



Western Michigan University
ScholarWorks at WMU

Dissertations

Graduate College

12-1995

Intrinsic Motivation for Learning of the Adult Graduate Student at Western Michigan University

Phyllis Crandall
Western Michigan University

Follow this and additional works at: <https://scholarworks.wmich.edu/dissertations>



Part of the Higher Education Commons

Recommended Citation

Crandall, Phyllis, "Intrinsic Motivation for Learning of the Adult Graduate Student at Western Michigan University" (1995). *Dissertations*. 1736.

<https://scholarworks.wmich.edu/dissertations/1736>

This Dissertation-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Dissertations by an authorized administrator of ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.



INTRINSIC MOTIVATION FOR LEARNING OF THE ADULT GRADUATE
STUDENT AT WESTERN MICHIGAN UNIVERSITY

by

Phyllis Crandall

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
December 1995

INTRINSIC MOTIVATION FOR LEARNING OF THE ADULT GRADUATE STUDENT AT WESTERN MICHIGAN UNIVERSITY

Phyllis Crandall, Ed.D.

Western Michigan University, 1995

The perceptions of adult graduate students concerning barriers to the educational process and their levels of motivation for pursuing a graduate degree were investigated. The established motivational theory first expressed by Abram Maslow in 1954 was used in defining the first variable of motivation to learning when pertaining to the healthy self-actualized individual. The second variable chosen was a listing of student perceived barriers to the educational process as defined by H. G. Schutze in 1987. It was hypothesized that the higher the level of the barriers overcome per Schutze's scale, the higher the level of intrinsic motivation in the learner per Maslow's scale. The purpose of the study was to find a correlation between level of motivation and level of barriers to learning so that universities could better provide services to more individuals who are interested in a graduate program.

It was hypothesized that the reasons students pursued a graduate degree had no relationship to the perceived barriers which must be overcome by the same group of students.

The study also looked at relationships between the variables of individual

reasons to pursue and perceived barriers to overcome and the sample's demographic factors.

The results indicated that the general null hypothesis of the study was retained because only one correlation of the variables out of the 3 X 5 table showed a significant correlation.

The study outcome of the hypotheses based on demographic data showed only twelve significant correlations out of a possible two hundred. Therefore, the ten secondary null hypotheses based on demographic data had to be retained.

Further study in the area of intrinsic motivation would include research with a larger and more diverse population from which to draw the sample, a more defined research tool for a more defined outcome, and a method of qualitative research based on follow-up interviews. These would add to the knowledge base for universities to use in their search for better ways to assist graduate students to reach their goal.

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI

A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

UMI Number: 9611401

UMI Microform 9611401

Copyright 1996, by UMI Company. All rights reserved.

This microform edition is protected against unauthorized
copying under Title 17, United States Code.

UMI

300 North Zeeb Road
Ann Arbor, MI 48103

ACKNOWLEDGMENTS

This paper is dedicated to my family, who allowed me to do this.

And an acknowledged thank you to Brenda Holling, my able typist.

Phyllis Crandall

TABLE OF CONTENTS

ACKNOWLEDGMENTS	ii
LIST OF TABLES	vii
CHAPTER	
I. INTRODUCTION AND STATEMENT OF THE PROBLEM	1
Background of the Problem	2
Statement of the Problem	4
Purpose for the Study	6
Research Objective	7
Limitations of the Study	8
Definition of Terms	8
Intrinsic Motivation	8
Adult Learner	9
Barriers	10
Organization of the Study	10
II. REVIEW OF SELECTED LITERATURE	12
Motivational Theories	12
Adult Learners	16
Reasons for Pursuing	19
Barriers to Overcome	22

Table of Contents -- Continued

CHAPTER		
	Demographic Factors	24
	Increasing the Outlook	28
	Summary	31
III.	DESIGN AND METHODOLOGY	34
	Research Question	34
	Description of Sample and Subjects	34
	Selection Process	35
	Procedures for Data Collected	35
	Measurements and Instruments	36
	Variables	36
	Scales	37
	Instrumentation	38
	Comparisons and Exclusions	39
	Analysis of Data	40
	Chapter Summary	41
IV.	PRESENTATION AND ANALYSIS OF DATA	42
	Introduction	42
	Summary of the Study	42
	Statistical Techniques	45

Table of Contents -- Continued

CHAPTER

Research Results	49
Chapter Summary	72
V. SUMMARY AND DISCUSSION	73
Summary	73
Conclusions	74
General Study Null Hypothesis	74
Secondary Hypotheses for Reasons to Pursue	75
Secondary Hypotheses for Barriers to Overcome	76
Results of Secondary Study	78
Limitations	79
Recommendations	80

APPENDICES

A. Extraneous Comments From Data Survey	82
B. Gestalt Psychology Defined	93
C. Questionnaire Cover Letter	95
D. Questionnaire	97
E. Exercise #1 Data	101
F. Data Identifier Index	104
G. Assignment of Designated Questions to Variables	110

Table of Contents -- Continued

APPENDICES

H. Approved Proposal	115
I. HSIRB Approval Letters	119
BIBLIOGRAPHY	122

LIST OF TABLES

1.	Summary of Graduate Degrees	18
2.	Graduate Enrollment	19
3.	Reasons for Participation	22
4.	Reasons for Learning Activities	23
5.	Total Graduate Fall Enrollment	26
6.	Total Graduate Fall Enrollment: 1991	27
7.	Graduate Programs	29
8.	Mean Scores of Marked Responses	46
9.	Mean Scores for Opportunities to Designate	47
10.	Analysis of Demographic Data From Student Questionnaires.....	48
11.	Correlation of Reason Variable and Barriers Variable	50
12.	Chi-square Test of Independence Between Maslow's Reasons to Pursue and Program of Study	52
13.	Chi-square Test of Independence Between Maslow's Reasons to Pursue and Stage of Completion	54
14.	Chi-square Test of Independence Between Maslow's Reasons to Pursue and Age of Student	56
15.	Chi-square Test of Independence Between Maslow's Reasons to Pursue and Gender of Student	58
16.	Chi-square Test of Independence Between Maslow's Reasons to Pursue and Nationality of Student	59

17.	Chi- to C
18.	Chi- to C
19.	Chi- to C
20.	Chi- to C
21.	Chi- to C

List of Tables -- Continued

17.	Chi-square Test of Independence Between Schutze's Barriers to Overcome and Program of Study	61
18.	Chi-square Test of Independence Between Schutze's Barriers to Overcome and Stage of Completion	63
19.	Chi-square Test of Independence Between Schutze's Barriers to Overcome and Age of Student	66
20.	Chi-square Test of Independence Between Schutze's Barriers to Overcome and Gender of Student	69
21.	Chi-square Test of Independence Between Schutze's Barriers to Overcome and Nationality of Student	70

CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Americans have always looked to education as the means for preserving what was valuable in life and for transforming what needed to be improved. From protecting religion in New England towns to enhancing civic virtue in colonial and early national cities; from individual fulfillment to societal redirection -- education has seemed the means by which all was possible (Rohfeld, 1990 p.1).

Today, as we come nearer to the twenty-first century, this is an even stronger truism than when it was originally written. Education is the key which unlocks the future. This nation will continue to lead if the institution of education continues to recognize that individual motivation can work to increase capacity. The possibilities for increasing the value of life are endless, as we have seen with our space program and in the world market. As we look forward, the institution of education must also look at the means to improve itself and to remember that "the future of the United States and its ability to compete are tied to elimination of the remaining barriers to full participation..(in education)" (Rohfeld, 1990, p. 187).

The real, perceived, or extant barriers to education change over time, and our efforts to overcome must continually be re-evaluated. This process of self-examination can and will instigate renewal and growth. A look at the perceived

barriers to education in the light of adult intrinsic motivation to continue is the subject of this paper.

Background of the Problem

Abram Maslow (1954) states that all members of the human species are motivated by the following things:

By species-wide needs for food, etc; by needs for safety, protection, and care; by needs for gregariousness and for affection-and-love relations; by needs for respect, standing, and status, with consequent self-respect; and by a need for self-actualization or self-fulfillment of the idiosyncratic and species-wide potentialities of the individual person. (p. 2)

These human needs are the best known and most studied by psychologists. But along side these needs and intertwined within the person "are the cognitive needs for sheer knowledge and for (explained) understanding" (p. 2).

Maslow continues to observe that even if all of the physiological or basic needs of man are satisfied, we still often observe a discontented and restless individual. "A musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself. What a man can be, he must be" (Maslow, 1954, p. 94). This is man's desire for self-fulfillment and his need to become more and more of what he is. We can state that acquiring knowledge and systematizing the universe are techniques for the achievement of basic safety in the world, but this does "not constitute a definitive answer to the questions as to the motivational role of curiosity, learning, philosophizing, experimenting, etc. They are at best no more than partial answers" (Maslow,

1954, p. 94).

"When we ask what man wants of life, we deal with his very essence"

(Maslow, 1954, p. 106).

A study concerned with intrinsic motivation for learning is not the answer to the essence of life, but the reasons for pursuing education and the overcoming of barriers in the process may lead us to discover ways of increasing the satisfaction of that essence.

When conducting research to uncover the reasons for this essence of man, the scientist only uncovers more questions. In behavioral studies, such as those described by Burrhus Frederic Skinner, motivation is measured by the subjects response to certain stimuli. Harlow (1953) discusses that while the behaviorist can demonstrate a positive relationship between a learned response and a stimuli such as a period of food deprivation, he cannot explain the insatiable curiosity-investigatory motivation of a child as a response conditioned by hunger. He emphasizes this by saying that he is "convinced that the key to human learning is not the conditioned response, but rather, (internal) motivation aroused by external stimuli" (p. 219-220). Before coming to this conclusion, Harlow (1950) conducted investigations concerning the manipulative drive which might be operative in the rhesus monkey and the possibility that this drive might provide adequate motivation for learning. This thesis was tested without the input or restraint of food rewards. He observed that when given the opportunity to investigate and manipulate a mechanical puzzle, the subjects continued beyond

initial contact and investigation (p. 125-130).

An exploratory drive might have operated, in the present experiment, to initiate behavior towards the puzzle but some motivation in addition to the exploratory drive must be adduced to account for the persistence of the puzzle solving behavior through the course of the experiment without suggestion of extinction (Harlow, 1950, p. 131).

Maslow (1968) later defined this study into a philosophy of man as a theory of striving toward self-actualization. With this premise, he has joined the theory of behaviorism with the classical, Freudian psychoanalysis to reveal his own Psychology of Being. The major proponent of his premise is that "We have, each one of us, an essential inner nature which is instinctoid, intrinsic, given, 'natural,' i.e., with an appreciable hereditary determinant, and which tends strongly to persist" (p. 190). In further describing this inner nature he states that "this inner core, or self, grows into adulthood only partly by (objective or subjective) discovery, uncovering and acceptance of what is 'there' beforehand. Partly it is also a creation of the person himself" (p. 193).

Statement of the Problem

Schutze (1987) states that the participation of adult students in higher education is an issue of growing importance in many developed countries. Relatively little is known about this expanding clientele in terms of demand for educational needs, how they learn, and the main barriers they face. Although the demand for education and training for adults is growing, many establishments of higher education are little prepared to adapt to adult demand by making adequate

provision that responds to the educational needs and specific circumstances of adults. Schutze has categorized these barriers to adult educational opportunities as (a) "dispositional" or low level (relating to attitude and self-perception of the adult learner, especially those of only limited educational background); (b) "institutional" or middle (referring, for example, to lack of suitable courses, inconvenient schedules or location, or high fees); and (c) "situational" or high (referring to lack of time for study due to work, family or other social responsibilities, lack of financial support, means of transportation, child care facilities, etc.) (Schutze, 1987).

These barriers, along with Maslow's theory concerning the inner nature of man as being motivated to self-actualization, is the problem reviewed in this paper. While speculation is that an important element for learning is represented by the growing numbers of adult students as being based on outside or societal influences, the larger quality-of-life issues (labeled as self-actualization for the purposes of this study) should also be studied. Education can, and often times is, the means to an end which delineates the process of self-actualization in learning for the highly motivated individual.

Atkinson (1955) says that there is an important obstacle in the path of any significant study into the innate being of man when trying to discover what encourages or discourages his inmost desires. The obstacle is that no adequate measure has yet been defined, no thermometer so to speak, can measure the strength of a motive to achieve.

So the current problem is one of definition and measurement when seeking to investigate a relationship between motivation and goal accomplishment. The question is asked as to a relationship between the highly motivated individual and the barriers that he will overcome to meet his goal of learning. This paper attempts to put a measure to that relationship by using the five levels of Maslow's hierarchy of needs in his Psychology of Being along with Schutze's three types or levels of barriers to overcome in the process of education. This relationship will be measured by further analysis of the variables by dividing the data into demographic segments.

A relationship which might be defined and measured could then be a basis for further investigation into increasing the motivation to learn in the future.

Purpose for the Study

For many generations, society has looked to our schools and universities to push and prod students to learn so that they may have a better life and a better place in society. Today we observe a different kind of environment. University graduate students are usually older than a generation ago, have an established job and family, and are learning for many complex reasons as shown in the demographic factors in Chapter II. These reasons sometimes include the acquisition of knowledge for knowledge sake alone.

While it is understood that a college education is important in today's society, it is also important to know how to motivate students toward knowledge.

This study is an attempt to find a relationship between the reasons for students to seek that knowledge and the barriers which they perceive to be in the way.

If research in the educational field could put a thermometer measure on the self-actualizing needs of adult students, it should then be able to postulate a model which would be able to increase intrinsic motivation toward those needs and desires.

