



Patterns of undeclared students major declarations
by Diane Lageson Donnelly

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Education in
Education
Montana State University
© Copyright by Diane Lageson Donnelly (2001)

Abstract:

The current state of where General Studies (undeclared) students at Montana State University (approximately one-third of the entering, freshmen class each fall semester) declared their initial, specified majors, and what their patterns of major declaration were after leaving General Studies was unknown. The purpose of this quantitative, descriptive study was to describe in which Colleges and curricula these students declared majors, and the semesters of declaration and credits completed at the time of declaration. Also, what students had stated as considered majors their first semester was reviewed for similarities to their declared majors, or to determine if students considering majors not available at MSU were more likely to remain undeclared or exit the University. Two sources of information were used in this study: students' academic transcripts and their responses to a first-semester survey asking what majors they were considering.

A total of 248 students from the study population (N = 449) declared majors over the four semesters of the study. They declared majors in a variety of curricula in the University's seven Colleges, but the Colleges of Education, Health and Human Development, Arts and Architecture, and Letters and Science received the majority of students. Over 90% of the students declared a major as continuing freshmen or sophomores (less than 46 credits), and an equal percentage persisted in their initial, specified major over the study period. The majority declared a major similar to one considered their first semester, and whether or not MSU offered a major they were considering did not have a large effect upon attrition or remaining undeclared. Finally, this population of undeclared students was retained at a level similar to the overall retention rate of MSU's entering freshmen from that Fall.

The results suggest these students have diverse academic interests, as exhibited by their major declarations in curricula across the campus, and declaring a specified major is important to them since more than 90% did so while they were either freshmen or first semester sophomores. Even though undeclared, the majority do have an idea of what area of study they will pursue and they persist at rates similar to students who enter the University in declared majors.

The importance of understanding the major declarations and patterns of this large and diverse group of students is critical for effective resource planning and management of the University.

PATTERNS OF UNDECLARED STUDENTS' MAJOR DECLARATIONS

by

Diane Lageson Donnelly

A thesis submitted in partial fulfillment
of the requirements for the degree

of

Master of Education

in

Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

April, 2001

N378
D7189

APPROVAL

of a thesis submitted by

Diane Lageson Donnelly

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

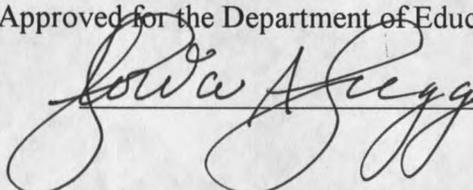
Dr. Kenneth Borland



3/1/2001
Date

Approved for the Department of Education

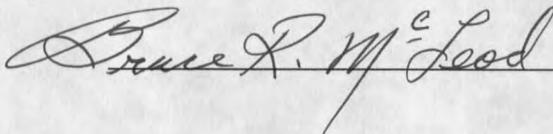
Dr. Gloria Gregg



4/20/01
Date

Approved for the College of Graduate Studies

Dr. Bruce McLeod



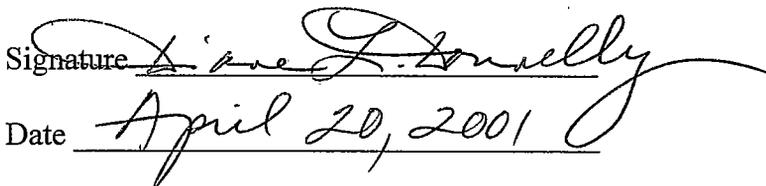
4-23-01
Date

STATEMENT OF PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a master's degree at Montana State University, I agree that the Library shall make it available to borrowers under rules of the Library.

If I have indicated my intention to copyright this thesis by including a copyright notice page, copying is allowable only for scholarly purposes, consistent with "fair use" as prescribed in the U.S. Copyright Law. Request for permission for extended quotation from or reproduction of this thesis in whole or in parts may be granted only by the copyright holder.

Signature



Date



ACKNOWLEDGMENTS

While completion of this thesis is a personal accomplishment, it was achieved only with the knowledge, support and encouragement of many people. First, my thanks to the members of my committee. Dr. Kenneth Borland, Chairman, has provided the highest quality instruction and guidance throughout my graduate work. He suggested I pursue the thesis option and has worked with me diligently to make it a reality. His immediate response to every query, as well as his meticulous attention to detail was remarkable. His high standards have helped me attain a level above my original expectations. Dr. Richard Howard provided quality guidance from the pilot project to the finished thesis. His insightful comments and ability to clarify important points proved invaluable. Finally, my sincere appreciation goes to Dr. Vicki Orazem, who not only served on my committee, but also is my colleague in General Studies. Vicki's questions, suggestions, and encouragement both challenged me and kept me on track, and were crucial to completion of this project.

I am also extremely grateful to the General Studies staff; I doubt one could work with a finer group of people. Mary Noll, Interim Director, has provided unfailing support and facilitated my success. Also, my thanks to Adam Feuerborn, my student assistant, who worked countless hours inputting data, and never uttered one complaint.

I also thank my children, Jennifer and John, who have been at my side always. Their unquestioning belief in me, encouragement and love serve as a cornerstone of my life.

And finally, my deepest heartfelt appreciation goes to Dr. Margaretha Wessel who believed in me long before I believed in myself. As Director of the General Studies Program for 25 years she guided and inspired countless students to realize their potential and reach for their dreams. I am fortunate to be one of those students. Her gifts to me are immeasurable and my thanks extend beyond what can be expressed in words.

TABLE OF CONTENTS

1.	INTRODUCTION TO THE STUDY.....	1
	Statement of the Problem.....	2
	Purpose of the Study.....	3
	Statement of the Question.....	4
	Rationale.....	5
	Introduction to the Study.....	6
	Background.....	6
	Importance of the Study.....	7
	Definition of Terms.....	9
	Major.....	9
	Specified Major.....	10
	Undeclared versus Undecided Students.....	10
	Major Selection versus Major Declaration.....	11
	Full-time, Part-time and Provisional Students.....	11
	Assumptions, Limitations and Delimitations.....	12
	Organization of the Study.....	14
	Summary.....	14
2.	REVIEW OF THE LITERATURE.....	16
	Introduction.....	16
	Synthesis of the Literature.....	16
	Criteria for Selection of the Literature.....	16
	Context of the Problem.....	17
	Current Understanding of the Problem.....	19
	Undecided Students.....	21
	Major Selection and Change of Major.....	23
	Career Decision Making.....	26
	Stated Majors versus Actual Majors.....	28
	Review of Methodologies.....	29
	Evaluation of the Literature.....	29
	Summary.....	29
	Overall Weaknesses and Strengths.....	30
	Avenues for Further Inquiry.....	32
	Chapter Summary.....	32

