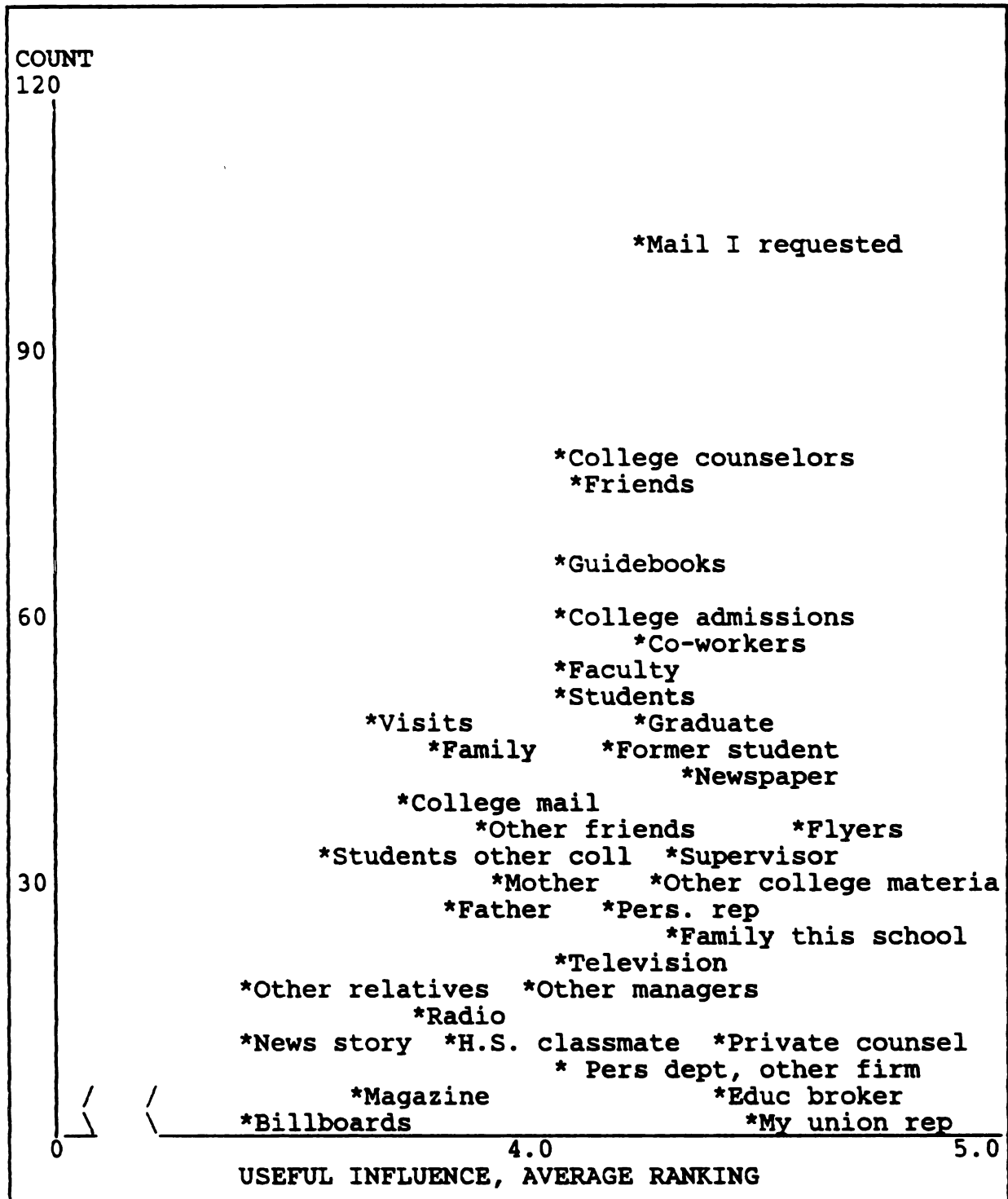


Figure 7.--Information sources chart.

Items #1-#35 Discussion

Items #1-#35 are be discussed to answer the two research questions:

1. What sources of information do adult students find useful in their college choice plans, decision and actions?

2. Which source(s) do adults find most influential?

The appendix gives the statistical compilation, including average, variance, and standard deviation of each item. Tables and charts are provided for the total group, and then for each school.

"Parents" were not a statistically significant influence on most of the adult students who completed this survey. Some students at Lansing Community College found their mother a significant influence. Students at Michigan State and Spring Arbor found their "Parents" were of little or no influence. Other sources close to students received weak responses from the few who said they found them useful.

"Friends" were the third highest item in terms of number of respondents indicating usefulness. Seventy-one of 157 indicated they were a useful source, but their influence was weak. Students at Lansing Community College and Michigan State University found "Friends" important in their choice decision. Spring Arbor students and those from Western Michigan University did not feel friends valuable. Spring Arbor and Western Michigan students had relatively few responses in general in this category.

Individuals who had been students at a school, and were known to the potential applicant tended to be beneficial information sources to these prospective students. This category includes "Graduates, this college;" former, and current students. "Graduates, this college" ranked as the ninth most useful item, and the second highest influence on a student's choice. In the ranking, 48 students found this source influential, with an average of 4.4 on the Likert scale.

Northwood and Michigan State University students found "Graduates, this college" an important source of information. The source was useful to a high proportion of Spring Arbor students, but not influential.

"Media," especially "Newspaper advertisements," were useful to some respondents in this marketing information study. Most students, however, indicated they did not find other media useful nor influential in their decision. This may indicate a non-use of the media by the institutions, or the media may have done their informing without the student's conscious perception. "Newspapers" were useful, but not influential, for students at several schools included in the survey. Lansing Community College has extensive advertising campaigns in some areas, but not in business. It rated low for the ten students who responded to this item. A key element in the LCC media program is the inclusion of the class schedule in the local newspaper prior to telephone registration.

Davenport College advertises heavily, but only a few people

indicated its usefulness. Those who did answer found the advertisements influential. Spring Arbor, which uses a heavy advertising schedule, had the greatest response rate from the students. They found the source influential (4.6).

Studies indicated "Unrequested mail" from colleges had a strong influence on the traditional student, but that was not the case for the adult students who responded to this survey. The item had a 3.8 average influence ranking, with only 34 people indicating it useful. A high proportion (17 of 28) of the Lansing Community College students indicated they had found mail influential, but not strongly so.

"Mail I requested" was intended to be a question where the students could indicate they had contacted the school for written information. Many had made the contact, as it received the highest usage response. Of the respondents in this survey, 71% (111 of 157) of the sample found this useful. The ranking of 4.5 indicates it was the information they wanted, and they were influenced by it. Western Michigan University, in Lansing, was the institution which differed substantially from the group average. Its students found "Requested mail" much lower in influence.

"College guidebooks" caused confusion in the minds of the respondents so the answers to this question are not valid.

"College counselors" were useful to the second highest number of respondents. Aquinas students (with no local counselors) ranked this source very low. Western Michigan

University, with a full time office and staff available in the area, did not rank much higher in the counselor category. In contrast Davenport and Northwood students found "Counselors" were influential. A large number of students responded positively to this source. Both schools have staffs available in the area. Davenport's counselors are at the school, but spend considerable time traveling to the prospective students. Some of Northwood's representatives are Lansing Community College employees. At other schools this item received no exceptional response. Spring Arbor has a full-time office and counseling staff in Lansing. Michigan State is a local school with people available. Central Michigan has one part-time person to help students and prospective students.

Students found college "Faculty" useful (52 responses or 33%). The influence of faculty was rated low by these 52. There was a wide difference of opinion, by schools, of the value of the item as a source of useful information. Students from Davenport, Lansing Community College, Michigan State University and Spring Arbor felt their faculty useful, and were influenced by them. Western Michigan University students ranked the faculty low. Five respondents from Spring Arbor ranked the influence of the faculty highest at 4.6. The next highest faculty ranking was at Davenport, where five students gave their instructors a 4.4 average rank followed closely by Lansing Community College. A large number of Michigan State students felt faculty were influential.

"Admissions personnel" at the colleges were useful. The total number of respondents was 57, the sixth highest. However, the ranking at 4.0 was not high. As was the case with faculty, the perceived influence of the admission people varied by school. The eight Davenport College students who responded ranked the admission people as influential at 4.3. Michigan State University and Western Michigan students surveyed found the admissions personnel of low influence.

College "Visits" were popular and found useful by traditional students, but not by the adults in the sample. "Private counselors" and "Educational brokers" are seldom known in the Lansing area, and only a few students in the sample marked them as a useful source.

Item #35, "Other college provided materials," allowed the student to add any utilized materials from the school which they could not include in the previous categories. Not many students responded to this question. Those who replied found the materials they received helpful. Typical items mentioned include program and curriculum guides, course outlines and schedule booklets. Many could have been included in previous category questions.

The researcher could not draw any conclusions for the three free-form questions because the answers to them were insufficient.

Bonferroni Method Tests for Significance

Average, count, standard deviation and deviation for Items #1 through #35 were the most vital statistics in response to Research Questions 1 and 2. They were computed, and appear in the appendix for the aggregate, and for each school studied. The average Likert scale results, for the major grouping of questions, were simultaneously tested for significance against each other, using the Bonferroni method test for significance for t -distribution. Within each major group, the average Likert value for individual item, was simultaneously tested for significance, against the others in that group. Bonferroni was used because simultaneous significance tests were required (Gill, 1989).

The groups were paired for similarity to each other. The Minimum Significant Difference (MSD) was computed using the Bonferroni method formula at the 95% confidence level, using the Family Wise Type I error rate (FWI) from the table in the Appendix. The net mean difference between each group in the pair was determined. The simultaneous intervals were compared. If the MSD was narrower than the difference between group means, the item was significant, and the researcher 95% confident of a meaningful difference between the groups. The item with the highest mean would be the most important (Gill, 1989; Miller, 1966; 1981).

The following tables compared, and tested for, significance of the major groups and items in the first thirty-five items from

the questionnaire. Significant items are those of greater influence to the respondents. Each major group of sources is tested against each other group. First, the calculated Bonferroni t -comparison is given. Listed under it is the difference between the item or group averages. Each group is tested against each other group. The major groups are shown in Table 4. In later tables, each item within each major group is shown tested against each other item within the group

The first example of this statistical method is in Table 4. "Family" was paired with and compared to "Students." The calculation for Minimum Significant Difference (MSD) from the Bonferroni formula above is .236. The average Likert value for all the items under "Family" was 3.821, and that for "Students" was 4.173. Subtracting 3.821 from 4.173 gives .352. Because the difference in average values is greater than the calculated figure of .236, "Students" are significantly more influential sources than "Family." Comparisons, where the difference in values is significant, are indicated by parenthesis around the difference between item averages, (.352) in this example. The higher average value for "Students" was not due to chance or sampling errors. The balance of the calculations follow this pattern.

In the major groupings, the MSD (computed value) for "Family" compared to "Students," "Mail," and "College" is less than the difference between the groups. (Student mean difference of .352 over "Family" is greater than the computed .236, likewise

"Mail" over "Family" is .357 compared to computed .257.

Table 4.--Comparison among the major information source groups using the Bonferroni method.

	Family Students	Company	Media	Mail	College
Family 3.821&	.236* (.352)#	.245 .227	.265 .056	.257 (.357)	.210 (.279)
Students 4.173		.245 .125	.265 (.408)	.257 .005	.210 .073
Company 4.048			.273 (.283)	.266 .130	.220 .052
Media 3.765				.284 (.413)	.242 (.335)
Mail 4.178					.233 .078
College 4.100					

* .236 is the calculated Minimum Significant Difference (MSD).

& 3.821 is the average Likert value for all items under "Family" in the survey.

(.352) is the difference between the average Likert value for "Family" [3.821] and "Students" [4.173], it is bracketed by parenthesis because the value is significant. Since "student" value is greatest, "students" are significantly more influential.

The mean difference of "College" over "Family" is .279 vs. .210.

These are significant differences. Sources included under

"Students," "Mail" and "College" have greater influence than

"Family." This indicates educational marketers should

concentrate their communications to the students or college over the family.