Research Objective

The major objective of this study is to determine a relationship between the reasons why adults pursue learning and the perceived barriers which must be overcome during the process. This relationship is operationalized by questioning a random sample of adult students concerning their reasons for learning sorted on the five level hierarchy introduced by Abram Maslow. These reasons for pursuing are then correlated with the student's perceived barriers to education sorted by the three definitions of impediments outlined by Hans Schutze.

This objective will also be determined by identifying the relationships of reasons why adults pursue learning and their perceived barriers based on certain demographic factors.

If a relationship or correlation is found, then further study might indicate that universities could assist individual students in reaching their goal by identifying their level of motivation and by helping to remove specific named barriers in the way of their learning process.

Limitations of the Study

The study is limited by the following factors:

1. The proposition tested in the study might have failed to include all relevant or major variables for both the reasons for pursuing graduate study and the perceived barriers to overcome for a full explanation of the influencing forces on the subjects. For this reason, the study questionnaire included an opportunity for the subject to include his/her own variables to be considered. These comments are included as extraneous comments in Appendix A.
2. The method of random sampling and return mail is problematic in that the aspect of volunteerism is evident. The results may be contaminated because of an over abundance of positive motivational perceptions by the observed sample. A response rate of 80% returned questionnaires from the sample surveyed precludes the impediment of volunteerism as being materially important.
3. The definition of the population studied may be misunderstood by the readers of this paper. The term "adult student" is normally used in connection with a much broader base of identifiers.

Definition of Terms

Intrinsic Motivation

Webster's Dictionary defines intrinsic as belonging to the true or fundamental nature of a thing. For this study, the definition is accurate. The

fundamental nature of a thing. For this study, the definition is accurate. The term intrinsic is then taken and put with Maslow's theory for the self-actualized individual as further discussed in Chapter II. Maslow's healthy individual has within himself a desire for self-fulfillment and a need to become more and more of what he is. This definition of the healthy individual will be used in this paper to refer to the intrinsically motivated person under study.

Adult Learner

This study defines the adult student as individuals 18 years of age and older, enrolled in an institution of higher learning such as a college or university, and pursuing a graduate degree program.

Wagner (1987) referred to the same definition in his 1983 study on adults in higher education. At that time, he reported that about seven million adults in the United States received instruction through formal programs offered at institutions of higher education. While the common definition of adult learner includes other programs such as corporate training classes, GED classes, vocational schools, immigrant language classes, and employee training classes, this study does not include such subjects.

The distinction of the term adult student must be made clear so that the study and the population investigated may be generalized back to a similar graduate student population at a similar university and not to the aforementioned larger and more varied group.

Barriers

A barrier for this study is defined as any adult student perceived impediment which stands in the way of progress toward degree matriculation.

This definition of a barrier is again a variant from the traditional form in usage today. This study will only look at barriers as they pertain to adult education. Wagner (1987) states that the normal listing of initiatives undertaken by higher education to promote adults has been the institution's perception of needs. These have included five categories: (a) Financing, (b) Admissions and Crediting, (c) Non-Traditional Attendance Options, (d) New Institutions and Providers, and (e) Student Support Services (p. 76).

While it may be possible to force the barriers found in this study into these same five categories, the difference lies in the foundation for the perceived variables. This study emphasizes the adult student's perception of barriers as viewed from their own difficulty in overcoming them and not from the academia point of view.

Organization of the Study

Chapter I contains an introduction and background which includes the statement of the problem, purpose for the study, research questions, and the limitations of the study. Definition of significant terms such as intrinsic motivation and adult learners are outlined.

A review of relevant literature is presented in Chapter II and begins with early motivational theories and a description of adult learners. The main focus of this research is analyzed by reviewing the reasons for pursuing a graduate degree and the barriers to overcome in the process. Statistics on demographic factors of the population are presented along with related studies for increasing adult participation in the learning process.

The methodology used in this study is outlined in Chapter III. The research question is further defined by the presentation of a detailed description of the sample, the selection process, the procedures for data collection and the instruments used.

The results of the research and specific information concerning the findings of the study are presented in Chapter IV.

The final chapter summarizes the research findings and includes recommendations for further study.

CHAPTER II

REVIEW OF SELECTED LITERATURE

Motivational Theories

Malcolm Knowles (1984) stated the fact that "we know more about how animals learn than about how children learn; and we know much more about how children learn than about how adults learn." He reasoned that this is because of the controlled environment used for study in the first two areas and the fact that adults learn for very different reasons.

He explained the differences by dividing historical studies on learning and motivation into theories based on the mechanistic model such as the studies of Thorndike, Pavlov, and Skinner and theories based on the organismic model such as the studies of William James, Max Wertheimer, and Abram Maslow.

Knowles (1984) defined these two models as:

The mechanistic model represents the universe as a machine composed of discrete pieces operating in a statio-temporal field. These pieces -- elementary particles in motion -- and their relations form the basic reality to which all other more complex phenomena are ultimately reducible. The organismic model represents the universe as a unitary, interactive, developing organism. The essence of substance it perceives to be activity, rather than the static elementary particle proposed by the mechanistic model. (p. 16)

This division was also described by Neff (1972) using a more common

terminology used in the literature on adults and their learning patterns.

1. Stimulus-response (S-R) associationism theories emphasize the concept of man as a human mechanism who reacts mechanistically to any stimulus situation. According to this study, the resulting reaction is the only one that could have occurred. No purposing on the part of the individual is necessary.

2. Gestalt-field theories hold that man is an active and purposive creature and they consider the whole greater than the sum of its parts. Environment is what the individual perceives around him; it is psychological and unique to him. Persons in close proximity to environmental stimuli may so structure their perceptions that each individual has a different environment. Thus, man is changed by his environment and his environment is changed by him. (p. 131)

Tennant (1991) used a slight variation of this division by separating motivation theories into three categories. One perspective is headed by Skinner and regards learners as passive receivers of behavior and that their values are shaped by rewards and punishments. The second perspective is headed by Piaget and attributes a more active role to learners who are trying to make sense of their experiences. And the third perspective is headed by Maslow and reaffirms the human qualities of a person, such as personal freedom, choice, and the validity of subjective experience.

It is this field of humanistic clinical psychology that equates man with choice that is examined in this research on adult motivation.

To review this field of psychology, Williams James must be recognized as

contributing the first important pioneering effort into the idea that the philosophy of human nature encompassed the whole being of man. His Principles of Psychology, written in 1890, brought together a variety of domains e.g. motivation, emotions, habit, the self, the streams of consciousness, imagination, memory, reasoning, hypnotism, physiology, and will into a scientific psychology that became completely integrated in his mind and in later literature. James believed that this whole person had the capacity to use his will along with his habit to re-energize himself into believing that life was worth living. His philosophy was that to be actively and enthusiastically engaged in the pursuit of life itself was the best that one could attain in his own lifetime. (Howard 1993)

Sigmund Freud (1955) later studied the neurotic personality rather than the healthy individual and in 1904 he wrote about a principle concerning unconscious or intrinsic motivation. He found during his observations that "certain inadequacies of our psychic functions ... and certain performances which are apparently unintentional, are determined through the consciousness of unknown motives" (p. 12).

In more modern time, Abram Maslow has been called the First Theorist on Human Motivation. He was one of the first to put into writing his theory of human motivation in Motivation and Personality (1970) the ideas of the human struggle to rise above the pitfalls of everyday life. Through the striving for survival and the pulling up of himself, man became more worthy of success. Maslow began to develop his theory of motivation around 1935 when he was a

student of Gestalt psychology at the New School for Social Research in New York City (see Appendix B for a definition of Gestalt Psychology). His idea of the human needs hierarchy began as a means to functionalize his observational experiences. He called this new positive thinking of motivation a holistic-dynamic theory (p. 80).

Maslow's five-step attempt to define this behavior included his delineation of the following hierarchical steps; the physiological or basic needs, the safety needs, the belongingness and love needs, the esteem needs, and the need for self-actualization. The basis for his theory rests on the fact that man can only introduce a higher level need when satisfaction of the current level of need has been obtained.

During his research, Maslow (1954) wrote of a "holistic analysis which included the most important and useful whole characteristics of the self-actualized person" (p. 203). This analysis has been used for further clinical experimental study and continues to be useful in today's environment.

Daniels (1984) brought together the thoughts of several researchers in the field of moral development when he looked at the theory of self-actualization development along-side the idea of moral development. He recognized that the characteristics associated with principled moral reasoning were consistent with Maslow's descriptors e.g. adjustment, lack of anxiety, autonomy, need for independence, intellectual and aesthetic interests, imagination and unconventional thought processes, creativity, tolerance for ambiguity, altruism, interpersonal

responsiveness, candidness, rejection of traditional value, lack of dogmatism, and lack of psychological conservatism.

With his study, Daniels then concluded that self-actualization is primarily a moral concept, and therefore it may need to be incorporated into the studies within the area of developmental psychology rather than remaining in the present humanistic (or clinical) area as promoted by current Maslow followers.

Adult Learners

Neff (1972) described the adult learner as "every adult who is motivated to participate in an adult education experience" (p. 129). He also observed that the adult learning experience needs to be structured differently than for children so that the adult opportunity is clearly defined and based on experience and logic rather than rote processes.

Learning is considered an individual process, even though it takes place in a group situation. The individual who adapts to the group has learned a mode of behavior as well as factual content. Learners learn from each other. The adult learner must be willing to accept the learning situation and the people about him in order to learn. (p. 133)

Tennant (1991) stated that intellectual and cognitive growth occurs in the adult years and that this growth is due to experience. Children do not have this experience and therefore grow at a different rate and in a different way.

The relevant history of adult education, in this country, began about 1919 and is divided into three periods according to Knowles and Klevins (1972). The first period of time was 1919 to 1929 when the American Association of Adult

Education was established. This was preceded by the foundation of the free library system dependent on public funding. The second period, 1930-1946, was a time during which the definition of adult education and the subject matter was changed and modified to include the various needs of adults in this changing America.

The third period began around 1947 when adult education moved toward professionalism and institutionalization. It was during this time that many graduate programs of study began to flourish.

The information in Table 1 shows this significant trend in adult education by showing the increase in graduate degrees presented from 1869 through 1991 compiled by the National Center for Educational Statistics (Snyder 1993).

When looking at graduate student enrollment rather than degrees conferred, we observe a steady number at about 1.3 million in the late 1970's and early 1980's, but that number rose to about 14% in the five years between 1986 and 1991. This rise in enrollment is also reflected by the number of degrees earned during the period of time from 1980 through 1991 by adult students with at least four years of college. The proportion of educational attainment for the entire United States population increased from 17% to 21%. The number of graduate degrees conferred during the 1992-1993 school year included 364,000 master's degrees and 41,200 doctor's degrees. (Snyder 1993)

This increase in enrollment shown in Table 2 to continue well into the next century based on adults need to improve their learning capacity. (Gerald 1992)

Table 1
Summary of Graduate Degrees
1869 - 1870 to 1990 - 1991

School Year	Number of Graduate Degrees
1869 - 1870	1
1879 - 1880	933
1889 - 1890	1,164
1899 - 1900	1,965
1909 - 1910	2,556
1919 - 1920	4,894
1929 - 1930	17,268
1939 - 1940	30,021
1949 - 1950	64,603
1959 - 1960	84,264
1969 - 1970	272,734
1979 - 1980	400,827
1988 - 1989	417,197
1989 - 1990	433,660
1990 - 1991	448,410

Table 2
Graduate Enrollment (in thousands)

Actual		Projected	
1978	1,312	1991	1,703
1979	1,309	1992	1,746
1980	1,343	1993	1,796
1981	1,343	1994	1,817
1982	1,322	1995	1,822
1983	1,340	1996	1,831
1984	1,345	1997	1,839
1985	1,376	1998	1,847
1986	1,435	1999	1,856
1987	1,452	2000	1,857
1988	1,472	2001	1,859
1989	1,522	2002	1,871
1990	1,574	2003	1,877

Reasons for Pursuing

When discussing a person's evaluation of self, Diggory (1966) states that "we value ourselves because of the part we play in accomplishing our goals," and

that if we value our abilities, then our achievements and accomplishments bear witness to that value (p.94).

Adults learn in different ways and for different reasons. Tennant (1991) says that the history of adult education literature is based on meeting needs. There are different categories, different types, and different levels of need, but all motivation to learning is needs based.

Knowles (1984) lists these needs as external motivators such as a better job or a promotion and internal pressures such as self-esteem or a higher quality of life.

If we acknowledge this fact, that motivation is needs based, then we also have to acknowledge that a theory of learning should be based on the fact of trying to meet that need. Knowles (1984) tells us in the following passage to match the need theory with program design in order for learning to take place.

You can conclude that Skinner's operant conditioning theory makes the most sense to you, provides the clearest guidelines for program design and operation, and assures the most predictable results. Or you can conclude that the third force psychologists (Maslow, Rogers, et al) are more in touch with human nature as it really is, and make decisions that are congruent with such concepts as self-directed inquiry, positive self-image, and self-actualization. (p. 107)

Barton (1982) declared that "the largest single reason adults participate in education and training is to advance in the workworld." (p. 41) Historically society believed that education was a prelude to life rather than a part of it and older workers were often denied access to learning opportunities, but today learning is based on the needs of the adult worker so that he can cope with a

changing society and the workplace.

Later in his book, Barton (1982) stated that colleges and universities are in the process of transforming to the approach that in order to meet the adult objectives, they must provide programs which allow easy access and lifelong learning. (Chapter 8)

In the search to meeting the needs of adults, Jourard (1971) spoke of special schools which cultivates this evaluation and discovery of self. He calls for an emphasis upon the person, the discovery of one's limits to experiencing action, human dialogue, and the discovery of those means by which the limits can be transcended. (p. 115)

Adult Learning: Research and Practice by Huey Long (1983) reported and discussed the current research that could contribute to the understanding of adult learning.