3.	METHODOLOGY.....	33
	Introduction.....	33
	Participants.....	33
	Population: Size and Demographics.....	33
	Selection of Sample.....	35
	Materials for Collection of Data.....	36
	Overall Function.....	36
	Academic Records.....	36
	Purposes for Education Surveys.....	37
	Validity and Reliability.....	37
	Academic Transcripts.....	37
	Purposes for Education Surveys.....	39
	Development.....	41
	Research Design.....	43
	Rationale.....	43
	Invalidity and Its Minimization.....	44
	Procedure.....	45
	Analysis Strategy.....	50
	Time Line of the Study.....	54
	Summary.....	54
4.	RESULTS.....	56
	Introduction.....	56
	Results of Data Analysis.....	57
	Description of the Results in Relation to the Nine Questions of the Study	59
	Question 1.....	59
	Question 2.....	61
	Question 3.....	62
	Question 4.....	63
	Question 5.....	64
	Question 6.....	64
	Question 7.....	65
	Question 8.....	66
	Question 9.....	66
	Discussion of the Meaning.....	67
	Patterns of Major Declaration by College.....	68
	The College of Agriculture.....	68
	The College of Arts and Architecture.....	69
	The College of Business.....	71
	The College of Education, Health and Human Development.....	71
	The College of Engineering.....	73

The College of Letters and Science.....	74
The College of Nursing.....	75
Students Remaining in General Studies.....	76
Relationship to Prior Research.....	76
Undecided Students.....	77
Retention Issues.....	77
Subsequent Major Change.....	78
Predictive Value of Stated Majors.....	79
Uncontrolled Factors Influencing the Outcome.....	79
Weaknesses in the Data.....	80
Summary of Results.....	81
Chapter Summary.....	83
5. CONCLUSIONS.....	84
Chapter Introduction.....	84
Summary of the Problem and Methodology and Results, Conclusions....	84
Summary of the Problem.....	84
Summary of the Methodology.....	85
Summary of the Results of the Study.....	86
Interpretation of the Results.....	88
Discussion of the Broader Implications.....	90
Theoretical Implications.....	90
Practical Implications.....	92
Implications for the University.....	92
Implications for Colleges and Departments.....	93
Implications for General Studies.....	94
Limitations of the Study.....	95
Summary.....	96
Recommendations and Implementation of Findings.....	97
Recommendations for the University.....	97
Recommendations for Colleges and Departments.....	98
Recommendations for General Studies.....	99
Further Research.....	100
Procedural Adjustments.....	101
Replication.....	101
New Questions.....	102
Chapter Summary.....	102
BIBLIOGRAPHY.....	103

APPENDICES.....	112
APPENDIX A: SAMPLE ACADEMIC TRANSCRIPT.....	113
APPENDIX B: "PURPOSES FOR EDUCATION" SURVEY DOCUMENTS.....	116
Student Consent Form.....	117
Pre-Freshman Seminar Questionnaire.....	118
Post Freshman Seminar Questionnaire.....	119
APPENDIX C: HUMAN SUBJECT COMMITTEE DOCUMENTS.....	123
Exemption Approval Email.....	124
Code of Federal Regulations (45 CFR 46).....	125
APPENDIX D: DECLARED MAJORS VERSUS MAJORS UNDER CONSIDERATION: LISTING OF RESPONSES CONSIDERED SIMILAR.....	128

LIST OF TABLES

Table	Page
1. Colleges of Major Declaration: Fall 1998-Spring 2000.....	59
2. Colleges and Majors Declared: Fall 1998-Spring 2000.....	60
3. Semester of Major Declaration by College: Fall 1998-Spring 2000.....	61
4. Credits Completed at Time of Declaration: Fall 1998-Spring 2000.....	63
5. Subsequent Major Declarations by College: Fall 1998-Spring 2000.....	64
6. Credits Completed by Students Remaining in General Studies (Undeclared) Spring 2000 Semester.....	65
7. Colleges of Major Declarations: Fall 1998 Study Population (General Studies) vs. Fall 1998 Entering Declared Freshmen (MSU).....	69
8. Total Yield of Majors for ED-HHD from Fall 1998 General Studies Study Population.....	72
9. Total Yield of Majors for Nursing from Fall 1998 General Studies Study Population.....	75

LIST OF FIGURES

Figure	Page
1. Enrollment Status of Study Population: Spring 2000.....	58

ABSTRACT

The current state of where General Studies (undeclared) students at Montana State University (approximately one-third of the entering, freshmen class each fall semester) declared their initial, specified majors, and what their patterns of major declaration were after leaving General Studies was unknown. The purpose of this quantitative, descriptive study was to describe in which Colleges and curricula these students declared majors, and the semesters of declaration and credits completed at the time of declaration. Also, what students had stated as considered majors their first semester was reviewed for similarities to their declared majors, or to determine if students considering majors not available at MSU were more likely to remain undeclared or exit the University. Two sources of information were used in this study: students' academic transcripts and their responses to a first-semester survey asking what majors they were considering.

A total of 248 students from the study population ($N = 449$) declared majors over the four semesters of the study. They declared majors in a variety of curricula in the University's seven Colleges, but the Colleges of Education, Health and Human Development, Arts and Architecture, and Letters and Science received the majority of students. Over 90% of the students declared a major as continuing freshmen or sophomores (less than 46 credits), and an equal percentage persisted in their initial, specified major over the study period. The majority declared a major similar to one considered their first semester, and whether or not MSU offered a major they were considering did not have a large effect upon attrition or remaining undeclared. Finally, this population of undeclared students was retained at a level similar to the overall retention rate of MSU's entering freshmen from that Fall.

The results suggest these students have diverse academic interests, as exhibited by their major declarations in curricula across the campus, and declaring a specified major is important to them since more than 90% did so while they were either freshmen or first semester sophomores. Even though undeclared, the majority do have an idea of what area of study they will pursue and they persist at rates similar to students who enter the University in declared majors.

The importance of understanding the major declarations and patterns of this large and diverse group of students is critical for effective resource planning and management of the University.

CHAPTER 1

INTRODUCTION TO THE STUDY

The selection of a major is one of the most crucial decisions college students make. Starting at a young age children are asked, "What do you want to be when you grow up?" And probably one of the most common questions college students are asked is: "What is your major?" Throughout their comprehensive analysis of the research, How College Affects Students, Pascarella and Terenzini substantiate the premise that the field of study selected by students has a considerable effect on how they experience college, as well as their future occupational course (1991). The literature, as well as common sense, confirm the fact that deciding upon the "right" major is a priority for college students, and causes them considerable anxiety (Bogenschutz, 1994; Boyer, 1987; Gordon, 1995; Gordon & Habley, 2000; Levine, 1978; Orazem, 2000; Rysiew, Shore & Leeb, 1999). As the renowned psychologist Erik H. Erikson stated, "In general it is the inability to settle on an occupational identity which most disturbs young people" (1968). For traditional-aged freshmen, this is probably one of the most substantive decisions they face. During the selection of a major, and subsequent reflection upon the appropriateness of that decision, students may encounter their first experience with the connections between their educational, career and life goals (Laff, 1994).