Examination of the table indicates that "Students" were significant when compared to "Media," but not when compared to "Company," "Mail" and "College" sources. The "Company" sources were found somewhat significantly different than "Media" (.283 difference and .273 value), with the "Company" sources having the greatest mean influence ("Company" 4.048, "Media" 3.765). The figures indicate that a marketing person, having to choose between promoting to students and/or company sources and media, should choose students or company. There was no indicated significance between students and the other groups, including the company. No comparative benefit from either source was discerned.

The results indicated the "Company" sources were not significantly more influential than any other group, and "Media" was of significantly less value than either "Mail" or "Colleges." No significance was found in other pairings in this study.

Within the "Family" group (Table 5), there were few items significantly different from others. "Other relatives" were the only area where respondents made a clear distinction in significance. They were significant, and lower than either "Friends" or "Other family members."

Table 5.--Family information source group, Items #1-6.

	1. Mother	2. Father	3. Oth.Fam.	4. Oth.Rel.	5. Friends	6. Hi Sch
1. Mother 3.828		.648 .114	.579 .257	.799 .685	.541 .327	.872 .172
2. Father 3.7143			.583 .371	.803 .571	.546 .441	.878 .286
3. Other Fam. 4.0851				.748 (.942)	.462 .070	.826 .085
4. Other Rel. 3.1429					.719 (1.012)	.993 .857
5. Friends 4.1549						.799 .155
6. Hi. Sch 4.000						

"Graduates, this college" (Table 6) were significantly different than "Students at another college," as an influence on adult respondents to this survey. In this case the "Graduates" were significantly better as a source than the "Students." No other source can be considered statistically different.

Table 6.--Student information source group, Items #7-11.

	7. Family	8. Graduate	9. Former	10. Other	11. Student
7. Family member, this college 4.350		.583 .088	.584 .222	.580 .252	.616 .493
8. Graduate, this college 4.375			.449 .316	.443 .340	.490 (.585)
9. Former student, this college 4.127				.443 .030	.490 .275
10. Other students, this college 4.098					.485 .245
11. Students at another college 3.853					

No source in the job related category (Table 7) produced a significant difference.

Table 7.--Job related information source group, Items #12-18.

	12. Co-work	13. Union	14. Super	15. Pers.	16. Pers.	17. Mgr.	18. Friend
12. Co-workers 4.158	1.479 .175		.550 .158	.565 .063	1.073 .009	.743 .444	.527 .293
13. Union Rep. 4.333			1.507 .333	1.542 .238	1.767 .166	1.589 .619	1.499 .468
14. Supervisor 4.000				.702 .095	1.112 .167	.799 .286	.602 .135
15. My company Pers. Rep. 4.095					1.159 .072	.852 .381	.684 .230
16. Pers. Rep. other firm 4.167						1.219 .453	1.100 .302
17. Managers, other firm 3.714							.782 .151
18. Other friends 3.865							

In the Media information source groups, shown in Table 8, there was a difference in net influence and usefulness by respondents over other media, but there was no significant statistical difference.

Table 8.--Media information source group, Items #19-25.

	19. Radio	20. TV	21. Paper	22. Story	23. Magaz.	24. Flyer	25. Board
19. Radio 3.692		.931 .308	.815 .383	1.046 .035	1.147 .317	.831 .367	1.194 .264
20. Television 4.000			.726 .075	.979 .273	1.086 .625	.744 .059	1.136 .571
21. Newspaper 4.075				.879 .348	.989 .700	.593 .016	1.040 .646
22. News Story 3.727					1.186 .352	.884 .332	1.232 .298
23. Magazines 3.375						.884 .684	1.002 .054
24. Flyers 4.059							1.056 .630
25. Billboard 3.429							

Table 9 is for the mail group items. Previous information given in this dissertation indicted "Mail" was important to both traditional students, as discussed in the literature, and adult respondents. Within the "Mail" group, "Mail I requested" was significantly different from "College initiated" mail.

Table 9.--Mail information source group, items #26-27.

	26. College Initiated	27. I Requested
26. College Initiated 3.824		.281 (.708)
27. I Requested 4.532		

"College" information sources (Table 10) were shown to be statistically more significant than "Family" or "Media" categories. Within the college group, there was no source which differed statistically. A difference within these sources cannot be predicted with confidence from the information developed in this survey.

Table 10.--College information source group, Items 28-35.

	28. Guide	29. Coll.	30. Priv.	31. Broker	32. Fac.	33. Admiss	34. Visit	35. Other
28. Guides 4.087	.416 .008	.820 .095	1.077 .080	.459 .009	.453 .052	.473 .129	.107 .105	
29. College 4.079		.323 .103	1.074 .088	.453 .017	.446 .044	.467 .121	.571 .113	
30. Private 4.182			1.285 .015	.839 .086	.835 .147	.847 .224	.909 .011	
31. Brokers 4.167				1.091 .071	1.088 .132	1.097 .208	1.146 .025	
32. Faculty 4.096					.486 .061	.506 .138	.604 .096	
33. Admiss. 4.035						.449 .077	.599 .157	
34. Visit 3.958							.615 .234	
35. Other 4.192								

Data Analysis Using Kotler and Fox

Research Questions 1 and 2 were analyzed using the Kotler and Fox model in a relationship matrix and the Bonferroni method to locate statistical significance. The information sources used in college choice are categorized by Kotler and Fox as Marketer (college) and Non-Marketer (not college) Controlled, as well as Personal and Non-Personal.

Students, as purchasers of goods and services, employ both personal and non-personal sources of information. Some of these are controlled by the marketer. The balance are significantly beyond the direct control of the marketing person (Kotler and Fox, 1985).

The four information sources which Kotler and Fox say act on the student are:

1. Personal, Non-marketer Controlled sources, which include family, friends and acquaintances.
2. Non-personal, Non-marketer Controlled sources include mass media, news stories, etc.
3. Personal, Marketer Controlled sources such as sales representatives, counselors, and admission personnel having direct contact with the public and particularly the students.
4. Non-personal, Marketer Controlled sources including advertising and sales promotion. Catalogs, advertisements, mailings, brochures, pens, folders, scarfs, etc., are normally considered typical examples of advertising and sales promotion.

The sources of information from the current study are inserted into the matrix shown on Table 11.

Table 11.--Completed Kotler-Fox data sources matrix.

	MARKETER CONTROLLED	NON-MARKETER CONTROLLED
PERSONAL SOURCES	Mail I requested College Counselors Admissions people Faculty Visits Graduates Former students College mail Family, this school Other students, this school Other college provided material	Friends Co-workers Other family Job related friends Students, other col Supervisors Mother Father Personnel rep. Other relatives Union rep. Other managers HS classmates Private counselors Educational brokers Personnel dep't,
NON-PERSONAL SOURCES	Newspapers Flyers Television Radio Magazines Billboards	College guidebooks News stories

The Bonferroni comparison, of these quadrants of widely

differing information and numbers of sources, compares the significance of the sources involved. In Table 12 each group in the Table 11 matrix was shown tested against each other group. First the calculated Bonferroni t-comparison is given, listing under it the difference between the group averages. In the comparison between Group 1 (Personal, Marketer Controlled) and Group 2 (Non-personal, Marketer Controlled) the figure calculated from the Bonferroni formula above was .106. The Group 1 average Likert score was 4.157, Group 2 was 3.772, subtracted yields a figure of .385 which is greater than the .106. Therefore, the difference in reported usefulness is significant, not due to chance or sampling errors. The balance of the calculations follow this pattern. A discussion follows Table 12.

Table 12.--Kotler-Fox statistical comparison.

GROUP > \\	1	2	3	4
1. Personal, Marketer Controlled Group average 4.157 for 11 sources		.106 (.385)	.006 (.191)	.125 (.250)
2. Non-personal, Marketer Controlled Group average 3.772 for 6 sources			.110 (.194)	.153 .135
3. Personal, Non-marketer controlled Group average 3.966 for 16 sources				.128 .059
4. Non-personal, Non-marketer Controlled Group average 3.907 for 2 sources				

These figures would indicate that the "Personal, Marketer Controlled" sources were, at a 95% confidence level, significantly different than any of the other sources. The "Non-personal, Marketer Controlled" sources could be said to be significantly different than the "Personal, Non-marketer Controlled sources" and of less importance (3.772 is less than 3.966 group average). The comparisons which do not indicate significant differences were the "Non-personal, Marketer Controlled" group compared to the "Non-personal Non-marketer Controlled" group and the "Personal Non-marketer Controlled" group compared to the "Non-personal Non-marketer Controlled" group.

Section B: Research Question 3.

What Would the Respondent Suggest?

Item #39.

In Research Question 3 the researcher asked, "Would the adult student now in school be influenced by the same sources, at the same magnitude, if the individual had to do the choice process again?" Answers given to Item #39 on the survey form answer Research Question 3. The resulting data is shown in Table 13. Table 13 shows the counts the adult respondents gave when asked to mark the five sources they would suggest a friend use, in the friend's choice of college search.

In the first column are ranked the twenty questions respondents indicated important, listing them by rank, based on

number (count) of people who circled that question as important. The second column gives the number of people who indicated that the source would be useful, with the percentage of that number to the total respondents. The source item number (#1-35), and the source name are listed in the last two columns.

Table 13.--Responses for Items #1-#38, first twenty as ranked by frequency of response with percentage to total responses given.

RANK	FREQ/%	ITEM #	SOURCE
1	48/31%	29	College counselor
2	38/24%	8	Graduate, this college
3	38/24%	28	College guidebook
4	30/19%	32	College faculty
5	28/18%	9	Former student, this college
6	28/18%	27	Material I requested
7	27/17%	33	College admissions
8	26/17%	34	College visit
9	24/15%	12	Co-workers
10	21/13%	10	Other student, this college
11	17/11%	5	Friends
12	15/10%	35	College provided material not otherwise listed
13	13/08%	15	My company personnel rep
14	12/08%	24	Handouts/flyers
15	12/08%	26	Mail, college initiated
16	12/08%	30	Private counselors
17	10/06%	21	Newspaper advertisements
18	06/04%	14	My supervisor
19	06/04%	16	Personnel, another firm
20	06/04%	18	Other friends

This ranking gives an indication of what sources a student found useful, now that, having completed their search, they know more about the system and could place the sources into better context. The responses differ from the answers to Items #1-38

because the responses to #39 are what the adults students now feel would be the best source. The answers differ from the sources the respondent named in the first ranking because this item allows a detached look at the search and the sources, permitting a respondent to indicate true personal feelings.

Respondents felt that the best sources of information were "Counselors" at the colleges in which a student was interested. Since this ranked second highest in the sources students said were useful, it correlated well on both lists. The second highest count for Item #39 was "Graduates, this college." This was ninth in count, but second in value on the Item #1-#38 Likert scale tabulation. Following graduates was "College guidebooks," an external source of information.

All college controlled items were the next five highest sources of information students felt were useful. They were "Faculty," "Former students," "Requested material," "Admissions personnel," and "Visits." Ninth on this list is "Co-workers," whom respondents of this survey thought were knowledgeable about available college choices.

These figures reinforce indications in this dissertation that students felt an adult who is choosing an institution of higher education should take advantage of information sources that are familiar (and/or connected with) with the schools.

Section C: Research Question 4.What Did the Students Want To Know and Why?Item #56

In this section of the study is analyzed the answers to the question, "What are the five most useful things you found out about this college before choosing to attend?" This analysis serves to answer Research Question 4. "What do adults consider most useful to know about a school?" Table 14 summarizes the findings. The most important information, the adult respondents in this survey wanted to know, was when and where they could take classes.

According to the survey, time of classes was vital to Aquinas, Central Michigan and Western Michigan University graduate or higher level students. Responses indicated time is not important to the Michigan State University student.

Location was important to Central Michigan and Western Michigan respondents taking classes in the downtown area. Lansing Community College students take classes in the same geographical location, but the LCC classes surveyed were in off-site locations. There was a heavier response regarding location from these LCC students than from the CMU and WMU students, because they desired classes close to home and/or not in the center city area.