The research literature concerning participation clearly reveals that adults participate in educational activities for a variety of reasons. Some of the reasons have been described in self-report studies, and others have been characterized in analytical psychological investigations. Reasons range from specifics such as 'to improve my occupational performance' to more psychologically defined reasons such as growth motivation. (p. 99)

An important self-report study conducted by the Illinois Board of Higher Education, and reported by Long (1983), revealed the transitional reasons for participation in adult learning activities listed in Table 3.

Table 3
Reasons for Participation

Reason	Percent
Career	56%
Family	16%
Leisure	13%
Art	5%
Health	5%
Religion	4%
Citizenship	1%

Another study reported by Long was conducted by the National Opinion Research Center in the early 1960's and revealed the reasons for engaging in learning activities by telling how the courses could be helpful that are listed in Table 4.

Barriers to Overcome

Barton (1982) strongly believed that "The largest impediment to equal service in higher education for adult workers is plain prejudice -- prejudice against the adult learner." (p. 140)

He listed the following factors to consider:

Table 4
Reasons for Learning Activities

Events	Percent
Become a better informed person	37%
Prepare for a new job or occupation	36%
On the job I held at that time	32%
Spend my spare time more enjoyably	20%
Meet new and interesting people	15%
In carrying out everyday tasks and duties around home	13%
Get away from the daily routine	10%
In carrying out everyday tasks and duties away from home	10%
None of these, or I don't know	7%
Other work or job related reasons	3%
Improve skills or increase knowledge	3%
Increase income	1%
Home or family life role	1%
Personality or interpersonal relations	1%
Other personal development	1%
All others	2%
More than 100% because more than one answer could be chosen.	

Most institutions identify education with the young by providing free public education for the first 18-20 years of life.

Student financial aid programs are only for undergraduates and then prohibits awards for less than half-time enrollment.

Unequal student school charges which require independent students to pay more for classes than parent-supported students.

Institution imposed time limits for earning a degree which do not consider the needs of adult workers.

Long (1983) reported that generally the barriers to participation in learning by adults have been examined through the census-type survey, and those results are not consistent. This is because of different approaches to the question of barriers in current major studies as discussed earlier. However, a general theme appears. Long (1983) states that the "five barriers to educational activities identified through an anthropological approach are family responsibilities, lack of access to educational facilities, money, time, and motivation." (p. 111)

Demographic Factors

"The single most important statistic found when looking at demographic factors on adult education is that since 1984 the number of women in graduate schools have exceeded the number of men" (Snyder, 1993, p. 165). Between 1961 and 1991, the number of male full-time graduate student increased by 23% compared with 45% for full-time women (see Table 5). Among part-time

graduate students, men increased by only 6% compared with 25% for women. (Snyder 1993)

The 878,000 women listed on the following table enrolled in graduate programs in 1991 represent 54% of the total for that year. Men enrollees represented 46%.

Comparing this information with Table 10 in Chapter IV of this paper, a ratio of 61% women to 39% men were found in the sample used for this research project. This indicates that the population defined as Western Michigan University graduate students and the random sample selected from the population are closely representative of the national data.

A listing of enrollment for 1991 by age designation is in Table 6. (Snyder 1993) The age category of -18 through age 29 has a total of 698,875 students and represents 43% of the total enrollment of 1,639,135. The age category 30 through age 39 represents 30% of the total and the age category 40 through 65+ represents 21%. The unknown age number totals the remainder for 100%.

Referring to Table 10 in Chapter IV of this paper, a proportion of 44.30% for the ages 18-30 and 31.65% for the ages 31-40 and 24.05% for the ages of 41-90 were found in the respondent sample used for this research project. This indicates that the population defined as Western Michigan University graduate students and the random sample selected from the population are closely representative of the national data.

To further define the population used for this study, a report of the

Table 5

Total Graduate Fall Enrollment

Year	Total Number of Graduates	Total Male	Total Female	Male		Women	
				Part-Time	Full-Time	Part-Time	Full-Time
1984	1,345	672	673	386	286	459	215
1985	1,376	677	700	388	289	479	220
1986	1,435	693	742	399	294	514	228
1987	1,452	693	759	400	294	525	233
1988	1,472	697	774	393	304	526	249
1989	1,522	710	811	401	309	548	263
1990	1,586	737	849	416	321	571	278
1991	1,639	761	878	419	341	578	300

Table 6
Total Graduate Fall Enrollment: 1991

Age	Total	Men	Women
All	1,639,135	760,966	878,169
-18	536	220	316
18-19	691	286	405
20-21	14,843	7,048	7,795
22-24	232,677	107,041	125,636
25-29	450,128	236,845	213,283
30-34	279,296	148,070	131,226
35-39	212,756	94,887	117,869
40-49	268,294	94,504	173,790
50-64	64,144	21,209	42,935
65+	5,051	2,293	2,758
Age ?	110,719	48,563	62,156

statistics compiled by the U.S. Department of Education (Snyder 1993) in relation to Western Michigan University reported a total enrollment of 27,901 students for Fall 1991. This total consisted of 12,809 men and 15,092 women with 17,499 full-time students and 10,402 part-time students. Of that total enrollment, 25% or

6,973 were enrolled in post baccalaureate programs.

During this same year, Western Michigan University conferred 1,262 post-graduate degrees. Caution must be exercised with this piece of data so that an assumption is not made that 1,262 graduate degrees were earned by the group of 6,973 graduate enrollees. The only assumption that can be drawn from this final statistic is that a lower number of earned degrees were conferred in relation to a larger number of enrollees during the same period of time.

Increasing the Outlook

Brawer (1973) discussed the integration of several motivational theories along with the rethinking of college educators in the process of meeting the needs of college students. She brought out the idea that colleges were not considering all of the research that has taken place with respect to the stabilization of enrollments along with continuance in the process of certification. It is acknowledged that:

Academic institutions must integrate into their curriculums the considerable knowledge now available about the diverse ways in which people function. They must replace comprehensiveness in works and intent by appropriate programs for aiding the person in his development. Only then will each individual become the well-individuated, well-integrated person he has the potential to be (p. 189).

The challenge given to colleges and universities is to increase the proportion of graduate degrees conferred on adult students in relation to the number enrolled in these programs.

The United States Department of Education compiles statistics on graduate enrollment and degrees received, but does not relate specific individuals to the numbers in order to show actual drop-out rates.

Table 7 shows graduate enrollment in proportion to degrees conferred from 1969 through 1991. (Snyder 1993)

Table 7
Graduate Programs

Year	Enrollment	Degrees
1969 - 1970	955,000	29,866
1979 - 1980	1,309,000	400,827
1988 - 1989	1,472,000	417,197
1989 - 1990	1,522,000	433,660
1990 - 1991	1,586,000	448,410

Because graduate students are on the rise in the United States, future research into the area of graduate "needs and wants" should complete a list of improvements for program development.

Knowles (1984) has told us that the educator of adults has to integrate several known theories in order to establish a climate which is conducive to learning. In order to do this, educators have to look at the following theories.

Ecological psychologists have obtained valuable information about the effects of the physical properties of environment on learning.

Social psychologists have taught us the effects of the human environment -- especially the quality of interpersonal relations.

Industrial psychologists have found useful insights into the effects of the organizational environment -- the structure, policies, procedures, and spirit of the institution.

Cognitive theories have stressed the importance of a psychological climate of orderliness, clearly defined goals, careful explanation of expectation and opportunities, openness of the system to inspection and questioning, and honest and objective feedback.

Personality theorists have emphasized the importance of a climate in which individual and cultural differences are respected, in which anxiety levels are appropriately controlled, in which achievement motivations are encouraged for those who respond to them and affiliation motivations are encouraged for those who respond to them, and in which feelings are considered to be as relevant to learning as ideas and skills.

Humanistic psychologists have suggested that we create psychological climates experienced by the individuals in them as safe, caring, accepting, trusting, respectful, and understanding. (pp. 117-120)

Barton (1982) reported on several ways that schools and universities are working on attrition and participation. Administrators are recognizing the high

drop out rates and trying to increase the follow through for adult students by changing programs and schedules. Teachers are changing presentation and classroom configuration in order to accommodate the motivation of adults and their many different sets of priorities.

Weekend colleges, off-campus programs, credit for life experiences, and multi-media packages are all attempts to increase the outlook for the adult seeking a degree.

Summary

The Utopian educational world as described by Brawer (1973) would allow people to function at their highest possible level. Even though every person would not be able to attain the highest degree of development possible, at least he would be operating at his own highest level. This would describe the well-individuated, actualized adult which would be closely related to his innermost self.

In order to achieve this idealistic perspective, the child as an individual would have parents and parental surrogates to meet his basic needs for security in his earliest years of life and all physiological and emotional needs would be met in an atmosphere of love and security. These experiences would be a base for the further development of responses based on successful and unsuccessful encounters. The individual's different coping adjustments would provide the growing sense of identity, the ability to act on emotions, the attitude of flexibility, and a balance between dependence and independence (pp. 179-181).

Many motivational theorists e.g. Freud, Maslow, McClellan, Adler, Thorndyke believe that self-actualization or self-fulfillment is a continual process, and because of that background and research, education today needs to build on these thoughts to provide an atmosphere of collaboration and cooperation. This process would then continue and further the motivational process which leads to education and learning.

Schutze (1987) studied this perception when he looked at the new frontiers of the demand by adults to educational processes and attempted to recognize the lack of concern by universities to the fulfillment of these wants and needs. His question for research was: "Which policies and institutional practices enhance adult participation and conversely, which ones present obstacles that adults cannot overcome without difficulty?"

He identified 15 theses which pointed to specific barriers to the educational process.

Dispositional: lack of time, money, lack of self-confidence, ability, interest, fear of being too old to learn, knowledge is obsolete.

Institutional: lack of information, unavailability of suitable courses, geographical barriers, and lack of entry qualifications.

Situational: women affected by family situations, lack of child-care facilities, lack of time to study, family and social responsibilities.

This research review will return to use Maslow's theory of motivation while looking at the definition of barriers by an author such as Schutze and the

attempt to remove them. Barriers, in this study, are perceived as such by the individual--not by outside definition. Maslow (1954) said that the environment influences behavior in relation to the situation and other people. "We must remember that the individual partly creates his barriers and his objects of value, ... they must be defined partially in terms set by the particular organism in the situation" (p. 74).

These self-defined barriers are included in this research and analyzed in Chapter IV. The determination to overcome barriers and to satisfy the most basic needs and wants rely in part on the individual's definition of problem solving. The individual, like the rat in a maze, will strive to overcome obstacles in the way of goal attainment. He will then continue to completion based on his own level of motivation.

CHAPTER III

DESIGN AND METHODOLOGY

Research Question

The major objective of this research study was to determine a relationship between the reasons why adults pursue learning and the perceived barriers which must be overcome during the process of obtaining a graduate degree.

The secondary objective of this research study was to determine a relationship between reasons to pursue or barriers to overcome with the demographic factors of the population studied.

Description of Sample and Subjects

The population-at-large for this study was based on the definition of the adult student as described in Chapter I: (1) individuals 18 years of age and older, (2) enrolled in an institution of higher learning such as a college or university, and (3) pursuing a graduate degree program.

The defined population for this study was taken from the Directory of Western Michigan University which lists enrolled graduate students. All students in the defined population held class standing codes of 5-Master's Degree, 6-Specialist Degree, or 7-Doctoral Degree.

The subjects in the population were expected to range in age from 18 years of age through approximately 75 years of age. The total number of students in the defined population was approximately 3,500 and the number in the sample taken was 200.

A description of the sample, as reflected in the returned demographic data, is reported in Chapter IV along with the presentation and analysis of the collected data.

Selection Process

Names and addresses of all graduate students were taken from the Directory of Western Michigan University for the academic year of 1993-1994. A master alphabetized roster was compiled and a random sample was obtained using the systematic sampling process of choosing every n th name on a list. The systematic sampling fraction of 200 individuals needed for the sample divided by 3,500 individuals in the population-at-large resulted in .057.

For the purposes of the study, the systematic fraction was utilized by choosing a random point to begin within the master roster and then choosing, alternately, every 5th and then 6th person on the list until a sample set was obtained containing 200 students.

Procedures for Data Collected

A three-part questionnaire was developed for this study to collect data from

the defined sample. This questionnaire was mailed to the subjects during the month of April 1994 along with a cover letter stating the purpose and intent of the research study. Contained in the cover letter was the statement that the survey was anonymous. The questionnaire is further defined in the section of this chapter titled Instrumentation and a copy of the cover letter and questionnaire are included as Appendix C and D.

Measurements and Instruments

Variables

The first variable was identified as the level of motivation for continuance of academic goals which is present in the graduate student during the process of learning.

This level of motivation was defined by a list of reasons for pursuing a graduate degree formulated on Maslow's criteria of the healthy self-actualized and highly motivated individual. The list used in the study was compiled by 10 graduate research students during a discussion of motivational factors. The compiled list of reasons was further categorized for the research questionnaire by a class of Western Michigan University students during an exercise for alignment to Maslow's original concept.

In the classroom exercise, 36 students were each given an envelope containing 18 small pieces of paper. On each piece of paper was a reason for

pursuing a graduate degree. The students were also given five empty envelopes. Typed on the front of each empty envelope was a level of need in Maslow's hierarchy of needs. A very short explanation was given concerning the hierarchy and what the terminology of each need represented. The students were then asked to sort the small pieces of paper into the empty envelope, according to their perception of the type of need; there would be no right or wrong placements. (See Appendix E for exercise outcome.)

The second variable was identified as the barriers or roadblocks which the student perceived as obstacles in the path of obtaining a graduate degree.