At Montana State University (MSU), approximately one-third of all entering freshmen enroll in General Studies which provides academic advising for all undeclared students. The students in this population cover the range of "undecidedness"--from having

no idea whatsoever about what to major in, to having a general idea but needing more information, to having a clear direction, while wanting to explore and more definitively refine that idea (General Studies New Student Guide, 1999-2000). Regardless, all students in General Studies share one common goal--all are moving toward declaring an initial, specified major. As stated above, the importance of this decision is profound, but no complete, analyzed data set existed regarding the major declarations of MSU's General Studies students. Therefore, a study was needed to learn more about the major declaration patterns of this large and diverse population.

In this chapter the overall problem and purpose of this study will be introduced. The local context of the problem will be presented, as well as how this problem relates to the literature on undeclared students and major declaration. Additionally, the significance of the problem will be presented in relation to MSU and the larger context of higher education. Finally, specific definitions, assumptions and limitations of the study will be discussed.

Statement of the Problem

The current state of where General Studies (undeclared) students at MSU declare their initial, specified majors, and what their patterns of major declaration are after leaving General Studies is unknown by the University. While nearly one-third of the fall semester, entering freshmen classes from 1995-2000 (average N = 623 or 32%) entered as General Studies, undeclared students, MSU has no specific knowledge of the Colleges and curricula in which these students declare their initial, specified majors. In addition, it is unknown in

which semester they declare, how many credits they have completed at the time of declaration, and how many students subsequently change that initial, specified major. For students who leave MSU, it is not known if they are more likely to leave before or after declaring a major. Also unknown are the similarities between majors being considered by undeclared students their first semester and the majors they declare, and if students are more likely to remain in General Studies (undeclared) or exit the University if they are considering majors not available at MSU. All of the above information could be beneficial to MSU for retention and resource management.

The problem is, MSU needs to know the current state of undeclared students' initial, specified major declarations and what their chronological patterns of major declaration are after leaving General Studies.

Purpose of the Study

The purpose of this quantitative, descriptive study is to describe the current state of undeclared, MSU students' initial, specified major declarations and what their chronological patterns of major declaration are after leaving General Studies. The description is in terms of which Colleges and curricula the General Studies students declared as their initial, specified majors, as well as the semesters of declaration and number of credits completed at the time of declaration.

In addition, using data from a survey administered at the beginning and again at the end of their first semester at MSU, what these students stated as considered majors during their first semester were reviewed to determine if there were similarities between their

stated and declared majors. Also, their responses were examined to see if students who had stated majors not available at MSU were more likely to remain in General Studies or exit the University.

Statement of the Question

The overall question of the study is: What is the current state of undeclared MSU students' declaration of majors? The specific questions asked in this study are:

- ▶ In which MSU Colleges and curricula do General Studies students declare their initial, specified majors?
- ▶ When (in which semester) do they declare?
- ▶ How many credits have they completed at the time of declaration?
- ▶ Of the students remaining in General Studies after the final semester of the study, how many credits have they completed?
- ▶ How many students subsequently change their initial, specified major?
- ▶ Are students more likely to leave the University before declaring a major?
- ▶ Are the majors declared by the students similar to what they stated as majors they were considering during their first semester at MSU?
- ▶ Were students who stated majors not available at MSU more likely to remain in General Studies (undeclared) or exit the University?

Rationale

The initial question the researcher wanted to answer when first contemplating this study was: "In which Colleges and majors do the General Studies students at MSU declare their initial, specified majors?" After working in General Studies as an academic advisor for three years it was apparent this information was unknown, or at least known only subjectively--a formal study had never been done. Considering the number of incoming freshmen enrolling in General Studies each year (approximately one-third of the entering freshmen class), it seemed information worth knowing for University planning, retention, and general understanding. Therefore, the researcher decided to pursue a pilot study of the major declarations and patterns of students enrolled in General Studies (GENS) 101: Freshman Seminar, Fall 1996. Information from that study was presented at an end-of-class forum to members of the Department of Education, General Studies and University administration. Since then, requests have come from across campus for more information on General Studies students' major declarations. This continued interest confirmed the author's initial premise regarding the need for a better understanding of the major declarations of MSU's undeclared students and has helped to define the parameters of this study.

Introduction to the Study

Background

The institution which served as the setting for this study is Montana State University-Bozeman (MSU)—a public, Land Grant institution with an average fall enrollment of 11,633 students academic years (AY) 1995-2000. MSU is organized into seven Colleges:

- ▶ The College of Agriculture
- ▶ The College of Arts and Architecture
- ▶ The College of Business
- ▶ The College of Education, Health and Human Development
- ▶ The College of Engineering
- ▶ The College of Letters and Science
- ▶ The College of Nursing

The Colleges are further broken down into departments, which offer baccalaureate degrees in 50 different undergraduate majors, with additional options (MSU 1998-2000 Bulletin).

General Studies is classified as a "Special Academic Program," organizationally positioned directly under the Office of the Provost, and led by a Director who has Assistant Dean authority. The program serves all students at MSU who have not declared a major. Over the past six years, nearly one-third of all freshmen entering MSU chose to be undeclared majors and were enrolled in General Studies. Of all freshmen entering MSU each fall from 1995-2000 (average N = 1,987), 31.6% or an average of 623 each fall entered as General Studies students. According to University regulations, students may remain in General Studies until they have completed 60 credits. The total number of students (entering freshmen, continuing freshmen and sophomores) enrolled in General Studies each fall since 1995 has been approximately 1,300.

The program serves two main purposes for undeclared students: (1) Academic advising--all 1,300 students enrolled in General Studies receive individualized advising from the General Studies staff; (2) The Freshman Seminar--an academic, core-curriculum course, emphasizing verbal and written communication and critical thinking, which focuses on students' successful transition into the University. The seminar is the largest freshmen seminar on campus and provided the sample population for this study.

Importance of the Study

Since the 1920's, undecided students have been a population of interest in the field of higher education (Gordon, 1994; Lewallen, 1994). Theories of student development propose that being "undecided" about one's major or career path is a normal developmental stage (Chickering & Reisser, 1993; Erikson, 1968; Evans, Forney & Guido-DiBrito, 1998; Perry 1970, 1998) and researchers confirm that a large number of college students are indeed unsure. The Higher Education Research Institute at the University of California, Los Angeles has collected data showing that nationally, during the five-year period from Fall 1995 to Fall 1999, 7.7% of all freshmen entering higher education formally stated they were undecided about even their *probable* major field of study (Astin, Parrott, Korn & Sax, 1997; Sax, Astin, Korn & Mahoney, 1998, 1999).

The most evident group of undecided students are the entering freshmen of traditional age, who, for any number of reasons, enter college without declaring a specific major (Gordon, 1995). Titley and Titley (1980) relate that 75% of college freshmen demonstrated "...some form of undecidedness, tentativeness, or uncertainty about choice of

major.” Foote (1980) postulated the percentage of freshmen who were undecided might be as high as 90%. And while the first year of college has received a great deal of attention in the literature, few studies follow undecided students beyond the freshman year (Anderson, Creamer & Cross, 1989).