School reputation, including faculty and advisor's reputation, was the next greatest influence mentioned by the students. Reputation was not useful knowledge for Lansing

Community College students before making their college selection decision. It was important to the four-year school students included in the survey.

Table 14.--Useful information desired by respondents.

RANK	ITEM	TOTAL COUNT
ACCEPTANCE		
17	Admission Requirements	7
11	Accepts prior work	16
FINANCIAL		
2	Cost	39
15	Financial aid available	11
17	Whether company pays	7
PROGRAM		
1	Location	57
2	Night classes available	39
4	Class availability	31
6	Curriculum	22
8	Time classes are held	20
9	Program available	17
9	Time to complete (long/short)	17
13	Offerings in work area	14
14	Flexible	13
16	For adults/working students	10
17	Transferable	7
20	Small classes	6
REPUTATION		
5	Reputation of the School	25
6	Advisor's influences	22
12	Reputation of the faculty	15
20	Suggested by friend, boss	6
(arbitrary cutoff of 6 responses)		

Available class/program information was important to some students participating in this survey. Information on class

availability was important to Western Michigan University students. Program and curriculum offerings were important to the Michigan State University students. Most of the students in the survey were in a specialized graduate program.

Acceptance questions were important to some students. Northwood Institute and Spring Arbor College give bachelor degrees in one year to students who have substantial prior work. They have open admissions, accept any credits, and allow credit for work experience. Over one half of the Northwood students mentioned acceptance of prior work as a key factor influencing their decision to attend.

Financial factors had a high response rate. Most respondents listed cost as a key influence. Those paying their own tuition seldom indicated "cost" as important. Financial aid availability is a similar item. The primary finance method for 53 of the students was themselves, and 33 received direct tuition reimbursement from their firms. Others appear to have financed their education by these means, but their wording was not clear. Financial aid was a factor to consider and thus an influence, but it did not appear to prevent those wanting to attend from doing so. Only a small number of people listed tuition reimbursement by their employer as an influence on their attendance.

Several other key influences were given. The school's flexibility was a term used by many students at Aquinas, CMU, LCC, Northwood and Spring Arbor. This could mean scheduling flexibility, flexibility to meet the needs of the students in

classes and timing, or the school's willingness to accommodate the problems of the student.

Transferability of credits to other institutions was of importance to some students. This was especially important to the community college student interested in further work at another institution.

Small classes were important to some people. The local major university has very large classes at all levels. Many students at other schools were attending an extension with small classes.

The last significant item, listed as an influence on attendance, was the class, college or program was suggested by someone of significance to the students, especially their supervisor. The persons listing this did not correlate with those who listed their supervisor as a major influence in Question #14. It showed a feeling by many students that they want to do what the supervisor wanted.

Miscellaneous Information

In this section is provided information on questions that are not discussed in other parts of this paper.

Table 15 shows the 132 people who answered this question attended an aggregate total of 376 colleges, implying the average adult student in this survey has attended 2.4 colleges (376 divided by 132); or two colleges prior to enrolling in their current school. Almost 1/2 (15) of the

students from Lansing Community College attended no previous schools. Seven of the twenty Michigan State University graduate students reported that they attended no other school.

Table 15.--Item #43, number of colleges the adult student has attended.

NUMBER OF COLLEGES ATTENDED	NUMBER OF PEOPLE ATTENDING	TOTAL
1	32	32
2	46	92
3	48	144
4	22	88
5	4	20
TOTAL INDICATING	132	376
none indicated = 25		
TOTAL SAMPLE	157	

The survey results shown in Table 16 indicate a high proportion of the adult students had parents who had not attended college, making these adult students first generation college matriculants.

Table 16.--Parental higher education.

37 respondents reported both parents attended college		
17 reported Mothers attended college, father did not		
21 reported Fathers attended college, mother did not		

	Schools attended	
	Father	Mother

CMU	4	3
LCC	2	1
U of M	2	4
MSU	5	1
WMU	2	4
Multiple	2	1
Other	20	16

All six students who said yes to the question in Table 17 had parents who attended college. One adult student in the survey, attended a college where one of his parents had gone; the others gave no indication which school their parents attended. The parents who attended college were there an average of 5.11 years.

Table 17.--Parents who influenced choice of college.

INFLUENCED?	NUMBER
No	140
Yes	6
No answer	11

There were 75 females, 80 males and two undecided. Lansing Community College and Central Michigan University had the highest proportion of female students (57 and 61%). Spring Arbor and Western Michigan had the highest percentage of males (60 and 62%). Michigan State University had 50% male, 50% female and one undecided. No difference was noted in the response ranking of any question in the survey.

Table 18 indicates a wide age spread in this group, ranging past 51 years of age. Twenty-three percent were above 39 years old. A large number of the older students were at Lansing Community College and Northwood Institute. Michigan State students tended to be the youngest group, the majority below thirty-five. Spring Arbor students were spread across the age bands, but none were under 25. No correlation between age and information sources in the first 39 survey items was found.

Table 18.--Age of respondents.

SCHOOL	AGE							
	Not Given	21-25	26-30	31-35	36-40	41-45	46-50	51+
Aquinas	2	0	3	2	5	3	2	
CMU	2	5	3	6	2	2	3	
Davenport		1	5	2	6	1	1	1
LCC		6	10	3	5	4		
MSU	3	3	4	5	1	3	1	
Northwood	1	2	2	5	2	5	2	
Spring Arb	4	0	4	3	4	3	2	
Western MI		2	2	3	3	0	3	
TOTALS	12	19	33	29	28	21	14	1

Table 19 gives the ethnic background of respondents.

Table 19.--Ethnic background.

Other	3
Black	15
Asian	2
White	126
Hispanic	3
Not given	7

Table 20 gives the county of residence of the respondents. Ingham, Eaton and Clinton counties with some of Shiawassee county comprise the Lansing trading area. One hundred and twenty five, (80%) of the students surveyed, lived in various incorporated and unincorporated areas of these counties. The students from Calhoun County were generally in one cohort group.

Table 20.--City/county of residence.

Ingham	88
Eaton	19
Clinton	13
Shiawassee	7
Calhoun	5
Other	12

The data shown in Table 21, was requested to determine the breadth of colleges considered by the adult students in this area. The majority of students only looked at schools in the Central Michigan area.

Table 21.--Other colleges considered.

COLLEGE	PERSONS WHO CONSIDERED IT
Michigan State University	44
Central Michigan University	38
Lansing Community College	37
Western Michigan University	24
Davenport College	21
Northwood Institute	19
University of Michigan	15
Aquinas College	14
Ferris State University	13
Spring Arbor College	11

Summary

The data obtained in the study was discussed in several ways. Responses were explored in descriptive terms, to look at both usefulness (Research Question 1), and influence (Research Question 2) on the adult student making their choice of college decisions. Statistical analysis established the significance of the items in relation to each other. An educational marketing matrix of the data, in relation to its use, put the information into forms usable by professional recruiters. The third research question, which asked what the student would suggest to someone starting their search, was answered.

Replies to the survey item on what the student wanted to know were the base for discussion of Research Question 4.

Miscellaneous information, derived from the survey, completed the chapter. Chapter V includes conclusions and recommendations.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

A study of the sources of information useful and influential to adult students in their choice of college has been presented in this dissertation. Explored were the sources of information a student found influential, and those sources they felt would be most influential if they were to make the choice-of-college decision again. The study had a marketing orientation. In the current era of overcapacity and lack of students, marketing can fill seats available at many institutions of higher education in the United States. This study of information from adult students now in school and how they arrived at their choices was designed to inform educators as they develop plans, make decisions and take actions.

The four research questions that guided the collection of data were:

1. What sources of information do adult students find useful in their college choice plans, decision and actions?
2. Which source(s) do adults find most influential?
3. Would the adult student now in school be influenced by the same sources, at the same magnitude, if the individual had to undergo the choice process again?

4. What things do adults consider useful to know about a school?

To answer these questions a survey was designed, and administered to one hundred and fifty seven adult students currently attending higher education classes, in the Lansing, Michigan area. The responses were tabulated, ranked and analyzed.

In general the adult students who answered the survey indicated they looked to the familiar when they made their choice of college search. Friends and some family members are examples of these useful sources. They also found valuable sources affiliated with the school, such as mail requested from the college, former students, counselors and admissions persons. Media, such as billboards and television, which are often used by the schools, were not thought to be useful sources of information by the study respondents.

Conclusions

Research Question 1.

What sources of information do adult students find useful in their college choice plans, decision and actions?

College-provided material was useful to the adult students in their choice of college search. Material that the student requested was a source of information involved in the decision making process. The figures indicate students found the material useful, and were influenced by it. College counselors were

utilized by a large number of adult students. Students at schools that have full time office and staff in the area, ranked them useful and influential. Other college employees, such as admissions personnel and faculty, were often useful.

Data in this survey indicated the average adult student did not employ a wide array of information sources. There were indications they did not spend time on this search. It could be concluded that adults who are willing to take the time and effort to attend school are busy people with many activities. To accomplish specific objectives, they become action centered. They tend to do a search through immediately available sources of information, and they make decisions based on perfunctory data gathering.

The typical adult looked at/looked for few sources of information, usually variations of the same major source group. They often accept the first school appearing to provide a program which meets their perceived requirements. The average student found just 7.5 sources of information useful.

Research Question 2.

Which source(s) do adults find influential?

School employees, such as counselors, are important information sources, with substantial influence on potential students. Individuals with first hand knowledge of the school, such as former students and graduates, influenced prospective enrollees.

Adults searched through sources familiar to them. They are

drawn to the schools by advertisements and similar sources after they have made the decision to attend higher education. Calls to the college yielded information. When a person requests information, they are a choice prospect with a high propensity to purchase. Telephone answerers, counselors, admissions people, all those who have contact with prospects, should provide maximum assistance of a credible nature to prospective students.

The study results indicated individuals known to the student, but not school controlled or relatives, may influence adults to attend a specific school. Friends ranked high for influence, just under requested mail and college counselors. Further down were co-workers, graduates and other students.

Adults found newspapers, flyers, supervisors and some family members/acquaintances influential sources in their college search. They learned a school exists from information sources such as advertisements and then they contacted the school for more information.

Many information sources thought useful to the traditional student were not of value to the adult and therefore, did not warrant effort by the school in adult recruitment. Adults go to school when ready. Mothers, fathers and other family members did not influence adult students, as they do traditional aged students. If a family member is a friend and/or is attending the school, they will have greater credibility and interest for the adult student.

Promotional media, other than newspaper advertisements and

flyers, were of little value to the adults responding to the survey. Communication methods such as television, magazine, billboard, radio and public relations were not useful. This finding suggested that schools should not spend money on these sources.

Company personnel may be influential, but did not influence adults in this study. These students did not indicate they approached work sources, such as supervisors, personnel representatives, union representatives and managers at either the adult's or other organizations. By marketing to these high influence sources, schools may be able to obtain greater indirect value.

Useful sources varied by schools, but there was no difference by program level.

Research Question 3.

Would the adult student who is now in school be influenced by the same sources, at the same magnitude, if the individual had to do the choice process again at this time?

Research Question 1 asked what sources were useful, while Question 3 asks what sources the students would find useful if they did the search again. There is some agreement as to the most influential items in each list. Former students of the schools were a viable source, more useful than friends.

According to the respondents, the best source of information for students interested in a particular college is the counselors at that college. College admissions people, similar to college

counselors, would be another source of useful information. Graduates of a college may be a valuable information source for that college. Faculty, can be important. College visits, co-workers and other students at the college complete the top ten items in the list of what adult college students recommend to others who are making their choice of college search. These are significant information sources, influencing potential students. Indications are higher education marketing personnel should use them in the school's enrollment efforts.

Research Question 4.

The final research question asked, "What things do adults consider most useful to know about a school?" The survey answers indicated many useful items.