The method used to obtain a list of barriers was to ask 15 doctoral students to brainstorm and then list their own barriers in the process of obtaining a graduate degree. The initial question was: List 10 roadblocks that you have encountered on your way to a graduate degree, i.e. child care, grant money, and miles to the classroom. They were also asked to discuss how important these seemed to be and how these barriers affected the difficulty in attaining the goal of graduation. This process was the basis for the formation of a list containing 22 barriers used for the second variable.

Scales

The research questionnaire required the participant to indicate their agreement, by a limited number of check marks, with the lists of the two variables. This check off method was then used in the statistical analysis of the

data.

The questionnaire also contained five fill-in-the-blank areas for demographic information. These five scales were heavily relied upon in the secondary analysis of this research for the purpose of testing alignment to reasons for pursuing and barriers to overcome based on the demographics of the population.

This opportunity of identifying specific reasons for pursuing and barriers to overcome correlated with the demographic data of a specific program, stage of completion, gender, age, or nationality of the student would add to the body of knowledge recorded in this study.

Instrumentation

The three-part instrument was formulated and reviewed by a class of graduate research students in the Educational Leadership department at Western Michigan University. After revisions based on their input, Dr. Robert Brinkerhoff, professor, and Dr. Michele Burnette, chair of the Human Subjects Institutional Review Board approved the instrument for validity and content. (See Appendix H and I.)

Part I of the instrument contained a list of 18 reasons that current authors on the subject of motivation and graduate students cite most frequently as the reasons for pursuing a graduate degree. Participants were asked to mark no more than five reasons that best answered the question for them: Why are you pursuing

a graduate degree?

Part 2 of the instrument contained a list of 22 barriers that current authors on the subject of lost educational opportunities and graduate students cite most frequently as barriers to overcome. Participants were asked to mark no more than five reasons that best answered the question for them: Which barriers have been the most difficult for you to overcome?

Part 3 contained a statement concerning the confidentiality of the instrument along with five fill-in-the-blank questions for use in the demographic analysis of the research study.

Some of the content, format, and methodology of the questionnaire was taken from two books titled Surviving Your Dissertation (Rudestam, 1992) and Planning Ethically Responsible Research (Sieber, 1992).

A blank space was also provided for participant input if they chose to include additional comments.

Comparisons and Exclusions

Comparisons were observed between the sample participant's program of study, stage of completion, different age groups, gender, and nationality. Details of the comparisons are included in Chapter IV.

In the final analysis, one difficulty was observed. The fifth and final demographic question asked the participants to name their nationality. This caused difficulty because some of the participants responded with their national

heritage and not the response of American or non-American as intended. Input caused this the one piece of data to be unreliable and will be noted in Chapter Four. The reliability of the remaining data and the study has not been sacrificed because of this failure.

Analysis of Data

The data from the research questionnaire were coded and input into a data set on a VAX computer system at Western Michigan University. (See Appendix F for Data Identifier Index) SPSS program was used to analyze the data (SPSS Introductory Statistics Students Guide, 1990). The outcome of that data query is the basis for Chapter IV.

The internal validity of the research project was assured by the character of the design. The variables were defined and chosen by an assembly of students representing the population without using the sample subjects themselves and allowing for pretest intolerance. It was possible that a student could be in both groups. This hypothetical person could have designed individual variable questions and could have been chosen as a participant in the sample. This was possible because both groups were part of the defined population.

The process of random sampling was extremely important for this reason. Care was taken to assure that every individual in the population was noted and that the systematic sampling process was strictly adhered to. This selection process was attested to by an outside observer.

For the purposes of external validity, the research selection was a representation of the defined population. That defined population was determined to be enrolled graduate students at Western Michigan University, Kalamazoo, Michigan, during the academic year of 1993-1994 and listed in the Western Michigan University Student Directory. The statistical analysis of the collected data can only have generalizability back to the defined population and not to the population at large. Only with a replication of this study may the reliability of the research be assured, and only with this assurance may the generalizability go beyond the scope of the limited defined population to the population at large.

Chapter Summary

This chapter defined the research questions and the methodology of the study reported. The variables were outlined and the procedures for data collected and analysis were discussed. Validity was discussed and examination of the data was explained. The analysis of this data is continued in Chapter IV by the process of being hypothesized and summarized using a series of statistical output tables.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study was to investigate the relationship between the reasons graduate students pursue a degree program and the barriers which they perceive must be overcome in the process. This chapter provides the basis for an interpretation of the research.

The chapter includes a summary of the study, the statistical techniques used, the research results of each hypothesis investigated in the data inquiry, and a chapter summary.

Summary of the Study

One hundred and sixty graduate students participated in this study. Participation was defined by the voluntary return of research questionnaires which were sent to a randomly-selected sample of 200 students out of a defined population of approximately 3,500. This represented a return rate of 80%.

The questionnaire was divided into three parts. Part one consisted of a list of reasons for pursuing graduate study, coded for the study to represent the five levels of Maslow's (1954) hierarchy of needs. Part two of the questionnaire

consisted of a list of barriers to the process, coded for this study to represent the three levels of Schutze's (1987) barriers to be overcome. The third part of the questionnaire listed demographic information to be used in the statistical analysis in order to further define the population and test the secondary hypotheses.

The following was the general study hypothesis used to investigate the relationship. It was hypothesized that the reasons for students to pursue a graduate degree program had no relationship to the perceived barriers which must be overcome by the same group of students.

General study hypotheses:

H_0 = The reasons students pursue a graduate degree program have no relationship to the perceived barriers which must be overcome by the same group of students during their degree program.

H_a = The reasons students pursue a graduate degree program have a relationship to the perceived barriers which must be overcome by the same group of students during their degree program.

It was further hypothesized that this relationship would not differ significantly from the general null hypothesis when related to the areas of program of study, stage of completion in degree program, age of the graduate student, gender of the graduate student, and nationality of the graduate student.

Secondary hypotheses for reasons to pursue:

S1 H_0 = The reasons students pursue a graduate degree program have no relationship to the degree program of the student.

H_1 = The reasons students pursue a graduate degree program have a relationship to the degree program of the student.

S2 H_0 = The reasons students pursue a graduate degree program have no relationship to the stage of completion of the student.

H_1 = The reasons students pursue a graduate degree program have a relationship to the stage of completion of the student.

S3 H_0 = The reasons students pursue a graduate degree program have no relationship to the age group of the student.

H_1 = The reasons students pursue a graduate degree program have a relationship to the age group of the student.

S4 H_0 = The reasons students pursue a graduate degree program have no relationship to the gender of the student.

H_1 = The reasons students pursue a graduate degree program have a relationship to the gender of the student.

S5 H_0 = The reasons students pursue a graduate degree program have no relationship to the nationality of the student.

H_1 = The reasons students pursue a graduate degree program have a relationship to the nationality of the student.

Secondary hypotheses for barriers to overcome:

S6 H_0 = The perceived barriers to overcome during a graduate degree program have no relationship to the degree program of the student.

H_1 = The perceived barriers to overcome during a graduate degree

program have a relationship to the degree program of the student.

S7 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the stage of completion of the student.

H_a = The perceived barriers to overcome during a graduate degree program have a relationship to the stage of completion of the student.

S8 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the age group of the student.

H_a = The perceived barriers to overcome during a graduate degree program have a relationship to the age group of the student.

S9 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the gender of the student.

H_a = The perceived barriers to overcome during a graduate degree program have a relationship to the gender of the student.

S10 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the nationality of the student.

H_a = The perceived barriers to overcome during a graduate degree program have a relationship to the nationality of the student.

Statistical Techniques

The primary statistic used in this study was a chi-square distribution of independence. Chi-square is a nonparametric test used with nominal data to compare observed frequencies (Hinkle, 1988). In 2 X 2 tables, when the expected

frequency within a cell was less than five, a two-tailed Fisher's Exact test was used. A critical value of $\alpha = .05$ was used to test all hypotheses.

The returned questionnaire data was analyzed according to the two variables represented in the study. Respondents were asked to designate up to five marks for the first variable, reasons for pursuing graduate study. The expected mean score for the first variable would then be five. The table below reflects a mean score slightly lower at 4.4596. Respondents were then asked to designate up to five marks for the second variable, barriers to overcome during the process. Again, the expected mean score would be five. Table 8 reflects a closer mean of 4.8323. This might indicate that the respondents had more affinity to a discussion concerning barriers than to a discussion concerning reasons for pursuing a graduate degree.

Table 8
Mean Scores of Marked Responses

	Mean	Standard Deviation
Reasons	4.4596	1.0368
Barriers	4.8323	1.4968

The variable called reasons was further divided into five levels which represented Maslow's five levels in his hierarchy of motivation. This data was

coded as basic, safe, love, esteem, and self. Because the level called esteem had double the opportunities for selection, the mean average for subject designation was adjusted by a division of two (see Table 9).

The variable called barriers was further divided into three levels which represented Schutze's three levels of perceived barriers to overcome. This data was coded as dispositional, institutional, and situational. Because the level called situational had one-third fewer opportunities for selection, the mean average for subject designation was adjusted by a multiplication of 1.33 (see Table 9).

Table 9
Mean Scores for Opportunities to Designate

Levels	Opportunities	Adjusted Mean	Standard Deviation
Maslow			
Basic	3	.6770	.7036
Safe	3	.5590	.6407
Love	3	.3851	.5597
Esteem	6	.7236	.9007
Self	3	1.3913	.7174
Schutze			
Dispositional	8	1.1863	.8530
Institutional	8	1.6211	1.2245

Table 9 -- Continued

Levels	Opportunities	Adjusted Mean	Standard Deviation
Situational	6	2.6930	1.1399

One hundred and sixty respondents completed the questionnaire which provided some specific demographic data used for analysis. The data in Table 10 describes more fully the characteristics of the sample.

Table 10

Analysis of Demographic Data From Student Questionnaires

	Number	Percent
Program		
Masters	125	90.58
+Masters	13	9.42
Completion		
Beginning	32	20.78
Mid Point	41	26.62
Ending	81	52.60

Table 10 -- Continued

	Number	Percent
Age		
18-30 Years	70	44.30
31-40 Years	50	31.65
41-90 Years	38	24.05
Gender		
Female	96	60.76
Male	62	39.24
Nationality		
American	102	87.93
Non-American	14	12.07

Not all respondents answered all demographic requests.

Research Results

A scale was developed using the number of questions marked for both variables divided by the five designations of Maslow and the three designations of Schutze. The expectation for the rejection of the general null hypothesis was based on the Pearson Product Correlation for the statistic r . This statistic, along with the probability that the correlation would be zero, was tested at the alpha

level of .05.

Table 11 reveals the results of this expectation. See Appendix G for assignment of designated questions to variables.

Table 11
Correlation of Reason Variable and Barriers Variable

	Dispositional	Institutional	Situational
Basic	$r = .205$ $P = .009^*$	$r = .009$ $P = .906$	$r = .060$ $P = .449$
Safe	$r = .117$ $P = .139$	$r = .033$ $P = .681$	$r = .053$ $P = .501$
Love	$r = .006$ $P = .941$	$r = .032$ $P = .689$	$r = .122$ $P = .123$
Esteem	$r = .052$ $P = .511$	$r = .126$ $P = .110$	$r = .154$ $P = .052$
Self	$r = .054$ $P = .498$	$r = .070$ $P = .376$	$r = .087$ $P = .270$

* Significant at alpha .05

Table 11 demonstrates the fifteen correlations between the two sets of variables. Analysis shows that only one set records a significant correlation with a statistic r equal to .205. The correlation between basic reasons to pursue and dispositional barriers to overcome has passed the test for rejection of the null hypothesis with a probability significance level of .009. Looking at the overall

picture of fifteen correlations upon which to base a decision, it seems to be a poor representation for denial of the null.

By reviewing this table as a subject for further study, a conclusion must be reached whereby we accept the general null hypothesis of the research that there is no relationship or correlation of the variables based on number of marked responses.

Further analysis of the data was undertaken to accept or reject the ten secondary hypothesis by observing the demographic information given in the returned questionnaires by the student subject.

Table 12 through 16 represent a chi-square test to discover if a significant relationship existed between those subjects marking the reasons to pursue questions and the five categories of demographic information.

Tables 17 through 21 represent a chi-square test to discover if a significant relationship existed between those subjects marking the barriers to overcome questions and the five categories of demographic information.

Table 12

Chi-square Test of Independence Between Maslow's
Reasons to Pursue and Program of Study

Question	Masters		+Masters		χ^2	P
	Number	Percent	Number	Percent		
1	16	12.8	1	7.7	.284	.59382
2	38	30.4	5	38.5	.357	.55031
3	6	4.8	0	0.0	.652	.41927
4	34	27.2	3	23.1	.102	.74943
5	64	51.2	7	53.8	.033	.85583
6	26	20.8	3	23.1	.038	.84791
7	41	32.8	1	7.7	3.506	.06114
8	87	69.6	10	76.9	.302	.58239
9	68	54.4	11	84.6	4.392	.03610
10	36	28.8	3	23.1	.190	.47115
11	11	8.8	0	0.0	1.243	.32234
12	17	13.6	3	23.1	.853	.28484
13	41	32.8	5	38.5	.170	.68025
14	16	12.8	1	7.7	.284	.59382
15	11	8.8	0	0.0	1.243	.26488
16	0	0	0	0.0	.000	.00000

Table 12 -- Continued

Question	Masters		+Masters		χ^2	P
	Number	Percent	Number	Percent		
17	10	8.0	0	0.0	1.121	.28965
18	43	34.4	4	30.8	.069	.79263

Question number 9 has a significant P value at $\leq .05$. Question number 16 was not marked by any of the sample individuals. Fisher's exact test was run on questions number 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, and 18 because the table failed the test of minimum expected frequencies. This large number of failures were due to the fact that only 13 individuals were designated as +Masters. None proved to be statistically significant.