Change of major is also a common experience among the majority of college students and a phenomenon that is acknowledged in the world of higher education.

According to Gordon, “At any given time, a majority of college students are in some state of doubt or indecision about their educational and career goals” (1995, p. 80). Researchers confirm that large numbers of students change majors during their college careers (Feldman & Newcomb, 1969; Foote, 1980; Kramer, et al., 1994). Pascarella and Terenzini summarize this phenomenon with the following understatement: “...it is clear that students frequently change their occupational plans during college” (1991, p. 424).

The fact many students in college experience varying states of undecidedness has profound implications for their institutions. Many hypotheses which suggest that students who are unsure about an academic major are more likely to withdraw from college, have been supported (Pascarella & Terenzini, 1991; Tinto, 1993, 1996). Retention is a critical issue on campuses; therefore, a more complete understanding of the reasons for withdrawal, as well as ways to prevent it, is of utmost importance (Hossler, Schmit & Vesper, 1999). Declining enrollments limit resources and require wise management of those limited resources (Gaff & Ratcliff, 1994). In light of this situation, an understanding of student behavior and needs is valuable for planning and resource allocation on any campus. Additionally, if administrators, faculty, advisors and student services personnel

have a better understanding of the patterns of students' major declarations and career aspirations, they will be better prepared to help these students successfully navigate their early college years, thus benefitting both the students and the institution (Gordon, 1994, 1998).

Definition of Terms

In this section the researcher defines how certain terms are used in this study in order to provide a common understanding for all readers. In addition, the rationales for stated definitions are discussed.

Major. MSU offers degrees in 50 different majors, with additional options, and the selection of those majors by General Studies students is the focus of this study. "Major" is defined in the Policy and Procedures Manual of the Montana Board of Regents as follows:

"The specific field of concentration for the degree. A designated and coherent sequence of courses in a discipline, related disciplines, or professional area in which a student concentrates as a part of a baccalaureate degree program. The requirements of the major are usually defined by one academic department" (Montana Board of Regents Policy 303.1, 2000).

On a historical note, the initial reference to the term "major" was in the Johns Hopkins catalogue of 1877-78 (Levine, 1978, p. 29). The Oxford English Dictionary (1989) defines this use of the word as such: "In some universities, a subject to which special attention is given during a certain period of study." Over the past century, in the United States, the academic major has become the primary focus of faculty and students alike--it brings together those who share an interest in a "...constellation of related

questions, issues, and approaches” (Gaff & Ratcliff, 1996, p. 240). A study of the catalogs of 270 institutions of higher education by the Carnegie Council showed that only three of those institutions had an undergraduate curriculum without disciplinary majors (The Carnegie Foundation, 1977).

Specified Major. The adjective “specified” was chosen by the researcher as it connotes the process of thoughtful selection of something; in this case, a student’s deliberate selection of a major field of study, leading to a baccalaureate degree. The term “specified major” was also used by Kramer, et al. (1994) to identify the majors declared by students in their extensive study of major changes of Brigham Young University (BYU) graduates from 1980-1988.

Undeclared versus Undecided Students. In this study, “undeclared” students are those who are enrolled in the University without declaring a specified major; at MSU these students are enrolled in General Studies. Students may *decide* to be undeclared for a number of reasons: (a) They may be uncertain about a major field of study or uncertain about a career path, or both; (b) they may have an idea about a career of interest but are unsure which major is the appropriate one for their career aspirations; (c) they may want to explore different areas of study or explore what the University has to offer; (d) they may be attending MSU to satisfy basic requirements and plan to transfer to another institution to pursue a specialized degree; or (e) they may be uncertain about why they are even at a university, let alone have a sense of a specialized area of study (Gordon, 1994, 1995; MSU 1998-2000 Bulletin; General Studies New Student Guide 1999-2000).

Regardless of the reason, all students in this category have made the decision to be “undeclared”--they are students pursuing a degree, but initially uncommitted to a specified major. Some examples of terms applied to undeclared students at other institutions are “open-major,” “pre-major,” or “exploratory” (Gordon, 1995, p. x; Kramer, et al, 1994). In this study, the term applied to this group is “undeclared.”

The term “undecided” has different connotations. Gordon defines undecided students as “...students unwilling, unable, or unready to make educational and/or vocational decisions” (1995, p. x). Many of these undecided students may actually be “declared” students--they may be enrolled in a particular major, but they fit one of Gordon’s descriptors. Extensive research has been done on the population known as undecided students and that research will be examined in light of this study. Throughout this paper, the term “undecided” will refer to students who are educationally and/or vocationally unsure, whether or not they have declared a specified major.

Major Selection versus Major Declaration. Major *selection* refers to the process of consideration of different majors with the purpose of finding a major to formally pursue as an area of study. Major *declaration* refers to the action of filing paperwork with the University which indicates a student’s desire to formally pursue a particular area of study. At MSU, students file a “Change of Curriculum” card with the Registrar’s Office to formally declare a major.

Full-time, Part-time and Provisional Students. Students enrolled in 12 or more credits per semester at MSU are considered full-time; students enrolled in less than 12

credits per semester are considered part-time. Students who do not meet admission standards may be admitted on a provisional status for one semester. They are limited to seven credits and must receive a 2.0 grade point average (GPA) their first semester to continue at the University (Montana Board of Regents Policy 301.7, 1999).

Assumptions, Limitations and Delimitations

The researcher carried out the study with the following assumptions: (a) The students in the study population covered the range of decidedness about a major (Gordon, 1995, Chapter 1); (b) the students had varying levels of knowledge about the majors available to them at MSU, as well as the relationships between various majors and occupations; (c) the students responded with sincerity to the survey question on majors they were considering.

As with any research project, it is impossible to include the actual population of all individuals relevant to the study; therefore, the researcher had to form a set of criteria for selection of the target population. The decision was made to target a fall semester population of students; in this case, the entering, freshmen General Studies students Fall 1998 semester: $N = 625$ (MSU Quick Facts 1998-1999). From that group the sample was condensed to look at only those students enrolled in the GENS101 Freshman Seminar course that semester: $N = 543$. There were several reasons for this decision.

First, the population of students could be easily defined because they were all listed on the class rosters for the course. Secondly, they all shared the common characteristics that were required for enrollment in the course--entering freshmen students, traditional age

(17-21 years old), with 12 or fewer completed credits. The third criterion for establishing the sample population was participation in the "Purposes for Education" surveys given in the GENS101 class at the beginning and end of the Fall 1998 semester, which provided data on majors being considered. When these three criteria were applied to the target population, a total of 449 students were included in the study population.

Another consideration was that not all students enrolled in the Fall 1998 semester would be retained through the Spring 2000 semester. MSU's fall-to-fall retention rates for entering freshmen have averaged 70% over a four-semester time period since the mid-1990's; therefore, the researcher knew the sample population was likely to decline by approximately 30% and effect the data on declaration of majors (MSU Quick Facts).