Adult respondents to this exploration indicated they have clear ideas of what they need to know about a school. They were not looking for financial aid or admission requirements. Adults want to know where and when classes are held, and by extrapolation, what the school can do for the adult student. Location was a vital consideration to many people. Educators working with adults must find classrooms that appeal to the student.

Cost is important, as reported in this survey, but financial aid is of low value to the adults as adult students in the current era are not eligible for financial aid outside of their own or company resources (tuition reimbursement).

The adults in this study had much in common with the

traditional students in the literature. Adults sought information about the schools of which they were aware, and which they felt could provide them with the means to accomplish their ends. Publications were sometimes useful. Respondents talked to the employees of the school, as do younger student prospects. Adults do not utilize parents, and may not be affected by personal letters from the schools.

Personnel marketing to adults should utilize the present adult students to help locate and motivate other potential adults. School personnel should be trained, familiar and willing to satisfy the needs of the adults. Marketing personnel should know their market. Understanding the differences and similarities, between adults and traditional students, can make marketing effective and efficient to each group.

Application of Study Data to Kotler and Fox

Kotler and Fox, in their discussion of the information model from William Ihlanfeldt classify information sources into four groups. The model (given in Chapter IV) supports the findings that the school and its professional staff are the largest influence on the adult student's choice of college.

Personal, marketer controlled sources of influence, including the students and graduates of the school, are important to adults selecting a school. This conclusion has validity as the students and graduates are those who have been influenced by the college. The Ihlanfeldt model confirms that

the most influence on the student in this model is the professional staff talking to the potential student. This was shown in the current study.

The personal, non-marketer controlled group in Kotler-Fox includes family, friends and acquaintances. The current research indicates that some sources in this group had a significant effect on the adult's choice, and some did not. Influence of co-workers was ranked high by respondents. Friends also were influential. The balance of the personal sources of information were low on all lists.

Friends who are known by the individual but not under control or influence by the school are personal non-marketer controlled sources of information. Friends or family who have attended the school are personal but since they have been influenced by the school are here considered marketer controlled. These friends tended to be trusted and knowledgeable in their opinion of the school's value.

The non-personal, non-marketer controlled group seems to have had little effect on the students surveyed as well as those in the Kotler-Fox text. The only direct figures in this study are from newspaper stories, which were in twenty-ninth place among sources of information useful to students.

Recommendations for Further Study

Several questions surfaced during this study which are unanswered and beyond the scope of this study. Future study

would help educators enhance their marketing decision making abilities.

1. What is the time elapsed from an adult's initial interest in education to the decision to attend school?

2. Why did the adults choose college over other alternatives to achieve their purpose at this point in their lives? One would need to gather data on their need/want/purpose, for which college is the satisfier.

3. Studies have indicated adults employ college classes to satisfy ulterior motives, which they do not feel they can articulate in our society (Cross, 1981, Houle, 1973). Classes are a laudable reason for leaving the children and spouse for an evening or Saturday morning, alleviating guilt and gaining strokes from peers and family.

4. Why did the adult chose one institution over other available schools? What are the parameters an adult uses in their choice-of-college decisions?

5. Most of the adults in this study were first generation college students, who did not have parental role models to emulate. What will be the results on their children who see parents in this non-traditional role? Will this provide incentives for these children to attend and better their secondary and higher eduction?

6. What are the effects of the media on the adult student's choice process? This study indicated little influence, yet some schools use the source heavily, particularly newspaper

advertising. Do the media bring adults into the schools for personal sales to implement the enrollment? Or is media a waste of money needed elsewhere?

7. This survey indicated mail requested by the students was a strong influence in the choice process. Is it the mail or some other aspect which affects the adult? Does the mail do any good?

8. What are the total effects of graduates of a school on a prospective adult student? Should colleges involve graduates in the recruiting programs for other adults? Can the integrity of all concerned be ensured and not tarnished? Would former students yield benefits or disadvantages to a marketing program? If beneficial, how can a school determine which former students would be positive, and which negative towards the school?

9. There were indications that adults, who employed the company and union representatives, found these representatives strong, positive influences. Not many adults found these sources useful. How and when should institutional marketers utilize these sources to assist the prospective student in their choice process to pick the marketer's school?

Summary

This is a marketing study which sought to determine the sources of information adults found useful in their choice process. Information added to the literature may enhance the availability of data to help higher educators understand the sources which influence the adult student. The data may prevent

wasted attempts to reach prospective adult students. Many people, involved with marketing, recruiting, and enrollment, need to reach prospects to inform them about their institution. The information provided in this study may help these individuals, and their organizations, be more effective, efficient and productive by using only information sources found to be useful and influential to adults.

APPENDICES

APPENDIX A

QUESTIONNAIRE

HIGHER EDUCATION CHOICE SURVEY - 1989

Rev7/11

Dear Student:

Please complete the attached survey form and deposit it in the class envelope. It will be used to help determine how adult students in the area choose a college. People from classes at several schools are being surveyed to gather data from which schools can make plans, decisions and actions to better serve your needs and desires. The form will take you approximately 10 minutes to complete.

Your participation is entirely voluntary and you may choose to participate or not as you wish. It will have no effect on your activity or grade in this class. DO NOT put your name on the form. The completed forms will be collected as a group and tabulated with all those received from other classes. All results will be treated with strict confidence and the subjects will remain anonymous in any report of research findings. You may request the results and final report, within the restrictions above.

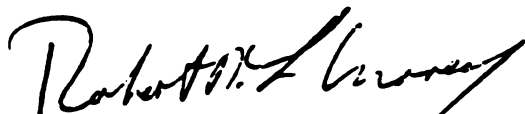
You indicate your voluntary agreement to participate by completing and returning this questionnaire.

INSTRUCTIONS: Please answer the following questions. If you do not care to answer any question leave it blank. Feel free to make additional comments on the back or add additional sheets, your ideas are valuable to this project.

Unless otherwise indicated, where "college" is used, consider it to mean the school which sponsors the class you are now attending. Please do not erase any answer after you put it down, if you change your mind draw a line through your first answer and add the second.

I am a doctoral student in Adult and Continuing Educational Administration at Michigan State. The information we are collecting will be used in my dissertation which is titled, "Sources of Information Used by Adult Students in Their Choice of an Institution of Higher Education". If you wish to discuss this personally or have any questions please feel free to call me at 517-323-3210.

Thank you for your assistance.



Robert D. LaMoreaux

PART I - SOURCES OF INFORMATION

1 - 40. How much did the following sources of information prove useful and/or influence your decision to attend this school or class (consider only those with which you have had contact in your most recent college experience)?

Check the space corresponding to your rating of its usefulness, to you, of each source. Write "NA" if Not Applicable to your latest college experience.

Very Useful - Useful - Not Useful

FAMILY/FRIENDS

1 Mother	—	—	—	—	—
2 Father	—	—	—	—	—
3 Other family members	—	—	—	—	—
4 Other Relatives	—	—	—	—	—
5 Friends	—	—	—	—	—
6 High School Classmates	—	—	—	—	—

STUDENTS

7 Family member, this college	—	—	—	—	—
8 Graduate, this college	—	—	—	—	—
9 Former student, this college	—	—	—	—	—
10 Other students, this college	—	—	—	—	—
11 Any at other college	—	—	—	—	—

JOB RELATED

12 Co-workers	—	—	—	—	—
13 My union representatives	—	—	—	—	—
14 My supervisor	—	—	—	—	—
15 My company personnel rep	—	—	—	—	—
16 Personnel Dept, another firm	—	—	—	—	—
17 Managers, another firm	—	—	—	—	—
18 Other friends	—	—	—	—	—

MEDIA

19 Radio	—	—	—	—	—
20 Television	—	—	—	—	—
21 Newspaper advertisements	—	—	—	—	—
22 Newspaper stories	—	—	—	—	—
23 Magazines	—	—	—	—	—
24 Handouts/wall flyers	—	—	—	—	—
25 Billboards	—	—	—	—	—

MAIL

26 College initiated	—	—	—	—	—
27 I requested	—	—	—	—	—

47. Did mother's or father's attendance influence your choice of college? Yes No

48. Currently working?.....No _____
 Full time _____
 Part time _____

49. What is/was your job function? _____

PART III - DEMOGRAPHICS

50. Female _____ Male _____

51. Age _____

52. Ethnic background: American Indian _____ Black _____
 Asian _____ White _____ Hispanic _____ Other _____

53. City of residence _____ County _____

PART IV - SEARCH INFORMATION Please answer questions 54-57 in respect to only the current college experience.

54. Where did you first learn about the college you are attending?

55. Please list each college from which you have received materials or had contacts and give who initiated the contact? (use back of sheet if necessary)

College	Initiated by	
	College	Me
a. _____	_____	_____
b. _____	_____	_____
c. _____	_____	_____
d. _____	_____	_____
e. _____	_____	_____

56. What are the five most useful things you found out about this college before choosing to attend?

1.

2.

3.

4.

5.

57. What other activities or sources of information did you use in your search for a college/university?

58. Please provide any additional comments you wish regarding the adult student college selection process in Lansing and the information used in the decision.

When you have completed the survey form please leave it in the class envelope. Thank you for your time and effort.