Table 13

Chi-square Test of Independence Between Maslow's
Reason to Pursue and Stage of Completion

Questions	Begin		Mid		End		X^2	P
	Number	Percent	Number	Percent	Number	Percent		
1	5	15.6	3	7.5	11	13.4	1.273	.52909
2	11	34.4	13	32.5	22	26.8	.804	.66897
3	2	6.3	2	5.0	3	3.7	.382	.82613
4	12	37.5	10	25.0	20	24.4	2.135	.34384
5	14	43.8	20	50.0	45	54.9	1.177	.55505
6	5	15.6	9	22.5	15	18.3	.583	.74714
7	10	31.3	15	37.5	22	26.8	1.453	.48340
8	25	78.1	29	72.5	55	67.1	1.437	.48755
9	18	56.3	25	62.5	43	52.4	1.106	.57512

Table 13 -- Continued

Questions	Begin		Mid		End		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
10	7	21.9	7	17.5	25	30.5	2.652	.26550
11	3	9.3	2	5.0	7	8.5	.609	.73755
12	4	12.5	5	12.5	15	18.3	.978	.61329
13	11	34.4	17	42.5	29	35.4	.708	.70205
14	3	9.4	6	15.0	10	12.2	.523	.76975
15	2	6.3	1	2.5	9	11.0	2.823	.24394
16	0	0.0	1	2.5	1	1.2	.875	.64552
17	1	3.1	3	7.5	9	11.0	1.897	.38724
18	12	37.5	13	32.5	27	32.9	.254	.88074

None of the questions had a significant P value at $\leq .05$. Examination of question number five was deemed to be important for subjects in the later stages of their program. Question 16 was not important to the sample.

Table 14
Chi-square Test of Independence Between Maslow's
Reason to Pursue and Age of Student

Questions	18-30		31-40		41-90		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
1	7	10.0	7	14.0	6	15.8	.866	.64862
2	30	42.9	11	22.0	6	15.8	10.735	.00466
3	0	0.0	4	8.0	3	7.9	5.827	.05429
4	16	22.9	12	24.0	16	42.1	5.080	.07885
5	36	51.4	32	64.0	13	34.2	7.670	.02160
6	17	24.3	7	14.0	6	15.8	2.339	.31057
7	25	35.7	14	28.0	10	26.3	1.327	.51500
8	47	67.1	35	70.0	29	76.3	.994	.60838
9	47	67.1	26	52.0	16	42.1	6.834	.03281

Table 14 -- Continued

Questions	18-30		31-40		41-90		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
10	20	28.6	14	28.0	7	18.4	1.481	.47696
11	0	0.0	7	14.0	5	13.2	10.352	.00565
12	4	5.7	8	16.0	12	31.6	12.827	.00164
13	28	40.0	14	28.0	15	39.5	2.072	.35492
14	14	20.0	2	4.0	4	10.5	6.959	.03082
15	2	2.9	5	10.0	5	13.2	4.327	.11495
16	2	2.9	0	0.0	0	0.0	2.547	.27992
17	1	1.4	7	14.0	5	13.2	7.716	.02112
18	21	30.0	20	40.0	13	34.2	1.297	.52295

Questions number 2, 5, 9, 11, 12, 14, and 17 have a significant P value at $\leq .05$. Special examination should be given to question number 14 also, this question was deemed important by the first age category with more frequency.

Table 15

Chi-square Test of Independence Between Maslow's
Reasons to Pursue and Gender of Student

Question	Female		Male		X ²	P
	Number	Percent	Number	Percent		
1	17	17.7	3	4.8	5.643	.01752
2	29	30.2	18	29.0	.025	.87454
3	2	2.1	5	8.1	3.183	.07441
4	29	30.2	15	24.2	.678	.41018
5	46	47.9	35	56.5	1.098	.29463
6	18	18.8	12	19.4	.009	.92459
7	30	31.3	19	30.6	.006	.93603
8	72	75.0	39	62.9	2.638	.10435
9	50	52.1	39	62.9	1.793	.18059
10	19	19.8	22	35.5	4.827	.02801
11	9	9.4	3	4.8	1.105	.29327
12	13	13.5	11	17.7	.516	.47260
13	27	28.1	30	48.4	6.706	.00961
14	11	11.5	9	14.5	.319	.57246
15	7	7.3	5	8.1	.032	.85789
16	2	2.1	0	0.0	1.308	.25272

Table 15 -- Continued

Question	Female		Male		χ^2	P
	Number	Percent	Number	Percent		
17	7	7.3	6	9.7	.284	.59412
18	33	34.4	21	33.9	.004	.94800

Questions number 1, 10, and 13 have a significant P value at $\leq .05$. Fisher's exact test was run on questions number 3, 11, 15, and 16 because the table failed the test of minimum expected frequencies. None proved statistically significant.

Table 16

Chi-square Test of Independence Between Maslow's
Reasons to Pursue and Nationality of Student

Question	American		Non-American		χ^2	P
	Number	Percent	Number	Percent		
1	10	9.8	4	28.6	4.086	.04325
2	28	27.5	8	57.1	5.071	.02433
3	4	3.9	0	0.0	.569	.45081
4	27	26.5	4	28.6	.028	.86771
5	51	50.0	6	42.9	.251	.61616
6	16	15.7	5	35.7	3.330	.06800
7	36	35.3	3	21.4	1.060	.30310
8	78	76.5	4	28.6	13.632	.00022

Table 16 -- Continued

Question	American		Non-American		χ^2	P
	Number	Percent	Number	Percent		
9	58	56.9	10	71.4	1.077	.29943
10	25	24.5	6	42.9	2.116	.14575
11	6	5.9	1	7.1	.034	.85266
12	20	19.6	1	7.1	1.290	.25603
13	37	36.3	3	21.4	1.201	.27313
14	9	8.8	6	42.9	12.665	.00037
15	6	5.9	1	7.1	.034	.85266
16	2	2.0	0	0.0	.279	.59714
17	7	6.9	0	0.0	1.022	.31193
18	32	31.4	5	35.7	.107	.74378

Questions number 1, 2, 8, and 14 have a significant P value at $\leq .05$, however, questions number 3, 16, and 17 were not marked by any Non-American subjects. Fisher's exact test was run on questions number 1, 2, 3, 4, 8, 10, 11, 12, 13, 14, 16, and 17 because the tables failed the test of minimum expected frequencies. Numbers 2, 8, and 14 had a significant P value at $\leq .05$.

Table 17

Chi-Square Test of Independence Between Schutze's
Barriers to Overcome and Program of Study

Question	Masters		+Masters		X ²	P
	Number	Percent	Number	Percent		
1	83	66.4	7	53.8	.818	.36574
2	49	39.2	8	61.5	2.424	.11951
3	21	16.8	3	23.1	.323	.56985
4	6	4.8	1	7.7	.205	.65105
5	16	12.8	2	15.4	.069	.79228
6	29	23.2	3	23.1	.000	.99202
7	41	32.8	3	23.1	.513	.47403
8	31	24.8	4	30.8	.222	.63779
9	2	1.6	1	7.7	2.055	.15169
10	38	30.4	3	23.1	.302	.58239
11	8	6.4	0	0.0	.883	.34733
12	4	3.2	0	0.0	.428	.51277
13	5	4.0	1	7.7	.386	.53440
14	6	4.8	0	0.0	.652	.41927
15	11	8.8	2	15.4	.598	.43923
16	23	18.4	6	46.2	5.465	.01941

Table 17 -- Continued

Question	Masters		+Masters		χ^2	P
	Number	Percent	Number	Percent		
17	30	24.0	4	30.8	.291	.58983
18	28	22.4	3	23.1	.003	.95561
19	7	5.6	0	0.0	.767	.38118
20	12	9.6	2	15.4	.432	.51089
21	43	34.4	6	46.2	.710	.39931
22	31	24.8	1	7.7	1.935	.16422

Question number 16 had a significant P value at $\leq .05$. Questions number 11, 12, 14, and 19 were not deemed significant by the +Masters subjects. Fisher's exact test was run on all questions except number two because the tables failed the test of minimum expected frequencies. Question number 16 proved to be statistically significant.

Table 18

Chi-square Test of Independence Between Schutze's
Barriers to Overcome and Stage of Completion

Questions	Begin		Mid		End		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
1	22	68.8	30	75.0	48	58.5	3.459	.17741
2	11	34.4	23	57.5	31	37.8	5.291	.07096
3	9	28.1	4	10.0	18	22.0	3.994	.13571
4	2	6.3	0	0.0	3	3.7	2.305	.31579
5	4	12.5	6	15.0	12	14.6	.108	.94737
6	6	18.8	8	20.0	23	28.0	1.570	.45608
7	8	25.0	17	42.5	24	29.3	3.035	.21923
8	10	31.3	14	35.0	16	19.5	3.939	.13954
9	1	3.1	0	0.0	2	2.4	1.130	.56829

Table 18 -- Continued

Questions	Begin		Mid		End		P
	Number	Percent	Number	Percent	Number	Percent	
10	9	28.1	12	30.0	24	29.3	.98491
11	2	6.3	2	5.0	4	4.9	.95498
12	2	6.3	0	0.0	1	1.2	.12726
13	1	3.1	1	2.5	6	7.3	.44528
14	2	6.3	0	0.0	2	2.4	.25129
15	5	15.6	4	10.0	7	8.5	.53499
16	3	9.4	13	32.5	20	24.4	.06693
17	4	12.5	12	30.0	21	25.6	.19952
18	10	31.3	7	17.5	21	25.6	.38853
19	2	6.3	3	7.5	4	4.9	.84031

8

Table 18 -- Continued

Questions	Begin		Mid		End		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
20	4	12.5	3	7.5	8	9.8	.506	.77663
21	7	21.9	11	27.5	35	42.7	5.560	.06203
22	11	34.4	6	15.0	18	22.0	3.860	.14514

None of the questions had a significant P value at $\leq .05$. Also noticed was the fact that questions number 4, 9, 12, and 14 were not important to the study participants.

Table 19
Chi-square Test of Independence Between Schutze's
Barriers to Overcome and Age of Student

Questions	18-30		31-40		41-90		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
1	7	10.0	7	14.0	6	15.8	.866	.64862
1	45	64.3	32	64.0	26	68.4	.231	.89081
2	33	47.1	20	40.0	14	36.8	1.243	.53707
3	13	18.6	10	20.0	8	21.1	.103	.94988
4	4	5.7	3	6.0	0	0.0	2.325	.31270
5	15	21.4	4	8.0	3	7.9	5.906	.05219
6	18	25.7	8	16.0	11	28.9	2.388	.30304
7	27	38.6	15	30.0	9	23.7	2.671	.26304
8	21	30.0	12	24.0	7	18.4	1.814	.40383

Table 19 -- Continued

Questions	18-30		31-40		41-50		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
9	2	2.9	0	0.0	1	2.6	1.423	.49103
10	12	17.1	21	42.0	13	34.2	9.362	.00927
11	2	2.9	2	4.0	4	10.5	3.186	.20335
12	2	2.9	1	2.0	1	2.6	.089	.95654
13	2	2.9	3	6.0	3	7.9	1.434	.48826
14	4	5.7	2	4.0	0	0.0	2.210	.33127
15	4	5.7	11	22.0	1	2.6	11.588	.00305
16	17	24.3	10	20.0	9	23.7	.328	.84895
17	11	15.7	18	36.0	9	23.7	6.574	.03736
18	20	28.6	9	18.0	10	26.3	1.825	.40152

Table 19 -- Continued

Questions	18-30		31-40		41-90		χ^2	P
	Number	Percent	Number	Percent	Number	Percent		
19	6	8.6	1	2.0	2	5.3	2.363	.30694
20	9	12.9	5	10.0	1	2.6	3.019	.22101
21	17	24.3	26	52.0	12	31.6	10.102	.00640
22	17	24.3	14	28.0	5	13.2	2.864	.23879

Questions number 10, 15, 17, and 21 have a significant P value at $\leq .05$. Examination of question number five reveals a near significant P value along with an analysis of younger individuals placing importance to this question.

Table 20

Chi-square Test of Independence Between Schutze's
Barriers to Overcome and Gender of Student

Question	Female		Male		X ²	P
	Number	Percent	Number	Percent		
1	61	63.5	42	67.7	.293	.58839
2	46	47.9	21	33.9	3.043	.08109
3	26	27.1	5	8.1	8.640	.00329
4	3	3.1	4	6.5	.985	.32107
5	12	12.5	10	16.1	.414	.51998
6	23	24.0	14	22.6	.040	.84174
7	33	34.4	18	29.0	.492	.48307
8	25	26.0	15	24.2	.069	.79420
9	2	2.1	1	1.6	.045	.83245
10	25	26.0	21	33.9	1.119	.29016
11	6	6.3	2	3.2	.717	.39722
12	3	3.1	1	1.6	.349	.55465
13	2	2.1	6	9.7	4.519	.03351
14	6	6.3	0	0.0	4.028	.04475
15	11	11.5	5	8.1	.477	.48990
16	24	25.0	12	19.4	.682	.40878

Table 20 -- Continued

Question	Female		Male		X ²	P
	Number	Percent	Number	Percent		
17	21	21.9	17	27.4	.634	.42591
18	26	27.1	13	21.0	.758	.38400
19	6	6.3	3	4.8	.140	.70860
20	4	4.2	11	17.7	8.080	.00448
21	31	32.3	24	38.7	.684	.40829
22	20	20.8	16	25.8	.530	.46679

Questions number 3, 13, 14, and 20 had a significant P value at $\leq .05$. Fisher's exact test was run on questions number 4, 9, 11, 12, 13, 14, and 19 because the tables failed the test of minimum expected frequencies. Questions number 13 and 14 showed a significant P value with only 8 and 6 participants responding.