For this study, the researcher decided to focus on the declaration of majors at the College level. Much of the data reported by the University, including entering freshmen declarations, are recorded at the College level, so this focus was consistent with MSU's practice. In addition, to provide more detail for this study, the specific majors and options declared by students were also collected and are presented. By the time the declarations were broken down into specific departments, and again into majors and options, the numbers were quite small and conveyed little meaning. Therefore, the researcher focused on patterns of declaration at the College and departmental level, but some striking cases at the major/option level are discussed as well. In spite of the factors described above, which reduced the study population, the size was still large enough to provide meaningful data for this study and furnish a foundation for future research.

Organization of the Study

The report consists of five chapters. Chapter 1 serves as the introduction to the study, while Chapter 2 is a review of the literature on undecided students, major declaration and change, career decision making and student development, and the predictive value of stated majors. Chapter 3 details the methodologies used, as well as provides a chronological report of the study. Chapter 4 presents the results of the study, while Chapter 5 offers a summary of the findings and discusses implications and applications of the study, as well as areas for further research.

Summary

Undecided students in higher education, of which undeclared students are just a component, comprise a large percentage of the undergraduate population and their "undecidedness" can profoundly effect their institutions. From 1995 to 2000 almost one-third of the students who entered MSU entered as General Studies students; in other words, they purposely decided to enter as undeclared students. The size of this clearly identified population of undecided students demonstrates the need for an understanding of their choice of majors and patterns of declaration. It is worthwhile to understand in which Colleges and majors these students declare their initial, specified majors, their semester of declaration, the number of credits completed at the semester of declaration, if they declare a subsequent major(s), or if they exit the University before or after declaring a specified major. In addition, the similarities between majors being considered by undeclared students their first semester and the majors they declare warrants investigation, as well as

if students are more likely to remain in General Studies (undeclared) or exit the University if they are considering majors not available at MSU. All of the above information could be beneficial to MSU, for retention and resource management, as well as a greater understanding of undeclared students as they progress through college.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter is a review of the pertinent literature on the topics of undecided students, major selection and change, career decision making and its relation to student development, and stated majors/careers as valid predictors.

Synthesis of the LiteratureCriteria for Selection of the Literature

The initial search of the literature for this study focused on undecided students, freshmen students, and major selection by college students. While an extensive amount of information was found on freshmen, and a fair amount on undecided students, there was less information on major selection. The relative lack of information on major selection caused the researcher to widen the search to include research on change of major and career decision making. When the topic of major change was reviewed, it became apparent that was a more common focus of study in the literature, and often, information regarding the initial major selection was found embedded in the research on major change. While much research on career decision making is related to the general population, a great deal of this research is accomplished on college campuses with college students; therefore, considerable information was applicable to this study. The literature on student development was also reviewed, focusing on major/career decision

making. In addition, some information was obtained on the relationship between entering students' major and career ideas and their actual major at graduation. While much of the research in these areas is dated, considerable inquiry continued throughout the 1990's, confirming or questioning previous work and adding to the knowledge base in these areas of study.

Context of the Problem

The selection of a major is at the heart of each student's college experience and the departmental major is ingrained in the structure of higher education in America. The term "major" was first used in The Johns Hopkins University catalog published in 1877-1878. That university had just been established in 1876, based on the German research model, and was the first American research university (Levine, 1978, p. 506). In 1909, Harvard, under the leadership of President A. Lawrence Lowell, established a system of "concentration and distribution" designed to provide more "unity and coherence" to their degrees (Dressel, 1963, p. 6; Levine, 1978). Students and faculty alike were in favor of more specialized areas of study--students were interested in preparing for future vocations and associated financial benefits, while professors preferred teaching courses in their specific areas of interest. As the research mission of higher education grew, departmental organizations were developed and individual departments attracted students who were dedicated to that field of study and faculty interests. Hence, the concept of the major spread throughout higher education and today is firmly established in the world of academia (Carnegie Foundation, 1977; Levine, 1978).

The major is comprised of a number of courses in a specific area or closely related field and provides the depth component of an undergraduate degree. It is designed to provide students with "...a body of knowledge, methods of study and practice appropriate to a subject or subject area" (Levine, 1978, p. 28). Pragmatically, education in a specific field provides students with preparation required to enter many occupations or for continuing study at the graduate level.

The major may also serve as a source of community, bringing together faculty and students who have a common interest in related problems, issues and areas of inquiry. This departmental community often provides an identity and serves as a student's campus "home base." In addition to academic engagement, it may provide a social and support network, which has been shown to have a positive effect on student outcomes (Carnegie Foundation, 1977; Dressel, 1963; Gaff & Ratcliff, 1994; Hossler & Bean, 1990; Pascarella & Terenzini, 1991; Tinto, 1993, 1996).

Understandably, the selection of a specific major is quite important to students. Entering freshmen listed scheduling of courses and selection of a major as their top two concerns at orientation (Sagaria, Higginson & White, 1980). Gaff and Ratcliff make the following comment, which attests to the importance students attach to the major.

When students are asked, "What are you studying?" they typically respond with their choice of major (or apologetically say they don't know, if they haven't decided on one), implying that all of the rest of their studies in the arts and sciences and elsewhere are insignificant (1996, p. 231).

A resounding 96.5% of undergraduates surveyed by the Carnegie Council found that "getting a detailed grasp of a special field" was seen as essential or fairly important

(Levine, 1978, p. 42). Researchers have also demonstrated that selection of an appropriate, congruent major is an important variable in student satisfaction, success and retention (Foote, 1980; Gordon, 1984; Noel, Levitz & Saluri, 1985; Orazem, 2000; Schurr & Ruble, 1988; Tinto, 1993; Walsh & Lewis, 1972; Walsh & Russel, 1969).

But, as presented in the introduction to this study, the decision of what to major in does not come easily for most students, and at some point in a student's college career, most experience some level of doubt or indecision about their college and vocational goals (Gordon, 1995). This indecision is expressed in the numbers of students who are enrolled in programs for undeclared students as well as the numbers of students who change majors. The reasons for major and career indecision are numerous and include lack of information, outside influences, the natural developmental process of young adults, and more serious problems of general indecisiveness (Gordon, 1994, Chap. 13; McDonald & Steele, 2000). These undecided students have a profound effect on higher education--a great deal of time, energy and resources are expended on recognizing, understanding and facilitating the success of these students (Lewallen, 1994).

Current Understanding of the Problem

Undecided students have been the focus of discussion and formal research since the 1920's (Gordon, 1995, p. 1). Researchers have looked at various aspects of the problem. Who are these students? Are undecided students "different" from decided students? Why are they undecided? Are undecided students more likely to leave school? How do faculty and staff facilitate the transition from undecided to decided? Perhaps the

over-riding theme gleaned from these studies is that undecided students comprise a large and diverse group that are *typical* college students. In fact, Lewallan proposes that “Undecided students represent more a microcosm of the college population than a highly distinguishable group” (1995, p. 12).

