

MOTIVATION AND PERSISTENCE OF COLLEGE STUDENTS WHO ARE
PARENTS COMPARED TO NON-PARENT COLLEGE STUDENTS

by

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

of

Doctor of Education

in

Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

November 2011

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ACKNOWLEDGEMENTS

Humbly, I would like to thank my committee and family for the survival of this journey which has seemed to be an all-consuming part of my life. I am thankful to have had this opportunity to learn about education, and I believe my life and my students' learning will be improved with my knowledge from both professors and this degree plan.

My committee provided guidance: using fewer words to provide greater clarity in my writing and applying authenticity (Dr. Lockhart, Chair), trust the knowledge taught and remember to see the joy (Dr. Myers), pursue future research with passion (Dr. Palmer), appreciate lifelong learning (Dr. Baker), teach the impact of cognitive dissonance (Dr. Stein), and appreciate the sharing of disciplines (Dr. Cunningham).

My entire family has kindly offered understanding, love and support even when they did not understand what I was talking about and grew weary of when my pending ending date would officially occur. Daily support was given from my J sharing the ride of ups and downs and not even looking for an exit but encouraging that I enjoy the journey rather than a sprint.

A lasting vision of the significance in education came to me with the birth of my first daughter when I became a college student-parent during my undergraduate work; this vision continues through the eyes of my daughters who are now adults with and pursuing college educations. Earning this degree has been a culmination of my hopes and dreams with guidance that has never ceased by Dr. Margaret Whittemore who knew me as a college student-parent with a newborn and the decades which followed. I dedicate the possibility and evolution of this doctorate to Dr. Margaret Whittemore.

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ABSTRACT

The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents. It is important that administrators, faculty, and support staffs know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation to enroll and persist in achieving degree attainment success when compared to students who are not parents. The results of this study can be used by administrators, faculty, and support staffs as they recruit students, enroll students, retain students, revise current programs, and create new programs. In this study, three hundred and twenty three students were administered a survey (designed from two existing surveys) distributed one week before the semester ended, spring, 2011; ninety four parents and two hundred and twenty nine non-parents responded to questions about five persistence factors (enrollment barriers, decision to continue attending college, classroom experiences, student services and attainment goals) and one factor of motivation. The difference between persistence and motivation is that persistence questions were more specific to academics, while motivation questions were both academic and personal (intrinsic). The results showed parental status predicted persistence to continue attending college, classroom experiences and perceptions of student services. Parents showed higher levels of persistence survey scores than non-parents to continue attending college, classroom experiences and student services. Differences in motivation were unclear. In addition to student-parent status, individual student characteristics of age, marital status, and gender showed significance for predicting enrollment, attainment and student services. Non-traditional age students had lower levels of survey response for barriers in enrollment. Married students had lower levels of survey response for the attainment of goals. Females showed higher levels of survey response for student services. This study concludes that persistence factors were different between parenthood, age, marital status, and gender while differences in motivation remain unclear when comparing student-parents and students who are not parents.

CHAPTER I

INTRODUCTION TO THE STUDY

Background

The majority of the adult U.S. population does not have a post-secondary degree; this includes nearly one hundred twenty-five million adults age twenty-five years and older (Applegate, 2010). Recent economic conditions and a greater legislative emphasis has encouraged adult enrollment in higher education (Goodman, 2005) creating a “culture of lifetime learning” (Lloyd & Griffiths, 2008, p.15). According to the U.S. Department of Education, National Center for Education Statistics (2009), the percentage of college enrollments of non-traditional-aged students (twenty-four and older) is expected to increase more significantly than traditional-aged students (twenty-three and younger) over the next ten years. According to the National Post Secondary Student Aid Study (2008), non-traditional students can be categorized by their independent status (those independent of their parents for support); these students account for nearly fifty one percent of the total student population and are expected to continue to grow (NPSAS, 2008). Tracking variables and categories differ for non-traditional student status.