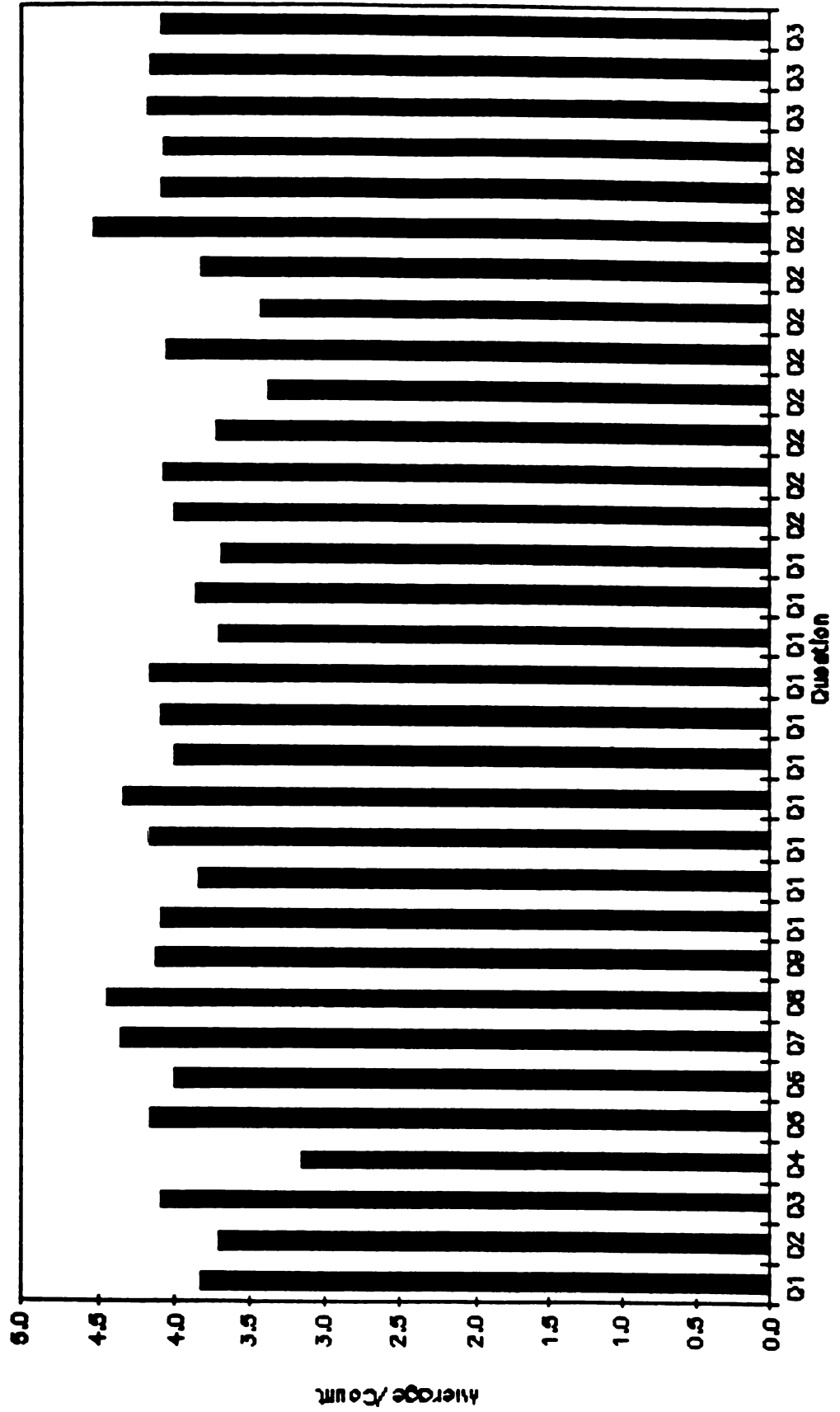
APPENDIX B

ANALYSIS OF QUESTIONS WITH CHARTS

School All Schools - All Records
Number of records 157

Question	Average	count	Std Dev.	Variance
Q1	3.8276	29	0.9123	0.8323
Q2	3.7143	28	0.8806	0.7755
Q3	4.0851	47	0.871	0.7587
Q4	3.1429	14	0.5151	0.2653
Q5	4.1549	71	0.8333	0.6943
Q6	4	11	0.8528	0.7273
Q7	4.35	20	0.9097	0.8275
Q8	4.4375	48	0.7043	0.4961
Q9	4.1277	47	0.8409	0.7071
Q10	4.098	51	0.8226	0.6767
Q11	3.8529	34	0.7329	0.5372
Q12	4.1579	57	0.812	0.6593
Q13	4.3333	3	0.9428	0.8889
Q14	4	32	0.866	0.75
Q15	4.0952	21	0.8677	0.7528
Q16	4.1667	6	0.6872	0.4722
Q17	3.7143	14	0.6999	0.4898
Q18	3.8649	37	0.8435	0.7115
Q19	3.6923	13	0.7216	0.5207
Q20	4	18	0.8165	0.6667
Q21	4.075	40	0.8771	0.7694
Q22	3.7273	11	0.4454	0.1983
Q23	3.375	8	0.4841	0.2344
Q24	4.0588	34	0.8725	0.7612
Q25	3.4286	7	0.4949	0.2449
Q26	3.8235	34	0.8565	0.7336
Q27	4.5315	111	0.6952	0.4832
Q28	4.087	69	0.8468	0.7171
Q29	4.0789	76	0.774	0.599
Q30	4.1818	11	0.936	0.876
Q31	4.1667	6	0.8975	0.8056
Q32	4.0962	52	0.7406	0.5484
Q33	4.0351	57	0.7939	0.6303
Q34	3.9583	48	0.8406	0.7066
Q35	4.1923	26	0.8779	0.7707
Q36	0	13	0	0
Q37	0	1	0	0
Q38	ERR	0	ERR	ERR

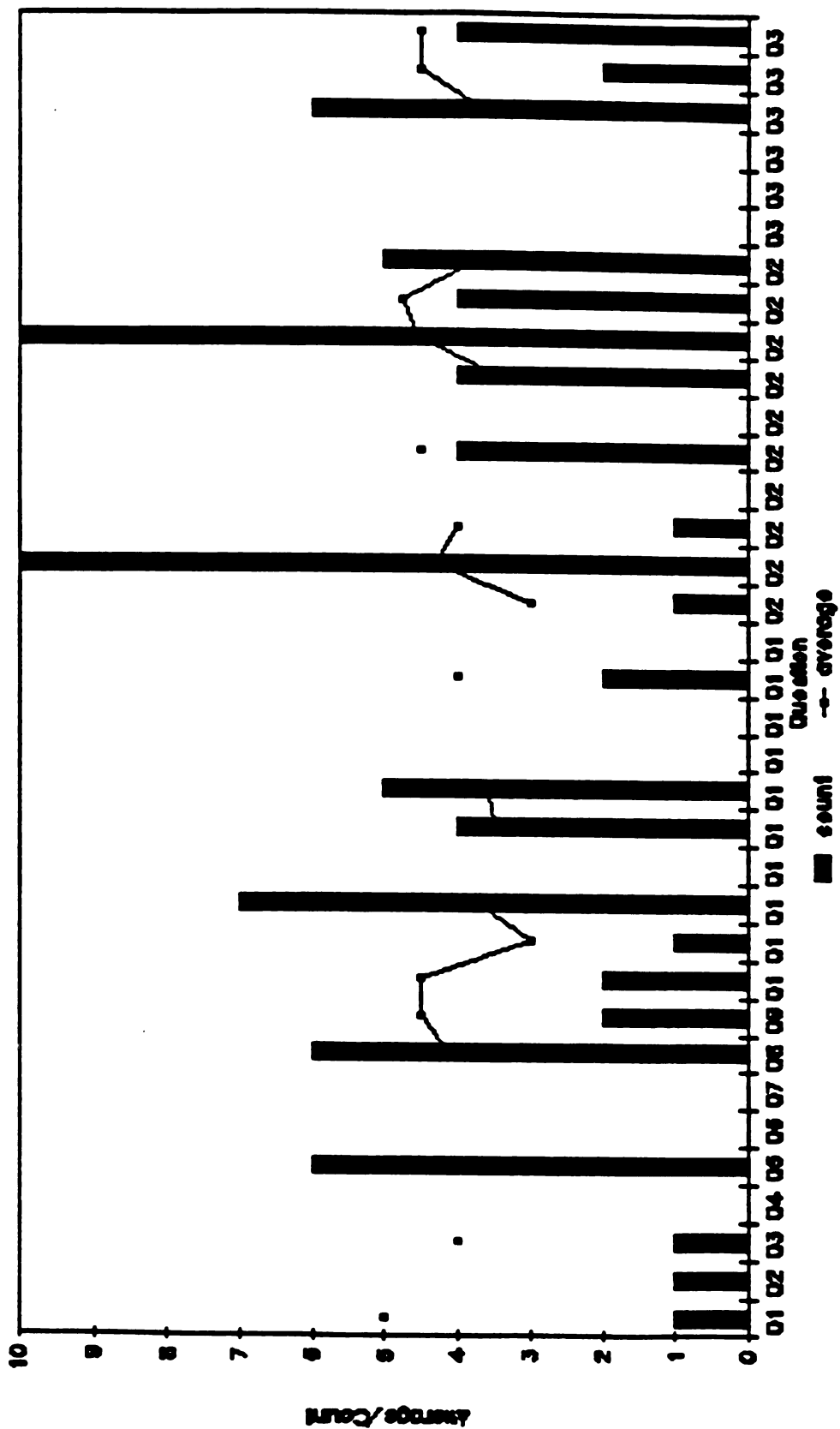
All Schools All Adults



School	Aquinas	17			
Number of	records				
Question		Average	count	Std Dev.	Variance
Q1		5.0000	1.0000	0.0000	0.0000
Q2		ERR	0.0000	ERR	ERR
Q3		4.0000	1.0000	0.0000	0.0000
Q4		ERR	0.0000	ERR	ERR
Q5		4.0000	6.0000	0.5774	0.3333
Q6		ERR	0.0000	ERR	ERR
Q7		ERR	0.0000	ERR	ERR
Q8		4.1667	6.0000	0.6872	0.4722
Q9		4.5000	2.0000	0.5000	0.2500
Q10		4.5000	2.0000	0.5000	0.2500
Q11		3.0000	1.0000	0.0000	0.0000
Q12		3.7143	7.0000	0.4518	0.2041
Q13		ERR	0.0000	ERR	ERR
Q14		3.5000	4.0000	0.8660	0.7500
Q15		3.6000	5.0000	0.8000	0.6400
Q16		ERR	0.0000	ERR	ERR
Q17		ERR	0.0000	ERR	ERR
Q18		4.0000	2.0000	1.0000	1.0000
Q19		ERR	0.0000	ERR	ERR
Q20		3.0000	1.0000	0.0000	0.0000
Q21		4.3000	10.0000	0.9000	0.8100
Q22		4.0000	1.0000	0.0000	0.0000
Q23		ERR	0.0000	ERR	ERR
Q24		4.5000	4.0000	0.5000	0.2500
Q25		ERR	0.0000	ERR	ERR
Q26		3.5000	4.0000	0.5000	0.2500
Q27		4.6000	10.0000	0.4899	0.2400
Q28		4.7500	4.0000	0.4330	0.1875
Q29		3.8000	5.0000	0.4000	0.1600
Q30		ERR	0.0000	ERR	ERR
Q31		ERR	0.0000	ERR	ERR
Q32		ERR	0.0000	ERR	ERR
Q33		3.6667	6.0000	0.7454	0.5556
Q34		4.5000	2.0000	0.5000	0.2500
Q35		4.5000	4.0000	0.5000	0.2500
Q36		0.0000	4.0000	0.0000	0.0000
Q37		0.0000	1.0000	0.0000	0.0000
Q38		ERR	0.0000	ERR	ERR