Table 21

Chi-square Test of Independence Between Schutze's
Barriers to Overcome and Nationality of Student

Question	American		Non-American		X ²	P
	Number	Percent	Number	Percent		
1	65	63.7	6	42.9	2.258	.13294
2	40	39.2	7	50.0	.594	.44086
3	19	18.6	2	14.3	.157	.69238

Table 21 -- Continued

Question	American		Non-American		X ²	P
	Number	Percent	Number	Percent		
4	4	3.9	3	21.4	6.654	.00989
5	13	12.7	3	21.4	.781	.37694
6	26	25.5	1	7.1	2.320	.12768
7	35	34.3	5	35.7	.011	.91766
8	29	28.4	1	7.1	2.910	.08805
9	1	1.0	1	7.1	2.759	.09671
10	27	26.5	5	35.7	.527	.46806
11	1	1.0	3	21.4	15.460	.00008
12	2	2.0	1	7.1	1.312	.25200
13	3	2.9	4	28.6	14.263	.00016
14	2	2.0	3	21.4	11.312	.00077
15	8	7.8	1	7.1	.008	.92682
16	25	24.5	4	28.6	.108	.74208
17	25	24.5	3	21.4	.064	.80055
18	20	19.6	6	42.9	3.826	.05045
19	7	6.9	1	7.1	.002	.96906
20	13	12.7	1	7.1	.364	.54626

Table 21 -- Continued

Question	American		Non-American		χ^2	P
	Number	Percent	Number	Percent		
21	33	32.4	5	35.7	.063	.80159
22	24	23.5	0	0.0	4.153	.04155

Questions number 4, 11, 13, 14, and 22 had a significant P value at $\leq .05$. Fisher's exact test was run on all questions except number one and two because the tables failed the test of minimum expected frequencies. The same questions still showed a significant P value, however, question number 22 was the only question recording more than seven participants.

Chapter Summary

The significance of this study had as its focal point the question of a relationship between the reasons to pursue a graduate degree and the barriers to overcome in the process. The general null hypothesis was substantially accepted. The alternate hypothesis of finding a relationship had to be rejected. The defined variables and the instruments used were described in Chapter III.

The ten secondary hypotheses did not differ substantially from the general hypothesis in any of the tests relating to the demographic data presented in the study. The ten alternate hypotheses of finding a relationship had to be rejected.

The conclusions and recommendations are discussed in Chapter V.

CHAPTER V

SUMMARY AND DISCUSSION

Summary

The purpose of this study was to determine if a relationship existed for adult students while pursuing a graduate degree using Maslow's five levels of psychological needs and Schulze's three levels of perceived barriers. The population of the study was further defined by using a sample at one mid-western university. A significant relationship was not found in the general study. Therefore, the null hypothesis was accepted and the alternate hypothesis stating that there was a relationship had to be rejected.

Further analysis was performed using the demographics of the sample to support or reject the five secondary hypotheses for reasons to pursue and the five secondary hypotheses for barriers to overcome. This secondary analysis was to study the implications of differing motivational needs and differing barriers to overcome for specific sets of individuals. In these analyses, significant relationships were not found and all ten null hypotheses were accepted in favor of the ten alternate hypotheses stating that there was a relationship had to be rejected.

Conclusions

General Study Null Hypothesis

H_0 = The reasons students pursue a graduate degree program have no relationship to the perceived barriers which must be overcome by the same group of students during their degree program.

The first variable, reasons students pursue, was operationalized by using a group of questions relating to the five level hierarchy of Maslow's psychological needs.

The second variable, barriers to overcome, was operationalized by using a group of questions relating to three types of barriers to overcome defined by Schutze.

This correlation analysis between the two variables found only one statistic to be significant; however, this was an important one. The lowest level on Maslow's scale proved to have a correlation with the lowest level on Schutze's scale. This does carry some weight. The fact that a correlation exists at one extreme end of the scale could provide validity for the research project when retested. The 14 other statistics proved to be non-significant. This also carries some weight. The fact that no other significant correlations could be found in this study could point to the need for further investigation with a broader based population or more verbal input from the students. This proposed verbal input would add another dimension to the study. Hinkle states (1988) that the statistic is

merely a collection of theory and methods to be applied to the analysis and understanding of data. More direct verbal contact would lead to more understanding in the area of intrinsic motivation.

It was the finding of this study that overall no significant relationship was found to disprove the general null hypothesis.

Secondary Hypotheses for Reasons to Pursue

Conclusions reached during the analysis of the stated hypotheses seeking a relationship of reasons to pursue with the demographic identifiers of program, stage of completion, age, gender, and nationality produced the following relationships:

S1 H_o = The reasons students pursue a graduate degree program have no relationship to the degree program of the student.

18 non significant

S2 H_o = The reasons students pursue a graduate degree program have no relationship to the stage of completion of the student.

18 non significant

S3 H_o = The reasons students pursue a graduate degree program have no relationship to the age group of the student.

11 non significant

7 significant

Question 2 = To become employed

Question 5 = To prepare for additional job responsibilities

Question 9 = To take advantage of advancement opportunities

Question 11 = To return to the work force

Question 12 = To study "something else"

Question 14 = To learn needed new technologies

Question 17 = To prepare for occupational dislocation

S4 H_o = The reasons students pursue a graduate degree program have no relationship to the gender of the student.

18 non significant

S5 H_o = The reasons students pursue a graduate degree program have no relationship to the nationality of the student.

15 non significant

3 significant

Question 2 = To become employed

Question 8 - To continue life long learning

Question 14 = To learn needed new technologies

Secondary Hypotheses for Barriers to Overcome

Conclusions reached during the analysis of the stated hypothesis seeking a relationship of barriers to overcome with the demographic identifiers of program, stage of completion, age, gender, and nationality produced the following

relationships:

S6 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the degree program of the student.

21 non significant

1 significant

Question 16 = Financial provisions for adult students are inadequate

S7 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the stage of completion of the student.

22 non significant

S8 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the age group of the student.

18 non significant

4 significant

Question 10 = Family responsibility became too great

Question 15 = Difficult child care arrangement

Question 17 = Inappropriate schedules for classes

Question 21 = Too much time away from family

S9 H_o = The perceived barriers to overcome during a graduate degree program have no relationship to the gender of the student.

20 non significant

2 significant

Question 13 = Fear of being too old to learn

Question 14 = Fear that current knowledge is obsolete

S10 H₀ = The perceived barriers to overcome during a graduate degree program have no relationship to the nationality of the student.

17 non significant

5 significant

Question 4 = Lack of ability or skill

Question 11 = Negative attitude of family and friends

Question 13 = Fear of being too old to learn

Question 14 = Fear that current knowledge is obsolete

Question 22 = Not enough pay back for the investment it takes

Results of Secondary Study

Test results indicated very few relationships among the statistics of the secondary study. Out of a possible 200 chances to accept or reject the various null hypothesis (18 reasons times five categories plus 22 barriers times five categories), only 22 relationships could be found of significant value. Further analysis revealed that 10 of these significant relationships were designated by 10% or less of our sample and all 22 possessed a P value of less than .045 which is deemed to be a slight relationship.

It is the understanding of this study that no significant relationship was

found to disprove the ten secondary null hypothesis.

Limitations

The results of this study should be viewed with several limitations in mind which were identified during the final stages of the research.

The sample taken may not have included enough individuals in the post masters level of graduate study. A ratio of respondents of nine Masters to one post Masters may be a true representation of the defined population, but may not have been large enough to include the possible strength of reasons to pursue and barriers to overcome by the post Masters group.

The instrument of the study asked participants merely to indicate five reasons to pursue graduate study which they selected as important to them, and to indicate five barriers to overcome in their attempt at this goal. More information may have been revealed if a system of ascending numbers based on degrees of perceived importance was used.

The question asked of the sample regarding the demographic information of nationality may have been misunderstood by some of the participants. The question was meant to determine if the participants were American or foreign or even citizen or non-citizen. On many occasions, the answer revealed national origin instead. This resulted in the elimination of inconclusive answers in the analysis process.

Recommendations

Although this study determined that overall there were no significant statistical relationships among the variables, the results could have indicated that more research into this matter would be beneficial to universities in order to increase graduate program effectiveness. This additional research should be directed in two areas:

1. A larger sample could be taken from the population base. This larger sample could also include a cross section of subjects from differing universities. This might include a possible larger number of post Masters students. Because this study was conducted at one mid-western university, the possibility exists that the sample was drawn from a higher or lower socio-economic level than is representative of the national average. Long (1983) noted that adult participation in studies which included a profile of adult learners tended to differ in some studies based on geographical location. "People from the West and those living in suburbs or on the outskirts of larger metropolitan centers were overrepresented among participants." (p. 87)

These areas of adjustment to the population and the sample would provide greater ease in generalizing the results to a greater population at large, i.e. all graduate students.

2. The 80% return factor for the instrument used in this study would indicate that the sample individuals believed the area of research to be important

enough for an overt response. The lack of significant result findings could indicate that a more defined research tool would affect the outcome. By asking for more defined responses, a more defined result could evolve.

Additionally, follow-up interviews could be conducted with the participants. Kerlinger (1986) stated that the personal interview far overshadows all other types of research and is perhaps the most powerful and useful tool in social scientific surveys. This face-to-face information could then be combined with statistical and factual information to reveal "the beliefs, opinions, attitudes, and feelings that respondents have about cognitive objects." (p. 379)

The purpose of this study was to add to the knowledge base of educational processes in order to encourage learning and to understand the motivation of students toward the acquisition of knowledge.

If research in the educational field could better understand the self-actualizing needs of adult student, it should then be able to postulate a model which would be able to increase intrinsic motivation towards those needs and desires.

There is a new frontier: the continued development of the mind, a frontier well explored if not yet accurately mapped. This frontier is in the mainstream of human evolution, and offers unlimited possibilities. Indeed, it is the mind, well-educated and developed, which will lead us onward to new frontiers of human purpose and meaning. (Barton, 1982, p 186.)

Appendix A
Extraneous Comments From Data Survey

NOTE: Students that participated in this research study were given the opportunity to add personal comments to the last page of the questionnaire. These comments are given here exactly as written by the student.

Questionnaire 003 comments:

"Most of the options offered for reasons for pursuing a degree and barriers were not applicable. This field requires the master's degree for entry-level employment. I have found this frustrating as I would have preferred to work for a few years to gain experience prior to pursuing graduate work. For me, probably the biggest barrier has been extreme burnout.

Our program requires a minimum of 52 hrs. (compared with 36 hrs. typical in most programs.

This study sound interesting. I would be interested in your results."

Questionnaire 004 comments:

"I'd be interested in your results - and I wish you'd asked more questions. Personally, I'd be happy to provide more detailed into, and I'm not concerned with confidentiality, but out of respect for your methodology, I will remain anonymous."

Questionnaire 006 comments:

"* 15 weeks to Too Long! + when classes are taken on campus we must pay more for the added burden! How Quaint!

"The CCCP Program is not set up for people who must work full time to sustain themselves - making it very difficult to accomplish completion."

Questionnaire 008 comments:

"Good luck with your research!"

Questionnaire 009 comments:

"In order to work in the field of speech pathology a masters degree is required."

Questionnaire 014 comments:

"Teaching takes up a lot of time in and of itself - definitely not a 9-5 job. Lack of time is probably the biggest barrier -

Also, many professors haven't been in a classroom in years so content doesn't always apply to 'real' work - 'busy' work is a barrier one must deal with which adds to 'time' factor."

Questionnaire 026 comments:

"1. major barrier has been lack of information about the education system, in general and because of my age people (profs., counselors etc, assume I know.

P.S. Would love to see the results - your conclusions, etc."

Questionnaire 029 comments:

"WMU flexibility of evening classes & being able to take as many or as few classes a term as I wished made me choose WMU."

Questionnaire 030 comments:

"I am in a very unusual situation. The occupational therapy (OT) program has a combined BS & MS program. When I graduate in December, I will receive both my BS & MS degrees at the same time. I have no other degrees, but when I graduate I will be an OT with both my B.S. & M.S. degrees. Most of the barriers you listed didn't apply to me. I don't have any children & I'm not married. I'm still covered under my parent's insurance & they still help some with my bills. I hope this is all understandable because I am not a 'typical' graduate student."

Questionnaire 037 comments:

"Thank you for choosing me to be a part of your survey.

Thank you."

Questionnaire 040 comments:

"Good Luck!"

Questionnaire 042 comments:

"Good Luck!"

Questionnaire 050 comments:

"Your welcome good luck!"

Questionnaire 053 comments:

"Other important factors:

A sense of pride and satisfaction in achieving my goals is a tremendous reward.

I have 'doors of opportunity' that I would not have had with only my bachelor's.

I have succeeded as a role model in educational values for my children."

Questionnaire 055 comments:

"The main problem I have is that professors are wedded to their take on the subject matter and their 'academic' view of the material. They have too little contact with what is truly beneficial or worth while to teach about what is really happening in Public Administration.

Too few have actually managed anything outside of the academic world."

Questionnaire 060 comments:

"Good Luck!"

Questionnaire 066 comments:

"Life keeps getting busier & busier so it was difficult at times to put the required effort in to excell in my studies. With three young children I made it a policy to never study until after they were asleep - 8:30 pm - 9:00 pm which left 3 hrs. (until midnight) to spend time with my wife & study. Weekends were use to 'catch-up' on studying - 4-5 hrs. on Saturday & 4 on Sunday.

Now that I've graduated, it was worth it. But if I was starting over now I don't know if it would be worth it since more time is required for my family.

Best of luck on your project!"

Questionnaire 072 comments:

"After being a 'stay at home' mom for 5 years, I found it frightening to even drive around on the campus, buy books, find classes, etc. It would have been very helpful & indeed comforting if the school could have assigned someone to me just to help me find my way around campus and gone with me to buy books and stand in lines. Another student would have been fine - just kind of a 'buddy'.