The Lumina Foundation recently titled non-traditional students as “non-traditional no more” which is a reflection of the increased number of students (non-traditional) projected in future enrollments. Also, there is anticipation that non-traditional students will be recognized more often as the new majority as they increase in enrollment (Lumina & WICHE 2010). The increasing numbers of newly identified non-traditional students

leads to a dynamic (continuous activity) environment as adult students and their needs are being identified. As the numbers of non-traditional students have increased and continue to increase in this “dynamic domain,” unique barriers continue to be identified which are not faced by traditional students (Maehl, 2004). Literature suggests unique barriers occur for non-traditional students in enrollment, retention, motivation, and persistence including academic, financial, social, cultural, and personal issues (Spellman, 2010; Fusch, 2010; Frey, 2007; Dougherty & Woodland, 2009; Flint, 2005; Grayson, 1996). Non-traditional students express different views and perceptions in their attempt to attend college and overcome obstacles when compared to traditional students (Kinser & Deitchman, 2007; Brown, 2004; Chaves 2006).

Students who are parents are a sub-population of non-traditional students. The focus of student-parents in the literature is primarily non-traditional or single mothers living in poverty (Waring, 2010; Burt & Nightingale, 2010; Sherr, 2010). The focus on single mothers arises from both national demographic trends and changes in the proportion of college students who are women. Women giving birth who are single parents have risen to nearly forty-one percent of all births in the US (National Center for Health Statistics, 2008). Women have also become the majority of the U.S. undergraduate population at nearly fifty-seven percent (NPSAS, 2008), and projections indicate a continued future increase in female students (NCES, 2009). Women are the majority of single parents; they are the majority of students on US campuses, and they are the majority among student-parents on campus.

Single student-parents account for more than half of the independent college student population (those independent of their parents for support) with dependents (NCES, 2008). According to NCES data (2008), single student-parents on college campuses are the majority when compared to married student-parents. First, the dynamics of increased populations of non-traditional students who are parents, and secondly increases in those who are single parents and female creates interest in research to better understand the unique characteristics of both married and single student-parent households.

Context

The author of this study conducted two qualitative studies in the spring semester, 2010 and fall semester, 2010 in which student-parents' motivation and persistence toward degree attainment were clarified (Lovell, 2010). In the first study, nine female student-parents were interviewed at a college of technology in rural Montana. In the second study, three female American Indian student-parents were interviewed at a flagship Montana institution. The purpose of both of these studies was to explore the complex human experience of being a college student-parent.

The primary finding of the first study suggested a phenomenon based on the age of the college student-parents' children. The mother's motivation to attend college was intertwined with the age of her children. This phenomenon enhanced the meaning of the lived experience of college student-parents. Although these college student-parents were

diverse in age, ethnicity, academic major, number of children, marital, and socioeconomic status, there was a shared experience.

For these nine women, the findings suggested that their persistence toward degree attainment was influenced by their children, and more specifically by the age of their children. Parents with younger children described their children as the primary reason to persist toward degree attainment. Secondly, the findings showed parents with both younger and older children saw their children and self-fulfillment as the combined reasons to persist. Lastly, parents with older children described self-fulfillment as their primary reason to persist.

The primary findings of the second study about American Indian Student-Parents showed three prominent themes. The first theme was described through familial connections (nuclear, tribal, and adopted); no patriarchal descriptors were shared while matriarchal descriptors were prominent with either a mother or grandmother. A connectedness to spiritual beliefs in the process of making academic choices was prominent while describing family. The second theme had descriptions of the birth of their child as a great motivator for academic pursuits combined with feelings of challenge to maintain the balance between the role of student and parent. For some, this necessitated putting their academic dreams on hold; others whose children were grown had their dreams realized. The third theme, feelings of limited connectedness to their mainstream university, was described with extracurricular activities including student government for American Indians and a religious organization for minorities.

These qualitative studies were completed at Montana Tech of the University of Montana (College of Technology), and Montana State University; this dissertation study was completed at the (College of Technology) combined with the main campus of Montana Tech. By Carnegie classification description, these two institutions are combined as one (both the College of Technology and main campus). The institutions are described as a small four year public institution, primarily non-residential with two thousand one hundred and eighty-seven students.

In statistical analysis by Montana Tech, the primary identifier is student age to understand the number of traditional and non-traditional students. Montana Tech of the University of Montana has seventy-one percent traditional students (twenty-four and younger) and twenty-nine percent non-traditional (twenty-five and older) on the main campus (public four-year); sixty-three percent traditional and thirty-seven percent non-traditional at the College of Technology (public two-year) (Tech Data, 11/2010). This study will include samples from both campuses (four-year and two-year).

The percentage of student-parents is unknown at Montana Tech of the University of Montana. This study will explore a more detailed accounting of non-traditional students (student-parents) in an effort to more clearly identify the numbers and needs of student-parents. When we understand more about who these students are, we can more clearly identify how their needs can be met.