Aquinas College

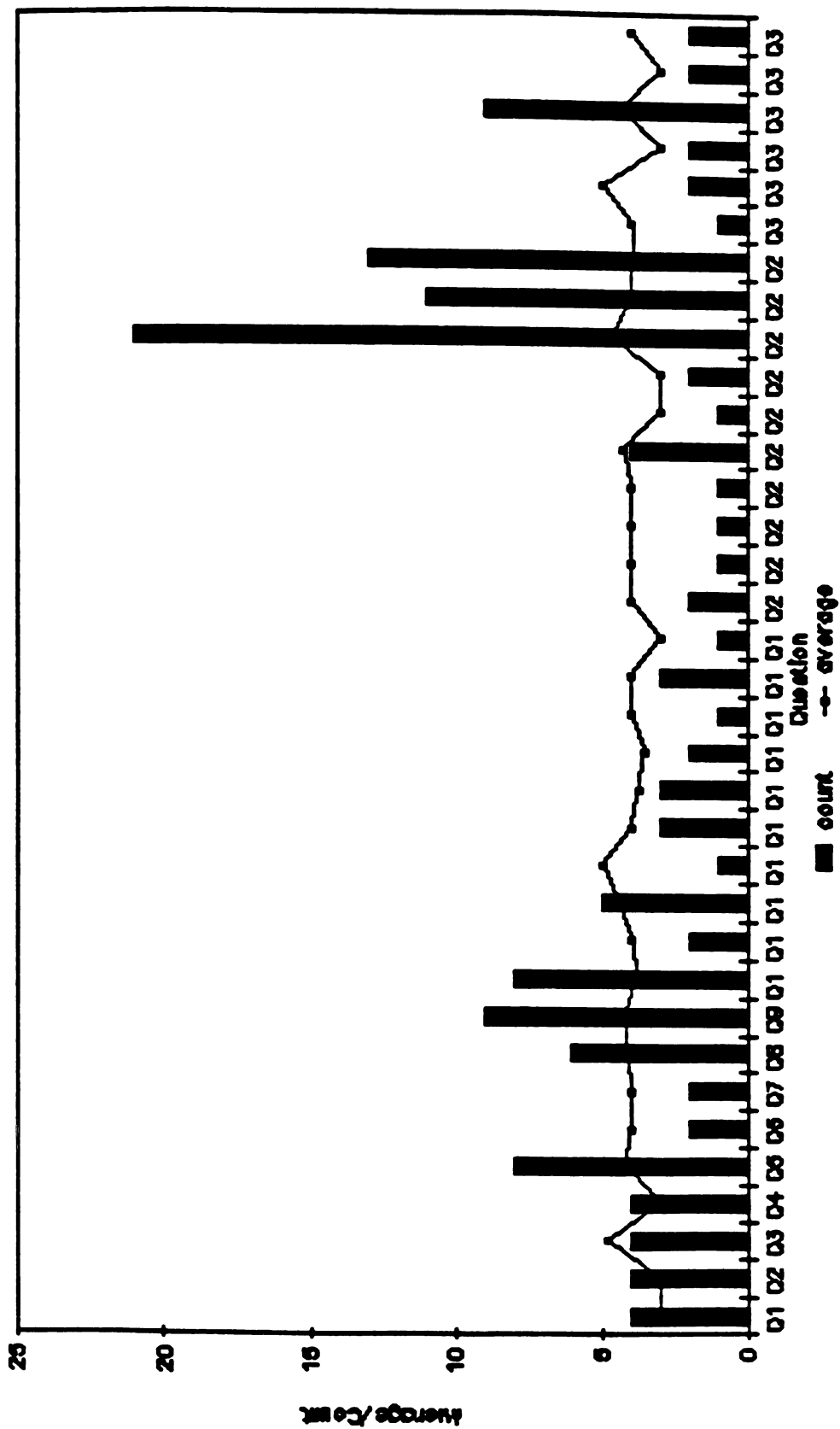
Masters of Management



School	CMU	23			
Number of records					
Question	Average	count	Std Dev.	Variance	
Q1	3	4	0	0	
Q2	3	4	0	0	
Q3	4.75	4	0.433	0.1875	
Q4	3	4	0	0	
Q5	4.125	8	0.927	0.8594	
Q6	4	2	1	1	
Q7	4	2	1	1	
Q8	4.1667	6	0.6872	0.4722	
Q9	4.1111	9	0.8749	0.7654	
Q10	3.75	8	0.8292	0.6875	
Q11	4	2	1	1	
Q12	4.4	5	0.8	0.64	
Q13	5	1	0	0	
Q14	4	3	0.8165	0.6667	
Q15	3.6667	3	0.9428	0.8889	
Q16	3.5	2	0.5	0.25	
Q17	4	1	0	0	
Q18	4	3	0.8165	0.6667	
Q19	3	1	0	0	
Q20	4	2	1	1	
Q21	4	1	0	0	
Q22	4	1	0	0	
Q23	4	1	0	0	
Q24	5.6	5	2.8	7.84	
Q25	3	1	0	0	
Q26	3	2	0	0	
Q27	4.5714	21	0.6598	0.4354	
Q28	4	11	0.8528	0.7273	
Q29	3.9231	13	0.7298	0.5325	
Q30	4	1	0	0	
Q31	5	2	0	0	
Q32	3	2	0	0	
Q33	4.3333	9	0.6667	0.4444	
Q34	3	2	0	0	
Q35	4	2	1	1	
Q36	0	2	0	0	
Q37	ERR	0	ERR	ERR	
Q38	ERR	0	ERR	ERR	

Central Michigan University

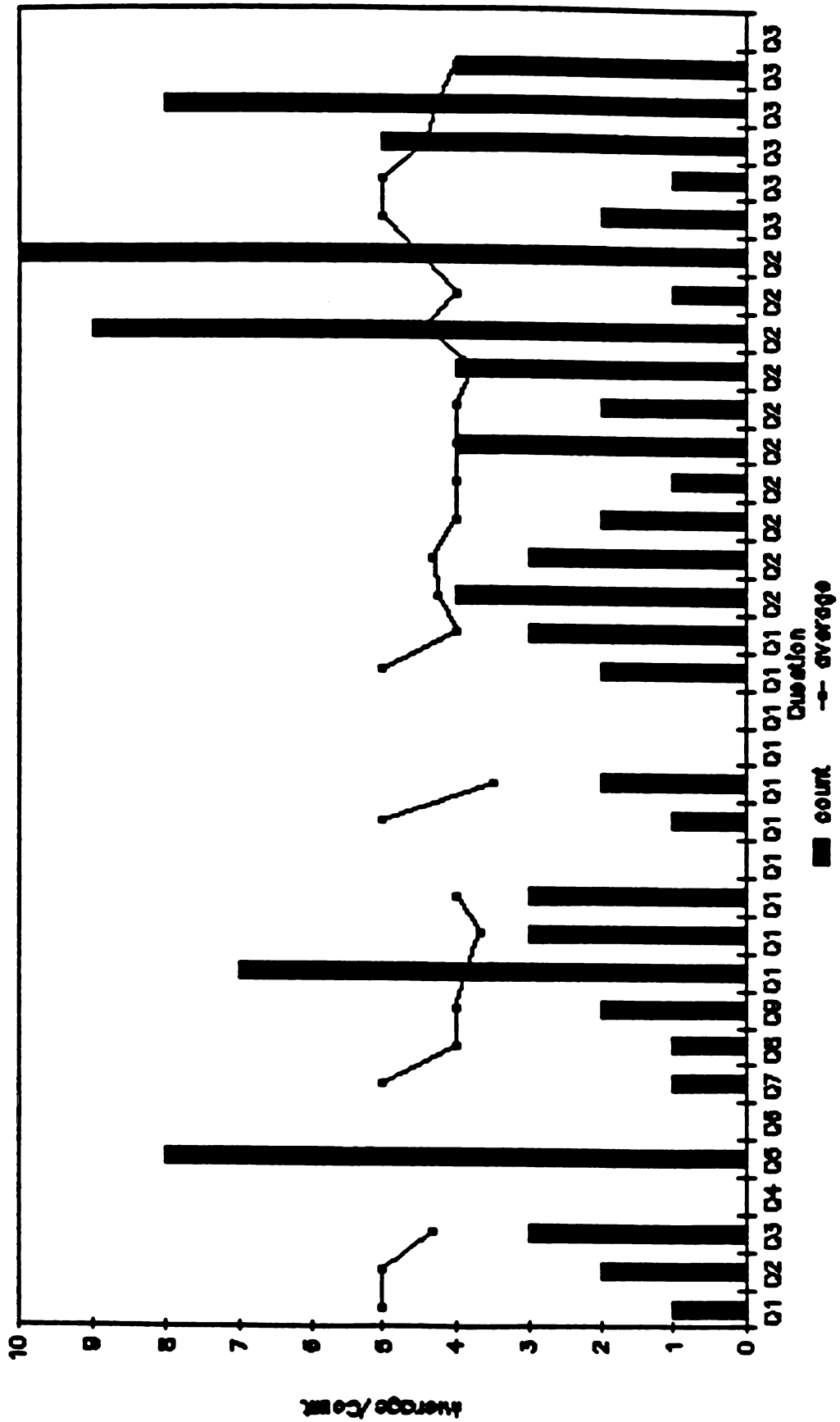
MS In Administration



School	Davenport	17			
Number of records					
Question	Average	count	Std Dev.	Variance	
Q1	5	1	0	0	
Q2	5	2	0	0	
Q3	4.3333	3	0.9428	0.8889	
Q4	ERR	0	ERR	ERR	
Q5	4.125	8	0.927	0.8594	
Q6	ERR	0	ERR	ERR	
Q7	5	1	0	0	
Q8	4	1	0	0	
Q9	4	2	1	1	
Q10	3.8571	7	0.833	0.6939	
Q11	3.6667	3	0.4714	0.2222	
Q12	4	3	0.8165	0.6667	
Q13	ERR	0	ERR	ERR	
Q14	5	1	0	0	
Q15	3.5	2	0.5	0.25	
Q16	ERR	0	ERR	ERR	
Q17	ERR	0	ERR	ERR	
Q18	5	2	0	0	
Q19	4	3	0.8165	0.6667	
Q20	4.25	4	0.8292	0.6875	
Q21	4.3333	3	0.4714	0.2222	
Q22	4	2	0	0	
Q23	4	1	0	0	
Q24	4	4	0.7071	0.5	
Q25	4	2	0	0	
Q26	3.75	4	0.8292	0.6875	
Q27	4.4444	9	0.6849	0.4691	
Q28	4	1	0	0	
Q29	4.5	10	0.5	0.25	
Q30	5	2	0	0	
Q31	5	1	0	0	
Q32	4.4	5	0.8	0.64	
Q33	4.25	8	0.8292	0.6875	
Q34	4	4	0.7071	0.5	
Q35	ERR	0	ERR	ERR	
Q36	0	2	0	0	
Q37	ERR	0	ERR	ERR	
Q38	ERR	0	ERR	ERR	

Davenport College

Business

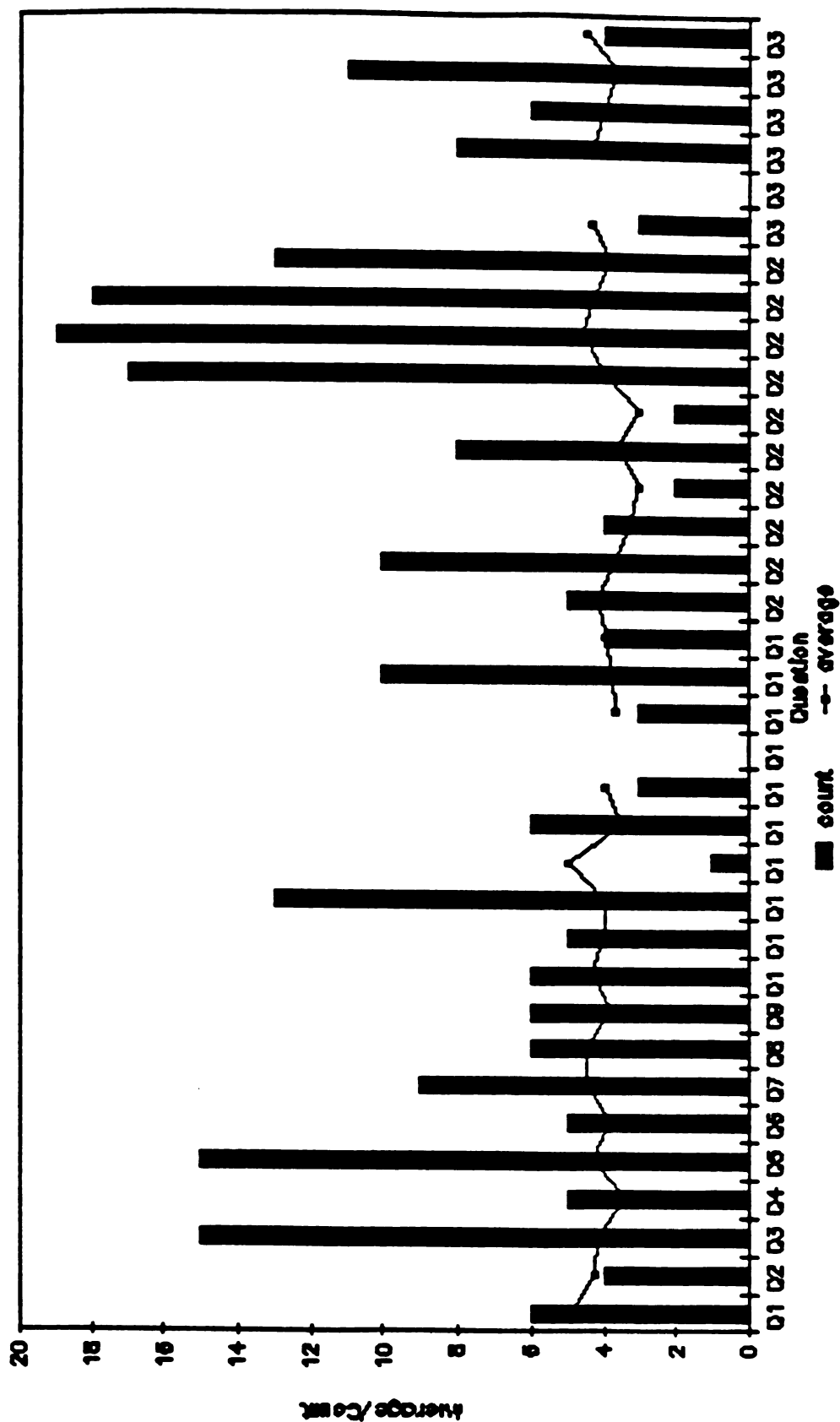


School Lansing Community College
 Number of records 28

Question	Average	count	Std Dev.	Variance
Q1	4.8333	6	0.3727	0.1389
Q2	4.25	4	0.8292	0.6875
Q3	4.1333	15	0.8844	0.7822
Q4	3.4	5	0.8	0.64
Q5	4.3333	15	0.7888	0.6222
Q6	3.8	5	0.7483	0.56
Q7	4.4444	9	0.8315	0.6914
Q8	4.5	6	0.7638	0.5833
Q9	3.8333	6	0.8975	0.8056
Q10	4.3333	6	0.7454	0.5556
Q11	4	5	0.8944	0.8
Q12	4	13	0.9608	0.9231
Q13	5	1	0	0
Q14	3.5	6	0.7638	0.5833
Q15	4	3	0.8165	0.6667
Q16	ERR	0	ERR	ERR
Q17	3.6667	3	0.4714	0.2222
Q18	3.8	10	0.8718	0.76
Q19	4	4	0.7071	0.5
Q20	4.2	5	0.7483	0.56
Q21	3.7	10	0.9	0.81
Q22	3.25	4	0.433	0.1875
Q23	3	2	0	0
Q24	3.625	8	0.857	0.7344
Q25	3	2	0	0
Q26	4.0588	17	0.9375	0.8789
Q27	4.5263	19	0.7517	0.5651
Q28	4.2222	18	0.8535	0.7284
Q29	3.8462	13	0.8635	0.7456
Q30	4.3333	3	0.9428	0.8889
Q31	ERR	0	ERR	ERR
Q32	4.25	8	0.6614	0.4375
Q33	4	6	0.8165	0.6667
Q34	3.6364	11	0.8814	0.7769
Q35	4.5	4	0.866	0.75
Q36	ERR	0	ERR	ERR
Q37	ERR	0	ERR	ERR
Q38	ERR	0	ERR	ERR