Researchers have demonstrated that finding the “right” major is of great importance to students, changing majors is a common phenomenon on college campuses, and there are many reasons for major change. Some researchers provide evidence that students who enter college undeclared and then declare a specific major after a period of time seem less likely to change majors in the future (Kramer, et al., 1994; Tinto & Tinto, 1985). Also, in the literature, major selection is closely connected to career decision making and career development; students often see the selection of a major and selection of a career as one in the same (Gordon, 1984, p. 5).

Numerous career development theories have been examined in the literature in relation to major selection. Examples of these are Holland’s (1973, 1992) personality and career congruency theory, Super’s (1957, 1990) exploration stage of his life-span theory, and Perry’s (1968, 1982, 1999) developmental stages.

Several researchers have shown a positive relationship between what students think they would like as a major and/or career (expressed choice) and what they actually choose, providing evidence that possible stated majors have predictive value (Davis, 1965; Holland & Gottfredson, 1975; Kramer, et al, 1994; Slaney, 1980).

Undecided Students

Who are “undecided” students? There have been numerous studies on this population, but the definition of who that population is differs from study to study. Virginia Gordon, probably the leading figure in this area of research, defines them quite simply as “students who are unsure of their academic and occupational goals” (1994, p. 1). This general definition includes students who enter college in an “undeclared major” category, those who change from a declared major to undeclared status, and those who have declared majors but in reality are unsure. The most obvious group of undecided students is the traditional-aged freshmen who enter college “...unable, unready or unwilling to commit themselves to a specific academic direction” (Gordon, 1995, p. 59). The study population of this paper comes from this group of undecided students.

The population of students who enter college *stating* they are “undecided” has been growing in number throughout the past four decades. Information compiled for The American Freshman: Thirty Year Trends, 1966-1996 (Astin, et al., 1997) reports that nationally, for all institutions, the number of entering freshmen who state they are undecided about a major has risen from 1.9% in 1966 to 8.2% in 1996. Figures from the 1997-2000 ACT High School Profile Reports show a steady increase in respondents listing “undecided” or not responding at all to the query on their “planned educational major:” 1997 = 15.7%, 1998 = 16.7%, 1999 = 17.3% and 2000 = 18.5% (American College Testing, 2000).

But these figures may not project a picture of reality. As James Lancaster, then Director of the Center for Undeclared Majors at the University of South Carolina stated:

“The truth is that the vast majority of freshmen *don't know* what they'll major in when they enter college, despite what they indicate on admissions forms and despite the posture they assume at orientation” (p. 109, 1985). Titley and Titley (1985) studied a group of Colorado State University students over a period of six years and their findings support Lancaster's statement. Only one in eleven students (9%) who entered Colorado State University in 1977 and attended a summer orientation actually applied in a specific major, maintained that major during preliminary advising, felt certain about it and ended up graduating in that major.

While indecision about a major and career is common for freshmen, it is not limited to that group. Evidence from the literature substantiates that the majority of all students enrolled in college are truly undecided at some point and most will change their major at least once (Anderson, et al., 1989; Baird, 1969; Foote, 1980; Gordon, 1995; Kramer, et al., 1994; Titley & Titley 1976, 1980). Steele (1994, p. 92) points out that in many colleges and universities, major-changers represent a bigger group of students than those who enter as undecided freshmen. The study by Kramer, et al. (1994) presented data showing that 38% of the juniors and 25% of the seniors made major changes. A 1995 study by Long, Sowa and Niles looked at undecided senior students--students who were nearing graduation in a major, but were not sure about their career path. Twenty-eight percent of the seniors in this study were self-reported as undecided about a career choice. These studies verify that major decisions and their related career implications exist throughout the college student population.

The reality of the tenuous state of major decision among college students has been studied in relation to retention issues. Some studies present data showing undecided students are more likely to be unsuccessful in college or drop-out, (Chase & Keene, 1981; Foote, 1980; Maier & Herman, 1974; Pascarella & Terenzini, 1991; Tinto, 1993), while other studies dispute this claim (Anderson, et al., 1989; Astin, 1993; Bean, 1990; Gordon, 1994, 1995). Orazem, in her qualitative study (2000), which describes why students stay and why they leave, looked at factors influencing undeclared students' selections of majors and persistence to graduation. She found undecided students do need greater assistance than those who arrive with a clear educational path, and that persistence is much more complex than simply choosing a major (p. 107). A review of the literature on giftedness and multipotentiality indicates this population of students is likely undecided about their specific course of study because they have so many abilities, interests and options (Rysiew, et al., 1999). Regardless, researchers have demonstrated students who make academic and social connections to their college or university are retained at higher rates and persist to graduation (Astin, 1984, 1999; Hossler & Bean, 1990; Orazem, 2000; Pascarella & Terenzini, 1991; Tinto, 1993, 1996, 1998). An understanding of undecided students is critical for retention and enrollment management and the goal of student and institutional success.

Major Selection and Change of Major

An abundance of research has been done on major change--much of this research overlaps with and is applicable to the current study on initial major declaration.

Therefore, literature regarding the common practice among students of changing majors was considered. Various studies have resulted in data showing that large numbers of students change majors either once or more during their undergraduate college career. The studies listed below, which span more than thirty years, show how prevalent the practice has been, and continues to be. The percentage listed refers to the number of students in each study who changed majors at least once during their college career.

Year	Researchers	% Changing majors 1+ times
1964	Davis	50%
1969	Feldman & Newcomb	33-66%
1978	Levine	43%
1980	Foote	87%
1984	Gordon	75%
1985	Noel, Levitz & Saluri	75%
1987	Simpson	65%
1994	Kramer, Higley & Olsen	75%

McDonald and Steele (2000) summarize research on the causes of major change and identify four general reasons:

1. Lack of information. Not having complete or accurate information may be the most common reason according to research (Kramer, et al. 1994; Pierson, 1962).

Students coming from high school may have been exposed to a limited variety of careers and may be bewildered by the variety of subject areas available for study. These individuals may have decided upon a major based on incomplete or incorrect information

or just to select something without understanding the requirements for that field of study or the process for deciding on a major.

2. Outside influence. Family and friends often encourage students to follow certain paths and for many reasons, students take their advice. Also, after a period of exposure, they may find they are not suited to that field of study or just do not like it; therefore, they change to a major that is a better match for them (Gordon & Polson, 1985; Grites, 1981).

3. Developmental issues. Extensive work by researchers shows that young adults progress through different developmental stages, at different rates. All students may not be ready to become involved in their major and career decision making process in their first year of college; instead, their focus may be on other developmental tasks and their engagement in this process is delayed (Chickering & Reisser, 1993; Erickson, 1980; Evans, et al., 1998; Perry, 1968, 1981).

4. Academic difficulty. Students sometimes find the course work in a certain major too difficult and they are unable to be successful in that course of study. As a result, they are unable to progress and must find another major (Gordon & Polson, 1985).