Statement of the Problem

It is important that administrators, faculty, and support staffs at Montana Tech of the University of Montana know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation to enroll and persist in achieving degree attainment success when compared to students who are not parents. The results of this study can be used by Montana Tech of the University of Montana administrators, faculty, and support staffs as they recruit students, enroll students, retain students, revise current programs, and create new programs.

Purpose of the Study

The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents.

Research Questions

R1 Is there a difference in motivation between students who are parents and students who are not parents?

R2 Is there a difference in persistence between students who are parents and students who are not parents?

Significance of the Study

The results of this study can be used by Montana Tech of the University of Montana administrators, faculty, and support staff to know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation and persistence in achieving degree attainment success and to understand the differences when compared to students who are not parents. In an effort to identify what administrators are interested in knowing about student-parents, discussions were conducted with two administrators at Montana State University and one administrator at Montana Tech of the University of Montana. These discussions, in conjunction with themes from the literature, generated proposed characteristics of interest to study concerning student-parents. One administrator stated, “A maximum level of success is an absolute key concern – we need to know what factors contribute to these students’ success [student-parents]” (J. Fedock, personal communication, October 21, 2010). The Dean of the College of Technology at Montana Tech of the University of Montana described the culture of his institution as unique both in mission and demographics. He noted that Montana Tech has a unique, long-standing mission in the engineering and extractive minerals disciplines. Montana Tech’s focus is on the sciences and, as a result, it does not offer Associate of Arts, Bachelor of Arts or Master of Arts degrees. Demographically, Montana Tech’s combined campuses (two-year and four-year) are also unique with a majority of their students being male and with a higher percentage being traditional age (J. Garic, personal communication, November, 01, 2011).

Further consideration was given to statewide initiatives to increase degree holders in Montana by 2018 to meet employment needs targeting non-traditional students age twenty-five and older (Applegate, 2010). Additionally faculty and administration at other institutions may also find these results of value as they continue to identify factors which are contributions or hindrances to their students' motivation and persistence as compared to students who are not parents.

Introduction to the Literature and Conceptual Framework

Three profiles of college students will be reviewed: 1) non-traditional students, 2) students who are parents and 3) students who are mothers living in poverty. These groupings are not mutually exclusive; however these groupings are strikingly apparent in the literature. College student theories for non-traditional students will be reviewed to enhance understanding of student-parents' needs; this is necessitated because there were no theories in existing literature specific to the needs of college student-parents.

Non-traditional students and the sub-populations of student-parents (student-parents and mothers living in poverty) will be explored for further contextual understanding of the purpose of this study by the categories of 1) persistence (five variables specific to academics working toward academic success): enrollment barriers, decision to continue attending, student services, classroom experiences, and attainment goals 2) motivation (one variable). These two categories establish further understanding of how students, administrators, faculty, and support staffs can benefit from this study as

they recruit students, enroll students, retain students, revise current programs, and create new programs.

Persistence: Enrollment Barriers and Student Services

Persistence begins when enrollment is initiated and barriers are overcome to successfully enroll. Enrollment barriers for non-traditional students are often described by students as not feeling connected to the institution as though they are outcasts (Bryan & Simmons, 2009). This feeling of being outcasts can begin with unmet needs during enrollment combined with a lack of understanding of the unique characteristics of student-parents by student services (Wilmer, 2005). Students are more challenged for success when professionals do not understand their individual needs, and this furthers their limitations beginning with enrollment and continuing with student services.

Professionals need to understand differences in students' needs related to, socioeconomic brackets, the role of parent, or a combination of these characteristics (Riel, 2007; Jennings, 2004).

A one person point of contact which can be described as hand holding or a "high touch approach" for enrollment services has shown to be particularly beneficial to reduce enrollment barriers (Fusch, 2010; Hart 2010). This reduces time spent in the enrollment process and reduces the potential barriers of miscommunication helping students to persist. The practice of a one person point of contact continuing through to student services can improve communication, and help the student to feel more included and less of an outcast thereby increasing persistence for pursuing their degree.

Persistence: Classroom Experiences and Attainment Goals

A student's persistence, their decision to continue attending college, can contribute to or hinder their academic success and institutions share in this responsibility with classroom experiences and retention efforts. Classroom experiences and retention efforts of the institution can encourage or deter persistence and the attainment of goals. An environment for success and the attainment of their goals is both internal and external to the institution. Internal (within the institution) and external (outside of the institution) factors encourage persistence and are both dynamic and reciprocal increasing retention success by "communication, collaboration, and creativity" (Massey, Locke, & Neuhard, 2009, p. 957). In order to persist and attain a degree, an understanding between factors is critical to retention and academic success as shown in Figure One.