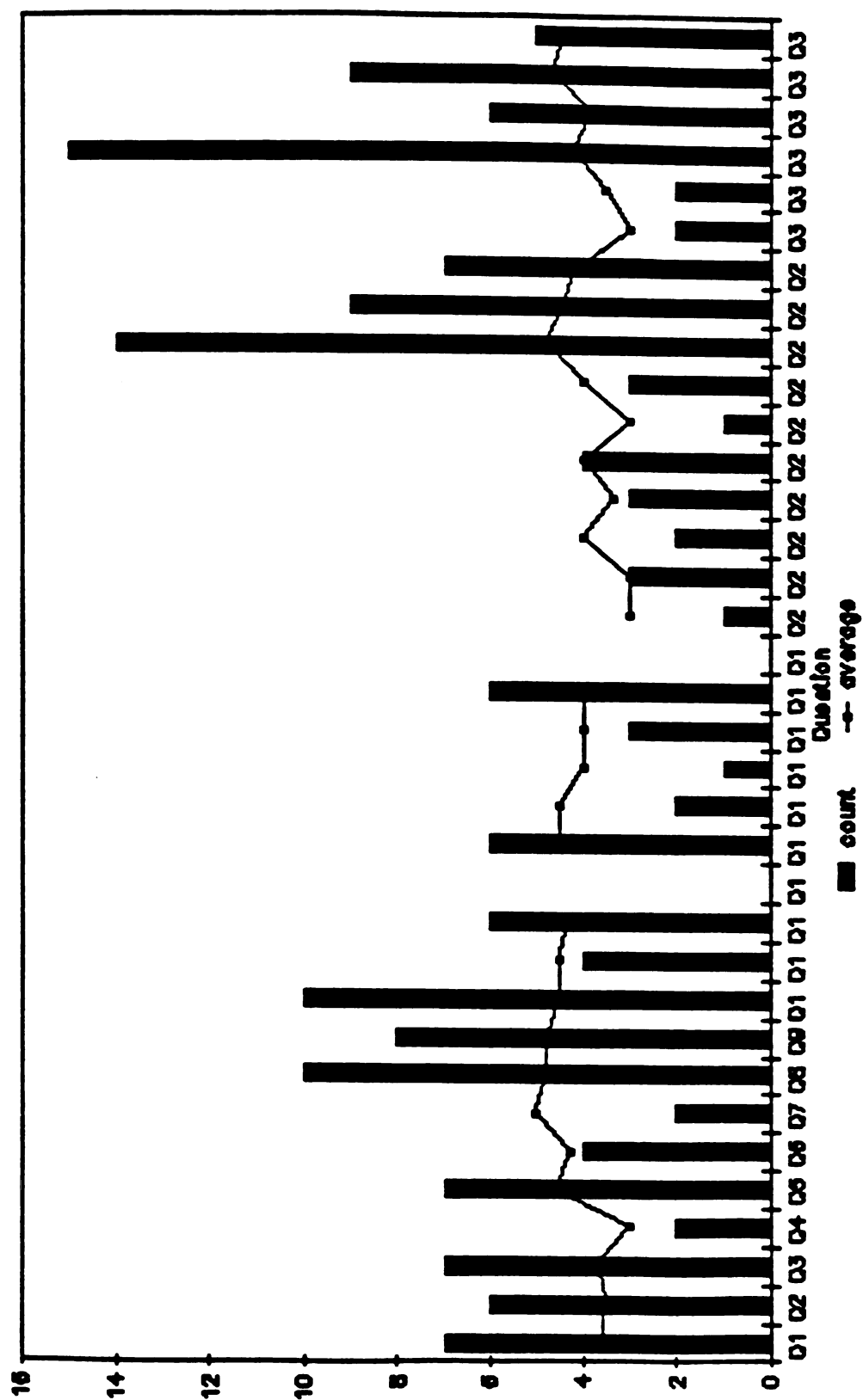
Lansing Community College

Business



School	Michigan State University				
Number of records	20				
Question	Average	count	Std Dev.	Variance	
Q1	3.5714	7	0.7284	0.5306	
Q2	3.5	6	0.7638	0.5833	
Q3	3.7143	7	0.8806	0.7755	
Q4	3	2	0	0	
Q5	4.5714	7	0.4949	0.2449	
Q6	4.25	4	0.8292	0.6875	
Q7	5	2	0	0	
Q8	4.8	10	0.4	0.16	
Q9	4.75	8	0.433	0.1875	
Q10	4.5	10	0.6708	0.45	
Q11	4.5	4	0.5	0.25	
Q12	4.3333	6	0.9428	0.8889	
Q13	ERR	0	ERR	ERR	
Q14	4.5	6	0.7638	0.5833	
Q15	4.5	2	0.5	0.25	
Q16	4	1	0	0	
Q17	4	3	0.8165	0.6667	
Q18	4	6	0.8165	0.6667	
Q19	ERR	0	ERR	ERR	
Q20	3	1	0	0	
Q21	3	3	0	0	
Q22	4	2	0	0	
Q23	3.3333	3	0.4714	0.2222	
Q24	4	4	1	1	
Q25	3	1	0	0	
Q26	4	3	0.8165	0.6667	
Q27	4.7857	14	0.4103	0.1684	
Q28	4.4444	9	0.6849	0.4691	
Q29	4.1429	7	0.6389	0.4082	
Q30	3	2	0	0	
Q31	3.5	2	0.5	0.25	
Q32	4.2	15	0.5416	0.2933	
Q33	3.8333	6	0.6872	0.4722	
Q34	4.6667	9	0.4714	0.2222	
Q35	4.4	5	0.8	0.64	
Q36	ERR	0	ERR	ERR	
Q37	ERR	0	ERR	ERR	
Q38	ERR	0	ERR	ERR	

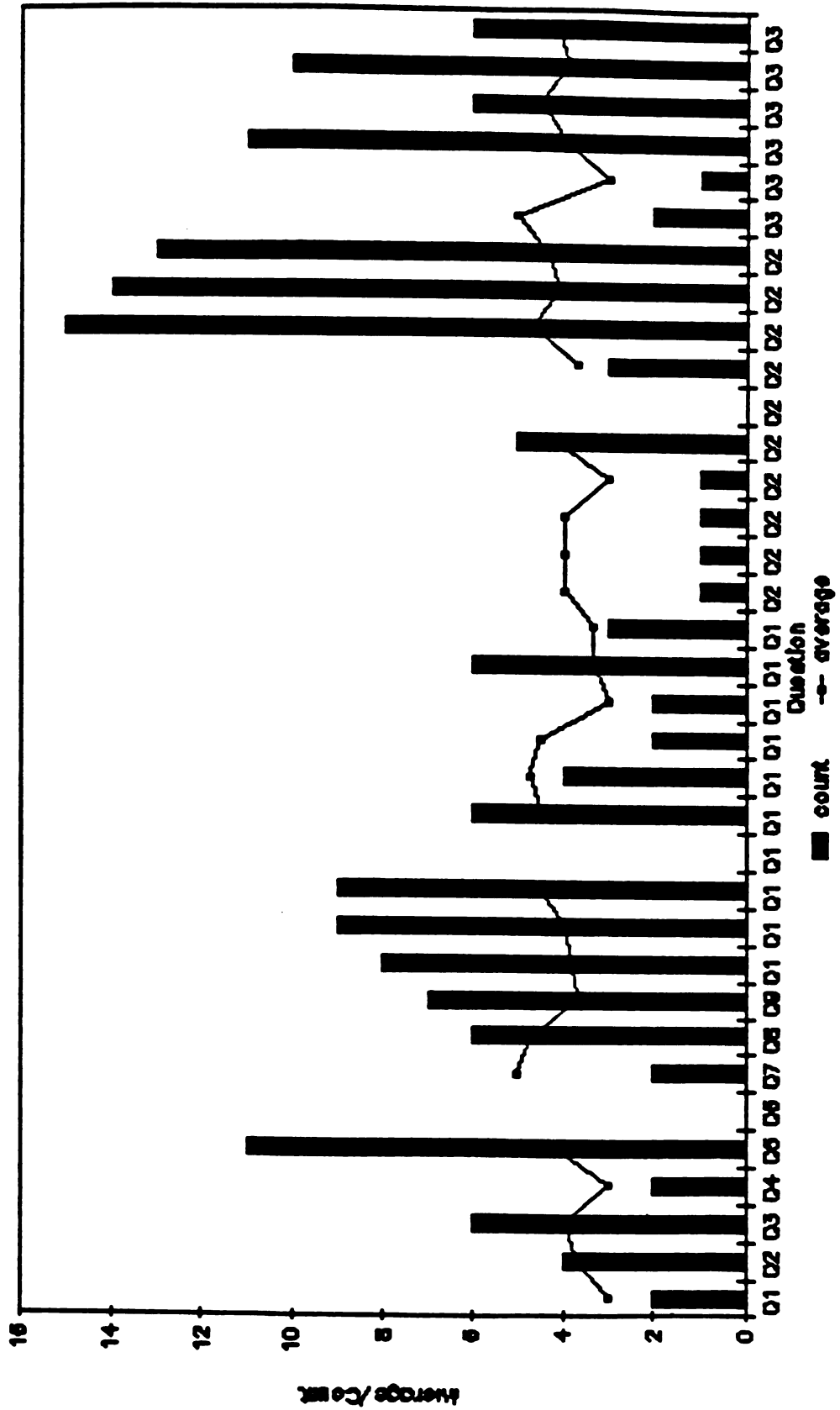
Water



School	Northwood Institute				
Number of records	19				
Question	Average	count	Std Dev.	Variance	
Q1	3	2	0	0	
Q2	3.75	4	0.8292	0.6875	
Q3	4	6	0.8165	0.6667	
Q4	3	2	0	0	
Q5	4.1818	11	0.8332	0.6942	
Q6	ERR	0	ERR	ERR	
Q7	5	2	0	0	
Q8	4.6667	6	0.4714	0.2222	
Q9	3.7143	7	0.6999	0.4898	
Q10	3.875	8	0.7806	0.6094	
Q11	4	9	0.6667	0.4444	
Q12	4.5556	9	0.4969	0.2469	
Q13	ERR	0	ERR	ERR	
Q14	4.5	6	0.7638	0.5833	
Q15	4.75	4	0.433	0.1875	
Q16	4.5	2	0.5	0.25	
Q17	3	2	0	0	
Q18	3.3333	6	0.4714	0.2222	
Q19	3.3333	3	0.4714	0.2222	
Q20	4	1	0	0	
Q21	4	1	0	0	
Q22	4	1	0	0	
Q23	3	1	0	0	
Q24	4.2	5	0.7483	0.56	
Q25	ERR	0	ERR	ERR	
Q26	3.6667	3	0.4714	0.2222	
Q27	4.6667	15	0.4714	0.2222	
Q28	4.0714	14	0.7986	0.6378	
Q29	4.3846	13	0.7378	0.5444	
Q30	5	2	0	0	
Q31	3	1	0	0	
Q32	4	11	0.8528	0.7273	
Q33	4.5	6	0.5	0.25	
Q34	3.9	10	0.8307	0.69	
Q35	4.1667	6	0.8975	0.8056	
Q36	0	4	0	0	
Q37	ERR	0	ERR	ERR	
Q38	ERR	0	ERR	ERR	