Some information was discovered in the literature on subsequent major change among students who were initially undecided and then declared a specific major. Research accomplished by Kramer, et al. (1994) at BYU from 1980-1988, which tracked changes in academic major among undergraduate students, directly compared the major changes of "open major" (undeclared) students and "specified major" (declared) students. Open major students in this study changed their majors 25% less often than

specified major students. Over 70% of Colorado State University students who began as general studies (undeclared) students and graduated, received their degrees in the field of their first, specified choice (Titley & Titley, 1985).

Career Decision Making

The process of major selection is intertwined with the process of career decision making--the two "go hand in hand." As Davis (1965) states: "The undergraduate college is the entry point into the top layers of our occupational structure" (p. I). Although this comment was printed over thirty years ago, it may contain even more truth in today's society. It is impossible to look at the major selections of college students without looking at their career decision making process.

Many studies demonstrate that vocational reasons (getting a better job and making more money) are primary in the minds of students (Altbach, 1993; Astin, et al., 1997; Levine & Cureton, 1998; Pascarella & Terenzini, 1991; Peterson, 1983; Zunker, 1994.) Gordon states that "Most students look upon choosing a major and an occupation as a single problem" (1984, p. 5). And, a definite question students have is how will specific majors connect to the real world of work (Bogenschutz, 1994)?

In relation to undecided students, Lewallan (1994) discusses the "two-dimensional nature of being undecided" (p. 7). Students may be undecided about the specific area to study (major), their eventual career choice upon graduation, or undecided about both.

The ideas of many career development theorists have been applied to the realm of major and career decision making. Holland's "Theory of Types" assigns people and

work environments to specific categories--an individual's career choice and career adjustment are extensions of their personality (1973, 1992). When applied to the field of major selection, this theory proposes that:

When a student's characteristics resemble those of the typical student in his prospective field, he is likely to feel at home and remain in the field. Conversely, incongruencies between a student and his field result in feelings of alienation and dissatisfaction and usually lead to a change of plans (Abe & Holland, 1965).

A substantial amount of investigation has been done on this idea of the congruency of personality and major and/or career, and supports this theory (Noel, et al., 1985; Schurr & Ruble, 1988; Tinto, 1993; Walsh & Lewis, 1972; Walsh & Russel, 1969).

Another career development theory commonly related to major and career selection of college students is Super's life-span theory (1957, 1990). Super proposes different developmental tasks at different times in life--in late adolescence and early adulthood individuals are involved in "exploration." They are involved in obtaining occupational information, choosing career alternatives, making a specific decision and starting to work. The consistencies between the tasks of the exploration stage and the selection of a college major and potential career are obvious.

William Perry's theory of "Intellectual and Ethical Development" (1968, 1981, 1999) has been applied to the entire realm of higher education, and can be used to help understand the process of students' major and career decision making. For example, students in the "dualistic" (black and white) stage may believe there is *one* career that is just right for them, while students in the "multiplistic" stages are more willing to investigate potential careers and gather information (Evans, et al. 1998).

Overall, there is a vast amount of literature covering student development and applications to major selection, major change and career decision making. Borgen (1991) and Hackett, Lent and Greenhaus (1991) each wrote comprehensive summaries of 20 years of vocational behavior counseling and vocational theory and research, respectively. Also, the September-October 1999 issue of the Journal of College Student Development reprinted several landmarks articles pertaining to this field; in particular the articles by Parker (1974) and Strange (1994) provide much pertinent information on this area of study.

A comprehensive review of the literature on "career decidedness types" was published by Virginia Gordon in 1998. Her twenty years of research in this field documented that the level of major and career indecision among students varies widely. Based on this body of work, Gordon proposes seven categories of decision status among students--three categories of decided and four categories of undecided types, ranging from "very decided" to "tentatively undecided" to "chronically indecisive." Undoubtedly, all these types of undecided students are represented in the population of the current study.

Stated Majors versus Actual Majors

The final area investigated in the literature was the relationship between majors stated by freshmen or pre-freshmen and their actual majors of declaration or graduation. Several studies show a positive relationship between what students think they would like as a major and/or career (expressed choice) and what they actually choose.

The study by Kramer, et al. (1994) provided this finding: "On the average, 47% of the graduates in all of the cohorts selected the major they ultimately graduated with at the time they applied to the university" (p. 90). But, the bulk of those students changed their major one or more times during their college years and *then came back to their original choice*. Previously, Davis (1965), Holland and Gottfredson (1975), and Slaney (1980) showed that expressed choices have predictive value.

Review of Methodologies

In reviewing the literature on major declaration, some similar descriptive, quantitative studies were found. The study by Kramer, et al. at BYU in 1994, which tracked students' declarations of majors from their freshman year to graduation, was the most similar to the researcher's study. The purpose of the BYU study was to "...describe changes students make in their majors between college entry and graduation, and the impact of students' high school decisions on their college major" (p. 89). Additional studies which tracked major declaration and change patterns of students were accomplished by Davis (1965), Foote (1980), Simpson (1987), Titley and Titley (1980, 1985), Titley, Titley and Wolff (1976).

Evaluation of the Literature

Summary

The researcher's review of the literature for this study--undecided students, major selection and change, career decision making and related student development

information, and stated majors/careers as valid predictors--provided a comprehensive picture of how complicated and inter-connected the selection of a major is for all college students. While there are over-riding patterns verified in the literature (undecided students are not much different from decided students and a majority of students change their majors), and categories that groups of students fit into (very-decided to chronically indecisive [Gordon, 1998] and dualistic vs. multiplistic [Perry, 1981]) the process of selecting a major and pursuing it to graduation is an individual and variable process. In addition, the significance of this decision cannot be denied--the selection of a major is at the foundation of each student's college experience and is rooted in the system of higher education in America.

Overall Weaknesses and Strengths

No studies were found in the literature which looked specifically at entering, undeclared students and described their patterns of declaration over a period of time. The study by Kramer, et al. (1994) was the most similar. It looked at all entering and transfer students' major declarations from entry to graduation, and the number of major changes of undeclared (open-major) students in the population was compared to the number of major changes of specified major students (p. 91).

Research on undecided students is extensive, extending from the 1920's to the present. These students are studied and discussed in light of many factors, but descriptions of their patterns of major declaration over their college career are not common.

Undeclared students, undecided students who *admit* they are undecided, are not always studied separate from the varied group of all “undecided” students. Researchers who have focused specifically on undeclared students are: Foote (1980), who examined the differences between students without a “determined major” (undeclared) and students with a determined major; Titley and Titley (1980, 1985), who tracked students who entered undeclared through graduation, and Kramer, et al. (1994) who looked at the entering, “open-major” students separately from students who entered declared, and then changed majors. Gordon also focused on undeclared students separately from the larger category of undecided students in her book on advising undecided students (1995, Chapter 3).

Major change is a common theme in the literature with studies on the prevalence of the phenomenon, reasons for it and practices to facilitate students engaged in the process, but again, descriptions of the patterns of major declarations by these students were not common. Extensive literature exists on student development theory as applied to career decision making and provides a solid background for exploring why students are undecided, why they may find deciding upon a major difficult, and how they go about making their decisions. Research accomplished by several individuals has shown that stated majors do have predictive value for both declared majors and majors of graduation. However, much of this research was accomplished prior to the 1990's.