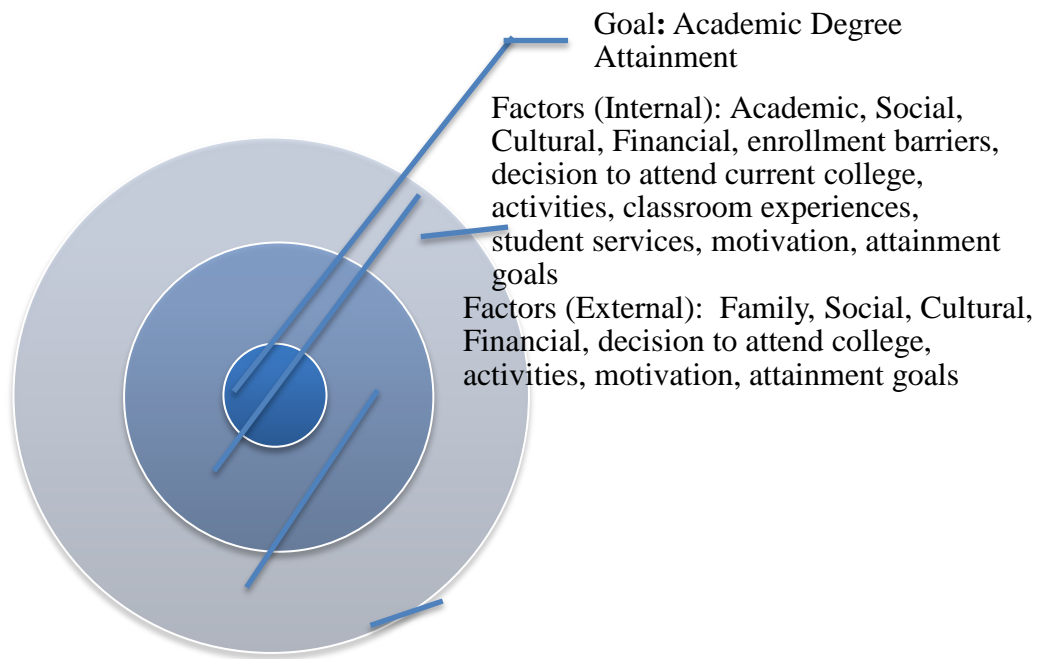


Figure One: Conceptual Framework: Retention (Internal and External Factors)

Motivation

Student-parents describe their motivation to degree attainment through the lens of their role as parents (Haleman, 2004). There is “no better motivation to finish college and to appreciate the marrow of the experience than a child whose future depends on your decisions” (Rizer, 2005, B5). Hope for their children’s education in the future encourages persistence toward their own degree attainment because parents do not want their children to experience the hardships of supporting a family without an education (Astone, 1993).

Motivation to remain in school was often complicated by competing work demands, family and child care responsibilities and school barriers (Battle, 2007). Students reporting that their teachers leave them feeling marginalized by discouraging them from enrollment in certain classes because of their role (status) of student-parent “show a decline in educational expectations over time” (Kalil, 2002, p. 555).

Stereotypes of single mothers living in poverty often have a negative connotation which can have an impact on their motivation. A study of college students who were single mothers living with welfare assistance in a quasi-communal setting suggested additional support for their academic success helped to contradict stereotypes. They did not perceive themselves as stereotypical once they entered school. “Women forged identities against the grain of dominant images that depict all women on welfare as ‘lazy women’ and ‘bad mothers’” (Jennings, 2004). The mothers stated their persistence was further improved with alternative housing on campus which provided additional support (childcare) for academic success (Johnson, 1991).

Single mothers make up the majority of single-parent households; the majority of these mothers and children live in poverty. Literature suggests that when curriculum, housing, and services, which are specific to a single parents' needs, are available, college success for student-parents can improve academic success (VanCleve, 1994; Apling, 1991).