Good Luck!"

Questionnaire 077 comments:

"I've found it really, really sad that the course materials selected (books, papers) that professors choose, reflected nothing or the reality of whats happening in the classroom. (I suspect and know most haven't been in a classroom to see whats going on)."

Questionnaire 081 comments:

"My 1st degree was in elementary education and due to the lack of jobs, I ended up teaching in an environment that was not what I wanted and the pay was low. I still wanted to remain in a field related to el. ed. Speech Pathology has given me that opportunity and I feel I will be well qualified upon graduation and the opportunities for jobs will be greatly increased."

Questionnaire 084 comments:

"Good Luck"

Questionnaire 086 comments:

"#1 problem - Difficult to obtain a 'road map' of course work that

needs to be taken to complete degree. Advisor sends a list of classes that comprise degree, but won't suggest order in which they should be taken."

Questionnaire 099 comments:

"Good Luck!"

Questionnaire 104 comments:

"I feel that WMU is not very understanding of the concerns and constraints of part time students who work full time during the day."

Questionnaire 110 comments:

"There are some pint that I want to discuss to you considering graduate studies.

1. If the library hours can be 24 hours it really goods for people who like study on campus (I'm not home studious person).
2. If there is a chance to get information about scholarship for foreigner, at least we know about there is a list to ge financial aid. It's very useful.
3. Sometime we find out that the offered course in schedule are time conflict or not enough capacity (in a class) to take one of my best coursed. (thank you)."

Questionnaire 112 comments:

"Part 2

As an older student, I have found the financial stressors are greater than any other. Since many of us need to work to support ourselves as well as attend college.

Part 1

The most important part for me in continuing on to graduate school was simply to be hireable in today's job market."

Questionnaire 114 comments:

"Reason #s for first section for me would be:

Physically unable to continue with present occupation

Additional reason:

Fulfillment of lifelong educational plan

Other barriers:

Loss of present employment status ie seniority, pay grade, vacation time, time off, increase in work hours."

Questionnaire 117 comments:

"Your welcome!"

Questionnaire 129 comments:

"I am very dissappointed in the anti-religious/anti christian bias that exists among a majority of WMU Instructors. In addition, there is a double standard that exists: WMU claims to not discriminate against race, color, religion, etc,etc, and at the same time preaches 'tolerance and diversity", while in the same breath (i.e. out of the other side of the 'WMU mouth') censors, and condescends to any religious (especially Christian) perspectives/values shared in classes. It was very disheartening to go through the program and have to put up with such hypocrisy, liberal ideology, and ani-conservative agendas. Overall, I enjoyed this MSW program, but the above certainly presented a formidable barrier to full

enjoyment. (Shame on you - WMU!)"

Questionnaire 131 comments:

"Good Luck Phyllis!"

Questionnaire 136 comments:

"Since I went directly from my undergraduate studies to graduate school, many of the choices are not applicable to me; I have never had a career & therefore cannot be changing. Also, I have no family responsibilities and do not yet consider myself old."

Questionnaire 137 comments:

"After receiving my undergraduate degree, by going to school part-time and raising my small children, I encountered chauvinism which I thought no longer existed. One man even interrupted me while I was explaining my qualifications and asked gruffly, 'Can You Type?!' Many women were of no help either. They were openly jealous of my education and tried to undermine my employment possibilities. Extremely distraught, I returned to school not knowing what I wanted to be 'when I grew up', but determined to have a secretary not be one!"

Questionnaire 138 comments:

"Students are criticized for passing around incorrect info but if you don't ask other students who do you ask? Information needed is not provided unless you already know right question to ask. My advisor was unavailable and generally rude."

Questionnaire 139 comments:

"The masters program that I am involved in initially had a very positive schedule that would work well with family and work. The classes were held on Fridays and Saturdays.

My only gripe would be that some of the classes required to not work well with the above schedule. The classes would come every other weekend for a total of 6 classes or 6 weeks - and its tough to do a mini - thesis in that time frame."

Questionnaire 144 comments:

"Your Welcome"

Questionnaire 149 comments:

"Pursuing my degree has been gratifying in many ways. I have advanced in skill in my area as a result of my training, and feel competent to pursue employment in my field. The greatest obstacle has been trying to maintain home and family (I have 2 small children 3+5 yrs.) and find time to study.

I did it though! Thank God it's done!"

Questionnaire 150 comments:

"Possibly a more positive tone toward your questions asked alot of 'lack of...' or 'fear of', etc. rephrasing the statements might prove to be informational toward a positive theme for graduate students.

Looks like a great topic. Good luck with your success."

Questionnaire 151 comments:

"Good Luck!"

Questionnaire 153 comments:

"I am international student. After completing my studies I will return back to my native country to implement my new knowledge at a work."

Questionnaire 157 comments:

"Good Luck w/ project.

It was somewhat difficult to look at barriers given the late stage in the program that I am currently at. To some extend, I feel that there were not any significant barriers since I will be graduating in about 60 days"

Questionnaire 159 comments:

"Reasons that I am pursuing a graduate degree (other than those listed):

- 1) increased starting pay
- 2) respect
- 3) to challenge my abilities
- 4) I need this degree on my way to my future goal: a doctorate!"

Appendix B
Gestalt Psychology Defined

Gestalt Psychology
The World Book Encyclopedia
Field Enterprises Educational Corporation

"Gestalt Psychology was concerned with the organization of mental processes. Like behaviorism, it was also a reaction against structuralist. The German word *gestalt* (pronounced *guh* SHTAHLT) means *pattern* or *form*. Gestalt psychologists believed that human beings and animals tend to perceive organized patterns, not individual parts that are merely added together. According to them, the relationship between different parts of a stimulus, which we perceive as a whole or a pattern, gives us our meaning. The gestaltists attacked the structuralist view that experience could be broken down into its parts, such as seeing, hearing, and feeling. Gestaltists believed that all these factors must be studied together in order to understand their relationships.

Max Wertheimer founded gestaltism in Germany about 1912. In the 1930's, Wertheimer and his associates - Wolfgang Kohler, Kurt Koffka, and Kurt Lewin - moved to the United States, where they headed the gestalt movement."

Appendix C
Questionnaire Cover Letter

Student Name
Student Address
Student City & State

Dear Graduate Student,

I am a fellow graduate student in the Educational Leadership department at Western Michigan University. My name is Phyllis Crandall and I am beginning to collect data concerning the intrinsic motivation of adult students. Your name has been randomly selected from a list of graduate students at Western Michigan University to be asked to participate in this study.

I plan to look at factors which may have a bearing on the persistence of graduate students to complete the degree process.

Please take a few minutes of your time to complete the enclosed questionnaire. Your answers will provide a basis for an analysis which may aid Universities in providing an environment for you and other graduate students to accomplish your goal.

This survey is anonymous. Please complete it and return it unsigned in the enclosed, postage-paid envelope.

I will be happy to relate my findings to you when my study is complete. If you wish for me to respond, please send a separate self addressed stamped envelope.

I thank you for assisting with my degree process.

Phyllis Crandall
2713 Hill and Brook Drive
Kalamazoo, Michigan 49008

Appendix D
Questionnaire

DOCTORAL DISSERTATION QUESTIONNAIRE -- PHYLLIS CRANDALL

The first part of my study asks the question WHY ARE YOU PURSUING A GRADUATE DEGREE? I have compiled a list of 18 reasons that current authors on the subject cite most frequently. Please mark five reasons that best answer the question for you. (Please, no more than five.)

- _____ TO HAVE MORE SOCIAL INTERACTION
- _____ TO BECOME EMPLOYED
- _____ TO AVOID THE SELF PERCEPTION OF GROWING OLD
- _____ TO PREPARE FOR PERSONAL CHANGE IN LIFESTYLE
- _____ TO PREPARE FOR ADDITIONAL JOB RESPONSIBILITIES
- _____ TO KEEP PACE WITH SOCIAL CHANGE
- _____ TO PREPARE FOR ECONOMIC CHANGE
- _____ TO CONTINUE LIFELONG LEARNING
- _____ TO TAKE ADVANTAGE OF ADVANCEMENT OPPORTUNITIES
- _____ TO INCREASE WORK PRODUCTIVITY
- _____ TO RETURN TO THE WORK FORCE
- _____ TO STUDY "SOMETHING ELSE"
- _____ TO PREPARE FOR UNCERTAIN FUTURE
- _____ TO LEARN NEEDED NEW TECHNOLOGY
- _____ TO ADAPT TO A CHANGE IN FAMILY STRUCTURE
- _____ TO REDUCE THE FEAR LEISURE TIME
- _____ TO PREPARE FOR OCCUPATIONAL DISLOCATION
- _____ TO LEARN A NEW SKILL

The second part of my study asks the question WHICH BARRIERS HAVE BEEN THE MOST DIFFICULT FOR YOU TO OVERCOME? I have compiled a list of 20 barriers that current authors on the subject cite most frequently. Please mark five reasons that best answer the question for you. (Please, no more than five.)

- _____ LACK OF TIME TO STUDY PROPERLY
- _____ LACK OF MONEY FOR EDUCATION
- _____ LACK OF SELF CONFIDENCE IN ABILITY
- _____ LACK OF ABILITY OR SKILL
- _____ LACK OF INTEREST IN CONTINUING THE PROCESS
- _____ LACK OF INFORMATION FROM COLLEGE
ADMINISTRATION
- _____ UNAVAILABILITY OF SUITABLE COURSES OFFERED
- _____ GEOGRAPHICAL BARRIERS TO ATTENDING CLASSES
- _____ PERSONAL LACK OF QUALIFICATIONS FOR COLLEGE
ENTRANCE
- _____ FAMILY RESPONSIBILITIES BECOME TOO GREAT
- _____ NEGATIVE ATTITUDE OF FRIENDS AND FAMILY
- _____ ATTITUDE OF SOCIETY IN GENERAL TOWARD
EDUCATION
- _____ FEAR OF BEING TOO OLD TO LEARN
- _____ FEAR THAT CURRENT KNOWLEDGE IS OBSOLETE
- _____ DIFFICULT CHILD CARE ARRANGEMENTS
- _____ FINANCIAL PROVISIONS FOR ADULT STUDENTS ARE
INADEQUATE
- _____ INAPPROPRIATE SCHEDULES FOR CLASSES

- _____ LACK OF INDIVIDUALIZED ADVISING
- _____ LACK OF FAMILIARITY WITH NEW TECHNOLOGIES
- _____ COST OF COMPUTER EQUIPMENT NEEDED
- _____ TOO MUCH TIME AWAY FROM FAMILY
- _____ NOT ENOUGH PAYBACK FOR THE INVESTMENT IT TAKES

In order to complete this survey, I need to have some information about the group of people called WESTERN MICHIGAN UNIVERSITY GRADUATE STUDENTS. Please complete the following questions and feel free to use the remainder of the page to add your personal comments which might be important to my study. Be assured that this information is completely confidential and in no way can be traced to the individual.

PROGRAM OF STUDY _____

STAGE OF COMPLETION _____

YOUR AGE _____

YOUR GENDER _____

YOUR NATIONALITY _____

THANK YOU

Appendix E
Exercise #1 Data

Exercise #1 Data

	Basic	Safety	Love	Esteem	Self	Total
1.	1	1	28	5	2	37*
2.	20	6		7	4	37*
3.		2	3	24	8	37*
4.		5	7	15	11	38
5.	2	7		20	9	38
6.	1	9	19	6	3	38
7.	21	9		5	3	38
8.				7	31**	38
9.	1	2		12	23	38
10.		4	1	24	8	38
11.	22	7		7	2	38
12.		4		11	23	38
13.	2	28		5	3	38
14.	3	20		7	8	38
15.	5	8	22	3		38
16.		10	3	21	4	38
17.	9	21		4	4	38
18.	4	4		20	10	38

The class size was 39 students. One chose not to participate.

* Three slips were tossed out by one student.

** Only one score (31) could be defined by the original desired 80% response; therefore, a majority was used in the analysis for the study.

Appendix F
Data Identifier Index

DATA IDENTIFIER INDEX
FOR "DATA SET" IN SPSS STATISTICAL PROGRAM

Column

1
2
3

Identifier = The first three columns contained a set of unique numbers which identify the subjects in the research project. Subject questionnaires are numbered from 001 to 160.

4

Program = Subjects program of study was received from the questionnaires and further defined by using Western Michigan University's program catalog for the following categories:

- 1 = MA
- 2 = MBA
- 3 = MS
- 4 = SPEC
- 5 = EDD
- 6 = PHD
- 7 =
- 8 = UNABLE
- 9 = No data received

5

Completion = The subjects definition of the stage of completion in their particular program is coded by using:

- 1 = Beginning (or first one-third)
 - 2 = Middle (or middle one-third)
 - 3 = End (or last one-third)
 - 9 = No data received
- Recognizing that a: MA = 30
SPEC = 60
DOC = 90

6

Age = Subjects age, as given in the questionnaire, has been defined by using

three age groups.

- 1 = 18-30
- 2 = 31-40
- 3 = 41-90
- 4 = No data received

7

Gender = Subjects were divided by the normal categories.

- 1 = Female
- 2 = Male
- 9 = No data received

8

Nationality = Information was taken from the subjects definition of nationality. Chapter Four of this doctoral dissertation recognize that the data may not have been reliable in that the question may have been misinterpreted by the subjects. The research intended to ask if students were American or Non-American, when in fact the data received told of nationality and ancestry.

- 1 = American
- 2 = Non-American
- 3 = Unable to determine from answer given
- 9 = No data received

9-26

The following 18 columns represent the answers given by the subjects when asked "Why are you pursuing a graduate degree?" The 18 statements have been divided into categories further defined by Maslow's five level hierarchy of needs. Each statement is coded by a 1 if checked by the subject and a 0 if not checked by the subject. Each column is also given a unique name.