Overall, the literature provides an abundance of information on *who* the students are who are undecided and change majors, as well as information on *why* they are undecided, change majors and why selection of an appropriate major is important to

them. But, descriptions of *what* majors undecided students select, *when* they select them, and their persistence in those majors have not been extensively developed.

Avenues for Further Inquiry

Little is known about what happens to undecided students once they decide upon a course of study. What are the patterns of declaration among this population? Are undecided students more likely to enter certain curricula than others? Why do they select the majors they do? What is their rate of subsequent major change? What is their persistence rate to graduation? What types of intervention or support from their institution made a difference? These are just some of the questions that provide opportunities for further study.

Chapter Summary

In this chapter the researcher provided a review of the literature base for the study. A synthesis of the literature on undecided students, major selection and change, career decision making and related issues of student development, and stated majors/careers as valid predictors was provided. Next, the criteria for selection of that literature was discussed. The context of the problem and current understanding of it was presented, as well as methodologies used in similar studies. Next the literature reviewed was evaluated, looking at the weaknesses and strengths, and finally, the avenues for further study. In Chapter 3 the researcher provides a detailed description of the methodologies used in this study.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes, in detail, the rationale and methodologies employed to describe the current state of where General Studies (undeclared) students at MSU declare their initial, specified majors, and what their patterns of major declaration are after leaving General Studies.

The target population of students for this study is described, and the rationale for the selection of the actual population of the study is explained. Detail is provided concerning how data was compiled from academic transcripts to describe patterns of declaration from Fall 1998 through Spring 2000 semesters. In addition, an explanation of information regarding possible majors obtained from a survey given to these students at the beginning, and again at the end, of their first semester is provided. A chronological explanation of the compilation and analysis of the data is included. Finally, the nine guiding questions are stated and a detailed explanation is provided of how the data was compiled and analyzed for each of these questions.

Participants

Population: Size and Demographics

General Studies, a special academic program under the Office of the Provost, is designed to serve undeclared students at MSU. General Studies has received

approximately one-third of all freshmen entering the University each year since 1995; for the Fall 1998 semester, 31% (625 of the 2,041 entering freshman) enrolled in General Studies. All first-time, entering, traditionally-aged (17-21 years old), freshmen who are enrolled in General Studies are required to take the General Studies Freshman Seminar Course (GENS101). "First-time," entering freshmen are defined by MSU as "those who have completed high school or its equivalent and have never attended a college or university, or who have attempted fewer than 12 quarter or semester college-level credits at another regionally accredited college or university" (1998-2000 MSU Bulletin, p. 10). Included in that group are full-time students (those enrolled for 12 or more credits), part-time students (those enrolled for less than 12 credits), and "provisional admits"--students who have not met the minimum academic requirements for admission, but are permitted to enroll for one semester, with a limit of seven credits (Montana Board of Regents Policy, 1999). The initial population for this study consisted of all students enrolled in the Fall 1998 GENS101 course--a total of 543 students were officially enrolled in the course September 22, 1998, the end of the add-drop period.

Specific data was not collected on this group regarding full-time and part-time status, gender or in-state and out-of-state status. The basic demographic information on full- and part-time status, gender and in- and out-of-state status is presented below for the entire MSU entering, freshman class for Fall 1998 (MSU Quick Facts 1998-1999). While the population of the GENS101 students may not be identical, the information is included as a point of reference for the reader.

The entering, freshman class was comprised of 93% full-time students (N = 1,900) and 7% part-time (N = 141); 55% male (N = 1,199) and 45% female (N = 919); and 69% in-state (N = 1,407) vs. 31% (N = 634) out-of-state students or those from foreign countries.

Selection of Sample

All students enrolled in GENS101 Fall 1998 semester as described above were initially considered part of the sample (N = 543). This number was obtained from the official class rosters of all 30 GENS101 sections, which list students who were officially enrolled at the end of the add-drop period (September 22, 1998). Students who did not receive a grade for the course (ie: withdrew from the class after the September 22nd drop deadline) were deleted from the sample; a total of 16 students withdrew during the semester and were deleted, leaving 527 in the population at that point.

Also, in collecting data from students' transcripts, it was discovered there were three students who enrolled in and completed the course, but had more than 12 college credits prior to the Fall 1998 semester. Those students were also deleted from the sample, leaving 524 in the population.

A final criterion for selection in the sample was based on participation in an in-class survey on students' "Purposes for Education" (Borland, Orazem & Donnelly, 1998). All students enrolled in the GENS101 course were asked to respond to a survey at the beginning of the semester (referred to as the "pre-survey") and again at the end ("post-survey") which queried students on their purposes for higher education, two majors they

were considering, and the impact of elements of the GENS101 course. Students who met the criteria noted above and participated in both surveys were included in this sample.

Based on the above criteria, a final total of 449 students were included in this study.

Materials for Collection of Data

Overall Function

The current state of where General Studies students at MSU declare their initial, specified majors and what their chronological patterns of major declaration are after leaving General Studies are unknown. Therefore, the purpose of this descriptive study is to describe the current state of undeclared, MSU students' initial, specified major declarations and what their chronological patterns of major declaration are after leaving General Studies. The Colleges and curricula at MSU in which students in General Studies declare their initial, specified majors is reported, as well as a description of their patterns of major declaration. In addition, what these students had stated as possible majors during their first semester were examined to determine if there were similarities between their stated and declared majors, and to see if students who had stated possible majors not available at MSU were more likely to remain in General Studies or exit the University. Two sources of information were used.

Academic Records. The Fall 1998-Spring 2000 MSU academic transcripts provided the following information: (a) enrolled Spring 2000 semester or last semester of attendance; (b) the College and major declaration of the initial, specified major, and the

semester of that declaration; (c) credits completed at the time of major declaration, exit from MSU, or if remaining in General Studies Spring 2000; (d) subsequent major declarations, including semester of and number of credits completed at that time.

Purposes for Education Surveys. The surveys given to the GENS101 students at the beginning, and again at the end of the Fall 1998 semester (Borland, et al., 1998) provided the second source of information for this study. Students' responses to the query: "Two majors I am now considering are..." were collected and recorded.

Validity & Reliability

The following issues of validity and reliability were considered by the researcher when gathering, recording and analyzing the data from the two sources.

Academic transcripts. These are the official University records of each student's semester-by-semester academic history while enrolled at MSU and are therefore, considered a valid and reliable record. Information from the following transcript categories was used in the current study. Each category is described, along with issues the researcher considered in relation to that information. Appendix A is a sample academic transcript for Fall 1998-2000.

College: The information on this line of the transcript lists the College in which students have officially declared a major in: one of MSU's seven Colleges or General Studies. This information is obtained by the Registrar's Office either from the initial application or a "Change of Curriculum" card filed with the Registrar's Office at some point during the semester.