Definition of Terms

For the purposes of this study, the following definitions were used:

1. Academic Preparedness – a student needs a level of preparation for writing, reading and math skills which can meet the rigor of a college level and which can be assessed by entrance exams and aptitude tests (Wilmer, 2005).
2. Administration – the people who conduct the business operations of a higher education institution.
3. Attrition – students who drop out of school without the completion of a semester or an actual degree (VanCleve, 1994).
4. Dynamic – the number of nontraditional students on college campuses is in a state of continuous change. The change is described in the increasing numbers and the identification of these student needs (Maehl, 2004).
5. Efficacy – a positive resolution of self-worth toward a better understanding of what an individual is able to accomplish (Ricco, Sabet, & Clough, 2009).
6. Faculty – professors or instructors who provide instruction within higher education.

7. Motivation - a state of being which induces or perpetuates a positive result while staying engaged to accomplish the task or goal with an internal locus of control which may be academic or personal.

8. Non-traditional student – the definitions within this study: student-parent (married, un-married, living in multiple socioeconomic brackets), varied starting ages are referenced from data bases (age twenty-three, twenty-four or, twenty-five) and older, independent of parents, GED graduate, part-time enrollment, primary family care-giver, delayed enrollment, or full-time employee (Lumina & WICHE, 2010).

9. Persistence – to continue toward degree attainment rather than drop-out and this is primarily academic.

10. Retention – students who do not drop out.

11. Stop Out – students who stop attending for a while but return to school.

12. Student Centered – services provided with the students’ thoughts, perceptions and values considered to insure a secure learning environment.

13. Student-parent – a student in higher education who is also a parent.

14. Traditional student – age twenty-four or younger (parent or non-parent), dependent on parents, attending school full-time, and may be unemployed or working part-time (National Center for Education Statistics, NCES, 2009).

Assumptions/Limitations/Delimitations

This study has the following assumptions: 1) there are differences between students who are parents and those who are not; 2) shifting demographics will continue to

increase the number of female college student-parents; and 3) that many of these lifelong learners will be student-parents.

This study has the following limitations: 1) the quality of responses may be limited if students discredit the significance of the surveys (those answering quickly rather than thoughtfully); and 2) the sample will not be a random sample.

This study will use the following delimitations: 1) the researcher has chosen to divide students into student-parents and students without children. This could make it difficult to compare variables and data with other studies – limiting the scope; and 2) the study includes students from only one university, 3) the survey is self-reporting.

Methodology

This study is a quantitative comparative analysis using a non-experimental approach with a quasi-experimental design. First, this comparison is between two populations: undergraduate student-parents and undergraduate students who are not parents attending Montana Tech of the University of Montana. Survey distribution was conducted over one week of classes during the last week of the spring 2011 semester. The selected sample includes undergraduate students attending freshman writing and math classes.

The instrument for assessment is a survey which was designed for the purpose of this study by combining two existing surveys. The survey was a self-report measure with comparative, associational, and descriptive approaches. The survey items were a combination of close-ended, unordered items, and close-ended questions with ordered

choices. Internal consistency for reliability was established with a scale of services needed. Convergent and discriminate evidence was enhanced by using research questions from two studies about non-traditional students by Kinser & Deitchman (2007) and Grayson (1996).

Since previous literature for this population is particularly limited, and no studies were found which compared student-parents to students who are not parents, there was not an existing survey to use. The two surveys were adjusted slightly to be more specific to the student-parent. Validity generalization included collaboration with my dissertation committee, two Montana State University Administrators, and one Montana Tech of the University of Montana Administrator. A Cronbach's alpha was run for each index to assure relationships among each group of questions (factors) for measurement validity.

Analyses initially included eight dependent variables which are indices (categories) within a Likert scale and seven independent variables. Dependent variables were narrowed to six indices corresponding to research questions, and independent variables were narrowed from seven to five variables because samples were too small for some variables. Organization of independent and dependent variables are shown in table one. Organization of survey questions with each dependent variable relating to research questions is shown in table two. Lastly, a table of internal and external variables in relation to inside or outside of the institution is described, but it was decided to eliminate these from this study because of weakened reliability.