- | | | | |
|------|---|--------|---|
| 9 = | Interaction | Love | 3 |
| | To have more social interaction | | |
| 10 = | Employed | Basic | 1 |
| | To become employed | | |
| 11 = | Old | Esteem | 4 |
| | To avoid the self-perception of growing old | | |

12 =	Personal	Esteem	4
	To prepare for personal change in lifestyle		
13 =	Job	Esteem	4
	To prepare for additional job responsibilities		
14 =	Social	Love	3
	To keep pace with social change		
15 =	Economic	Basic	1
	To prepare for economic change		
16 =	Lifelong	Self Act	5
	To continue lifelong learning		
17 =	Advancement	Self Act	5
	To take advantage of advancement opportunities		
18 =	Productivity	Esteem	4
	To increase work productivity		
19 =	Return	Basic	1
	To return to the work force		
20 =	Else	Self Act	5
	To study "something else"		
21 =	Future	Safety	2
	To prepare for uncertain future		
22 =	Technology	Safety	2
	To learn needed new technology		
23 =	Structure	Love	3
	To adapt to a change in family structure		
24 =	Leisure	Esteem	4
	To reduce the fear of leisure time		
25 =	Dislocation	Safety	2
	To prepare for occupational dislocation		
26 =	New	Esteem	4

To learn a new skill

27-48

The following 22 columns represent answers given by the subjects when asked "Which barriers have been the most difficult for you to overcome?" The 22 statements have been divided into categories further defined by Schultz's three types of barriers. Each statement is coded by a 1 if checked by the subject and by a 0 if not checked by the subject. Each column is also given a unique name.

27 =	Time	Situational	3
	Lack of time to study properly		
28 =	Money	Situational	3
	Lack of money for education		
29 =	Ability	Dispositional	1
	Lack of self-confidence in ability		
30 =	Skill	Dispositional	1
	Lack of ability of skill		
31 =	Continuing	Dispositional	1
	Lack of interest in continuing the process		
32 =	Information	Institutional	2
	Lack of information from college administration		
33 =	Courses	Institutional	2
	Unavailability of suitable courses offered		
34 =	Geographical	Institutional	2
	Geographical barriers to attending classes		
35 =	Entrance	Institutional	2
	Personal lack of qualifications for college entrance		
36 =	Great	Situational	3
	Family responsibilities become too great		
37 =	Friends	Dispositional	1
	Negative attitude of friends and family		

38 =	Education Attitude of society in general toward education	Dispositional	1
39 =	Learn Fear of being too old to learn	Dispositional	1
40 =	Obsolete Fear that current knowledge is obsolete	Dispositional	1
41 =	Child Difficult child care arrangements	Situational	3
42 =	Inadequate Financial provisions for adult students are inadequate	Institutional	2
43 =	Classes Inappropriate schedules for classes	Institutional	2
44 =	Advising Lack of individualized advising	Institutional	2
45 =	Familiarity Lack of familiarity with new technologies	Dispositional	1
46 =	Equipment Cost of computer equipment needed	Institutional	2
47 =	Family Too much time away from family	Situational	3
48 =	Payback Not enough payback for the investment it takes	Situational	3

200 questionnaires were mailed to the random sample as defined by the dissertation methodology. One hundred and sixty or 80% were returned and used in this analysis for various Pearson Product Moment Correlation Coefficients.

Appendix G
Assignment of Designated Questions to Variables

Reasons Graduate Students Pursue a Degree Program
Question 1-18
Maslow's Hierarchy of Needs

Basic Needs - Questions 2, 7, and 11 --

- 2. To become employed
- 7. To prepare for economic change
- 11. To return to the work force

Safety Needs - Questions 13, 14, and 17 --

- 13. To prepare for uncertain future
- 14. To learn needed new technology
- 17. To prepare for occupational dislocation

Love Needs - Questions 1, 6, and 15 --

- 1. To have more social interaction
- 6. To keep pace with social change
- 15. To adapt to a change in family structure

Esteem Needs - Questions 3, 4, 5, 10, 16, and 18 --

- 3. To avoid the self-perception of growing old
- 4. To prepare for personal change in lifestyle
- 5. To prepare for additional job responsibilities

- 10. To increase work productivity
- 16. To reduce the fear of leisure time
- 18. To learn a new skill

Self Actualization - Questions 8, 9, and 12 --

- 8. To continue lifelong learning
- 9. To take advantage of advancement opportunities
- 12. To study "something else"

Student's Perceived Barriers to Overcome During Degree Program
Questions 1-22
Schultz's Three Types of Barriers

Dispositional Barriers - Questions 3, 4, 5, 11, 12, 13, 14, and 19 --

- 3. Lack of self-confidence in ability
- 4. Lack of ability or skill
- 5. Lack of interest in continuing the process
- 11. Negative attitude of family and friends
- 12. Attitude of society in general toward education
- 13. Fear of being too old to learn
- 14. Fear that current knowledge is obsolete
- 19. Lack of familiarity with new technologies

Institutional Barriers - Questions 6, 7, 8, 9, 16, 17, 18, and 20 --

- 6. Lack of information from college administration
- 7. Unavailability of suitable courses offered
- 8. Geographical barriers to attending classes
- 9. Personal lack of qualifications for college entrance
- 16. Financial provisions for adult students are inadequate
- 17. Inappropriate schedules for classes
- 18. Lack of individualized advising
- 20. Cost of computer equipment needed

Situational Barriers - Questions 1, 2, 10, 15, 21, and 22 --

1. Lack of time to study properly
2. Lack of money for education
10. Family responsibilities become too great
15. Difficult child care arrangements
21. Too much time away from family
22. Not enough pay back for the investment it takes

Appendix H
Approved Proposal

PHYLLIS CRANDALL
DISSERTATION PROPOSAL

PURPOSE

The purpose of this graduate dissertation on motivation will be to examine the relationship between the reasons for pursuing graduate studies and the nature and extend of barriers which may present themselves during the process.

DEFINITIONS

REASONS - are defined as the specific perceived needs of an individual that motivated them to pursue graduate study.

GRADUATE STUDY - is defined as enrollment in a formal university program which leads to a Masters, Specialist, or Doctoral degree.

BARRIERS - are defined as specific obstacles which impede progress toward the pursuit of graduate study.

POPULATION

The population used for this study includes all students enrolled in graduate study at Western Michigan University during the 1993-94 academic school year.

SAMPLE - A sample of 200 students will be taken from an alphabetized list of graduate students using a random table of numbers.

INSTRUMENTATION

A three part questionnaire will be developed and mailed to 200 graduate students

with return anonymity assured. A cover letter will explain the research study. Part one will ask for demographic information. Part two will ask questions concerning the reasons for pursuing graduate study. Part three will ask questions about the nature and extent of barriers that have been encountered and overcome during the process.

VARIABLE A

Questions concerning the reasons for pursuing graduate study will be based on Abram Maslow's five level hierarchy of needs. This portion of the survey will be designed so that different survey items can be associated with different levels of needs, as per Maslow. A check for content validity will be conducted by asking a group of students to categorize slips of paper, each with specific reasons for pursuing graduate study (as identified from literature). Categories will be labeled to depict one of Maslow's five levels of need. Where students include the need into a pre-labeled envelope with 80% agreement it will be included into the study and used in the formation of questions for that category.

VARIABLE B

A list of barriers to the completion of a graduate study program will be constructed from current literature on the subject. The questionnaire will then ask the sample to rate their perception of their own experience in overcoming these barriers. A five point Likkert-type scale will be used to record their responses. A pre-study assessment will be conducted on the list of barriers by asking a group

of students to weight each of them as to the level of perceived difficulty as a "barrier". These weights will then be used in the scoring of the questionnaire.

ANALYSIS

The analysis of this study will focus on the relationship of the variables pertaining to why students pursue graduate study and the barriers which they must overcome in order to reach their goals. This will be moderated by the demographics of the population, by examining categories of age, program, gender, nationality, stage of program completed, and other variables indicated as important from the literature review. The tests used in this analysis will be a Pearson Product Moment and other appropriate tests of relationship.

The study will allow for generalizing to the population of graduate students at Western Michigan University and arguments will be made for broader generalization based on the specified characteristics of the sample and setting of the study.

Any relationships found between why students pursue graduate study and the nature and strength of the barriers overcome may prove to be helpful to universities in the future when looking at graduate student recruitment and retention.

Appendix I
HSIRB Approval Letters



WESTERN MICHIGAN UNIVERSITY

Date: February 16, 1994

To: Phyllis Crandall

From: M. Michele Burnette, Chair

A handwritten signature in cursive script, reading "M. Michele Burnette", followed by a stylized flourish.

Re: HSIRB Project Number 94-02-13

This letter will serve as confirmation that your research project entitled "Two exercises to present content validity for a doctoral dissertation project" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: February 10, 1995

xc: Brinkerhoff, Ed. Leadership



WESTERN MICHIGAN UNIVERSITY

121

Date: February 16, 1994

To: Phyllis Crandall

From: M. Michele Burnette, Chair

A handwritten signature in cursive script, appearing to read "M. Michele Burnette".

Re: HSIRB Project Number 94-02-14

This letter will serve as confirmation that your research project entitled "Intrinsic motivation for learning in the adult student" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: February 10 1995

xc: Brinkerhoff, Ed. Leadership

BIBLIOGRAPHY

- Atkinson, J. W. (1955). The achievement motive and recall of interrupted and completed tasks. In D.D. McClelland (Ed.). Studies in Motivation (pp. 494-506). New York: Appleton-Century-Crafts.
- Barton, P. E. (1982). Worklife Transitions: The Adult Learning Connection. New York: McGraw-Hill.
- Brawer, F. B. (1973). New Perspectives on Personality Development in College Students. San Francisco: Jossey-Bass.
- Daniels, M. I. (1984). The relationship between moral development and self-actualization. Journal of Moral Education, 13(1), 25-30.
- Diggory, J. C. (1966). Self-Evaluation: Concepts and Studies. New York: John Wiley.
- Freud, S., (1955). Unconscious motivation in everyday life. In D.D. McClelland (Ed.). Studies in Motivation (pp. 3-18). New York: Appleton-Century-Crafts. (Original work published in 1904.)
- Gerald, D. E. and Hussar, W.J. (1992). Projections of Education Statistics to 2003. Washington, DC: Department of Education.
- Harlow, H. F. (1955). Mice, monkeys, men, and motives. In D.C. McClelland (Ed.). Studies in Motivation (pp. 213-225). New York: Appleton-Century-Crafts.
- Harlow, H. F., Harlow, M.K., & Meyer, D.R. (1955). Learning motivated by a manipulation drive. In D.C. McClelland (Ed.). Studies in Motivation (pp. 125-133). New York: Appleton-Century-Crafts.
- Hinkle, W. J. (1988). Applied Statistics for the Behavioral Sciences. Boston: Houghton Mifflin.
- Howard, G. S. (1993). Why William James Might be Considered the Founder of the Scientist-Practitioner Model. The Counseling Psychologist, 21(1), 118-135.
- James, W. (1890). The Principles of Psychology. New York: H. Holt & Co.

- Jourard, S. M. (1971). The Transparent Self. New York: D. Van Nostrand.
- Kerlinger, F. N. (1986). Foundations of Behavioral Research (3rd ed.). Fort Worth: Holt, Rinehart, and Winston.
- Klevins, C. K. (Ed.), (1972). Materials and Methods in Adult Education. New York: Klevens Publications.
- Knowles, M. S. (1984). The Adult Learner: A Neglected Species. Texas: Gulf Publishing Company.
- Knowles, M. S. & Klevins, C. K. (1972). Resume of adult education. In C.K. Klevins (Ed.). Materials and Methods in Adult Education (pp. 5-15). New York: Klevens Publications.
- Long, H. B. (1983). Adult Learning: Research and Practice. New York: Cambridge.
- Maslow, A. H. (1954). Motivation and Personality. New York: Harper and Row.
- Maslow, A. H. (1968). Toward a Psychology of Being, (Second Edition). New York: D. Van Nostrand.
- Maslow, A. H. (1970). Motivation and Personality (2nd ed.). New York: Harper and Row.
- Neff, M. C. (1972). Classroom adjustment to theories of adult learning. In C.K. Klevins (Ed.). Materials and Methods in Adult Education (pp 129-136). New York: Klevens Publications.
- Rohfeld, R. W. (Ed.), (1990). Expanding Access to Knowledge: Continuing Higher Education. Washington: National University Continuing Education.
- Rudestem, K. E. & Newton, R. R. (1992). Surviving your Dissertation: A Comprehensive Guide to Content and Process. London: Sage Publications.
- Schultz, H. G. (1987). New frontiers - old barriers: Adults in higher education, an introduction to the issues. In H.G. Schultz (Ed.). Adults in Higher Education (pp. 7-20). Stockholm: Almqvist & Wiksell.
- Sieber, J. E. (1992). Planning ethically responsible research: A guide for students and internal review boards. Applied Social Research Methods Series (V31). London: Sage Publications.

Snyder, T. D., Project Director (1993). Digest of Educational Statistics. U.S. Department of Education. Washington D.C.

SPSS Introductory Statistics Student Guide. (1990). Chicago: SPSS Inc.

Tennant, M. (1991). The psychology of adult teaching and learning. In J.M. Peters, P. Jarvie (Eds.). Adult Education (pp. 191-216). San Francisco: Jossey-Bass.

Wagner, A. P. (1987). Adults in higher education: The situation in the United States. In H.G. Schultz (Ed.). Adults in Higher Education (pp 75-120). Stockholm: Almqvist & Wiksell.