Northwood Institute

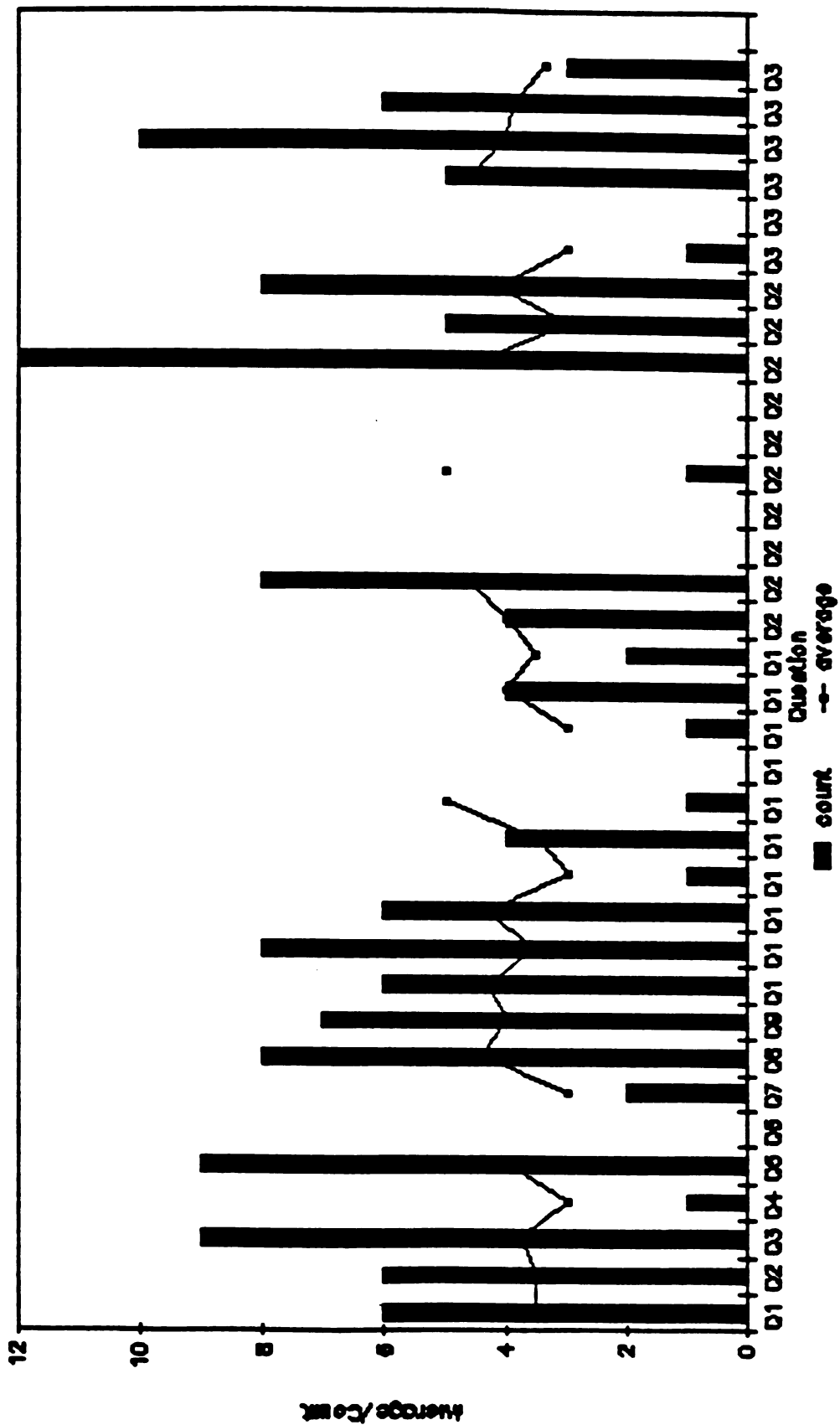
Bachelor in Business



School	Spring Arbor College				
Number of records	20				
Question	Average	count	Std Dev.	Variance	
Q1	3.5	6	0.7638	0.5833	
Q2	3.5	6	0.7638	0.5833	
Q3	3.7778	9	0.7857	0.6173	
Q4	3	1	0	0	
Q5	3.8889	9	0.737	0.5432	
Q6	ERR	0	ERR	ERR	
Q7	3	2	0	0	
Q8	4.375	8	0.857	0.7344	
Q9	4	7	0.9258	0.8571	
Q10	4.3333	6	0.9428	0.8889	
Q11	3.5	8	0.5	0.25	
Q12	4.3333	6	0.7454	0.5556	
Q13	3	1	0	0	
Q14	3.5	4	0.5	0.25	
Q15	5	1	0	0	
Q16	ERR	0	ERR	ERR	
Q17	3	1	0	0	
Q18	4	4	0.7071	0.5	
Q19	3.5	2	0.5	0.25	
Q20	4	4	0.7071	0.5	
Q21	4.625	8	0.696	0.4844	
Q22	ERR	0	ERR	ERR	
Q23	ERR	0	ERR	ERR	
Q24	5	1	0	0	
Q25	ERR	0	ERR	ERR	
Q26	ERR	0	ERR	ERR	
Q27	4.4167	12	0.862	0.7431	
Q28	3	5	0	0	
Q29	4.125	8	0.7806	0.6094	
Q30	3	1	0	0	
Q31	ERR	0	ERR	ERR	
Q32	4.6	5	0.4899	0.24	
Q33	5	10	3.4059	11.6	
Q34	3.8333	6	0.6872	0.4722	
Q35	3.3333	3	0.4714	0.2222	
Q36	ERR	0	ERR	ERR	
Q37	ERR	0	ERR	ERR	
Q38	ERR	0	ERR	ERR	

Spring Arbor College

BA in Management of Human Resources

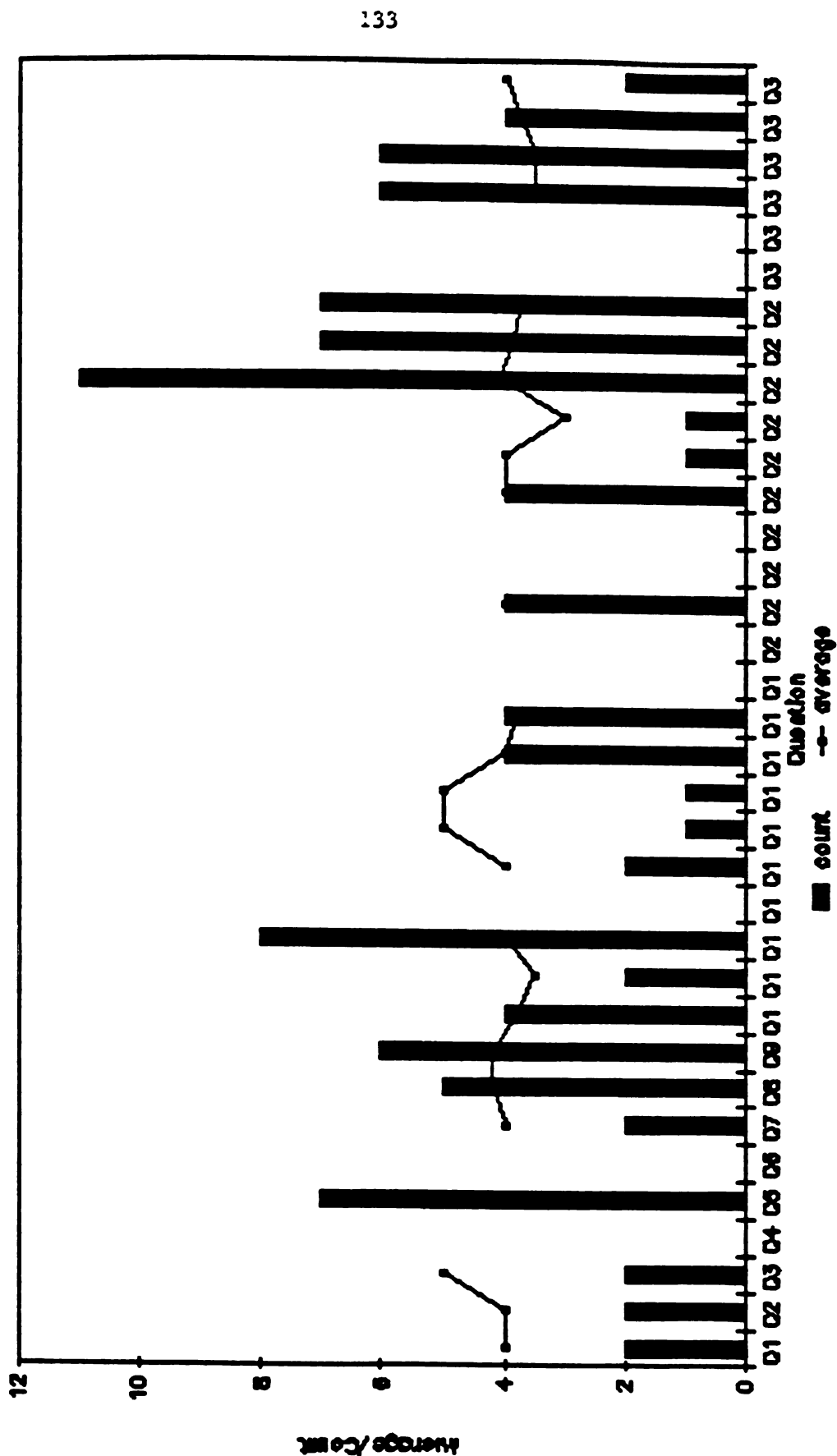


School Western Michigan University
 Number of records 13

Question	Average	count	Std Dev.	Variance
Q1	4	2	1	1
Q2	4	2	1	1
Q3	5	2	0	0
Q4	ERR	0	ERR	ERR
Q5	3.8571	7	0.9897	0.9796
Q6	ERR	0	ERR	ERR
Q7	4	2	1	1
Q8	4.2	5	0.7483	0.56
Q9	4.1667	6	0.6872	0.4722
Q10	3.75	4	0.433	0.1875
Q11	3.5	2	0.5	0.25
Q12	4	8	0.7071	0.5
Q13	ERR	0	ERR	ERR
Q14	4	2	0	0
Q15	5	1	0	0
Q16	5	1	0	0
Q17	4	4	0.7071	0.5
Q18	3.75	4	0.8292	0.6875
Q19	ERR	0	ERR	ERR
Q20	ERR	0	ERR	ERR
Q21	4	4	0.7071	0.5
Q22	ERR	0	ERR	ERR
Q23	ERR	0	ERR	ERR
Q24	4	4	1	1
Q25	4	1	0	0
Q26	3	1	0	0
Q27	4.0909	11	0.9	0.8099
Q28	3.8571	7	0.833	0.6939
Q29	3.7143	7	0.8806	0.7755
Q30	ERR	0	ERR	ERR
Q31	ERR	0	ERR	ERR
Q32	3.5	6	0.5	0.25
Q33	3.5	6	0.7638	0.5833
Q34	3.75	4	0.8292	0.6875
Q35	4	2	1	1
Q36	0	1	0	0
Q37	ERR	0	ERR	ERR
Q38	ERR	0	ERR	ERR

Western Michigan University

ES, MA, PhD



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