Table One. Independent and Dependent Variables in this Study

Independent Variables (6) (Dichotomous)	Dependent Variables
(All Independent variables in this study are attribute and nominal)	Persistence Variables:
1. Student-parent or non student-parent	1. Enrollment barriers
2. Gender	2. Decision to continue attending college
3. Age of student	3. Classroom
4. Single or married (partnered)	experiences
5. Type of degree being earned	4. Student services,
6. Age of children	5. Attainment goals.
	Motivation Variables:
	6. Motivation

Table Two. Dependent Variable Indices Corresponding to Research Questions/Indices/Questions

Abbreviated Research Questions (2)	Corresponding Indices Corresponding
Number of Research Questions	
R1 Is there a difference in motivation ... [39, 40, 41, 42, 43, 44, 45]	Motivation (R1)
R2 Is there a difference in persistence... [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	Enrollment Barriers (R2)
[16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26]	Continue Attending (R2)
[27, 28, 29, 30, 31, 32, 33, 34]	Classroom Experiences (R2)
[35, 36, 37, 38]	Student Services (R2)
[46, 47, 48, 49, 50]	Attainment Goals (R2)

Chapter Summary

The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents. Student-parents have individual characteristics which are different from students without children and these differences need to be understood so that services can be provided to encourage enrollment and degree attainment.

When faculty and administration have an understanding of the factors of motivation and persistence for student-parents, they can design a framework of services and programs to respond to individual characteristics to help students achieve their goals (CAEL, 2007). The needs of college student-parents are clarified with cultural, developmental, and retention theories; the merging of multiple types of theories is necessitated by the diverse needs of this population and the fact that there are no theories which have been identified specifically for the college student-parent population.

This study is important for administrators, faculty, and support staff who need to know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation and persistence when compared to students who are not parents. The results of this study can be used by Montana Tech of the University of Montana administrators, faculty and support staffs as they recruit students, enroll students, retain students, revise current programs, and create new programs.

CHAPTER II

LITERATURE REVIEW

Introduction

The literature review will serve as a summary of previous literature and findings which relate to the definition and unique needs of college student-parents. The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents. It is important that administrators, faculty, and support staffs at Montana Tech of the University of Montana know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation and persistence when compared to students who are not parents. The results of this study can be used by Montana Tech of the University of Montana administrators, faculty, and support staffs as they recruit students, enroll students, retain students, revise current programs, and create new programs. Additionally faculty and administration at other institutions may also find these results of value as they continue to identify factors which are contributions or hindrances to their motivation and persistence compared to students who are not parents.

Overview of Literature

A summary of the literature will first provide three student categories 1) non-traditional students, 2) students who are parents, and 3) students who are single mothers and living in poverty; secondly factors pertaining to student-parents' academic success will be summarized (factors vary within each student category); thirdly a summary of theories which can be applied to student-parents: retention, cultural, and developmental. And, lastly a review will be completed of student-parent studies' methodologies, strengths, and weaknesses which were used in the literature review.

An outline of this presentation is as follows. (The content of this outline begins on page twenty-two).

Review of Previous Literature, Findings and Opinions

Introduction of Student Categories

Non-Traditional Students

Internal Factors

1. Enrollment (Enrollment Barriers)
2. Student and Support Services (Student Services)
3. Learning and Teaching Environment (Classroom Experiences)
4. Academic Environment (Continue Attending and Attainment Goals)

External Factors

- 1 Enrollment (Enrollment Barriers)
2. Social Environment (Continue Attending College/Attainment goals)
3. Employment (Enrollment Barriers)

Students Who Are Parents

Maintaining Balance between Family and Academics (Motivation)

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Criteria for Selecting the Literature

Student categories, factors pertaining to motivation and persistence, and theories will be reviewed as the most critical criteria in this literature review as listed in the outline above. Literature themes will match with the survey themes (indices) for this study. Specific indices for the survey are shown in table 2 on page sixteen. Hence, each index on the survey will be explored in detail with the review of literature. It is the researcher's intent with the review of literature to add greater perspective and depth of meaning for the indices and questions chosen for the survey. Initially, an overview of non-traditional students will provide an introduction for the next two sub-groups within the non-traditional student population: 1) students who are parents and 2) students who are single mothers living in poverty. The criterion for separating these student categories was to assure the understanding of each of the individual categories which include: non-traditional students, student-parents, and students who are single mothers living in poverty. Next, the factor of motivation (variables with an internal locus of control)

index: motivation, and factors of persistence (variables specific to academics working toward academic success) indices: enrollment barriers, decision to continue attending college, classroom experiences, student services and attainment goals will be explored. These were the two most consistent factors (motivation and persistence) found in existing literature which were critical to student-parent success. Next, college student theories will be reviewed to enhance an understanding of student-parents; there were no theories in existing literature specific to the needs of student parents. Last, a review of student-parent studies' methodologies, strengths and weaknesses will be conducted. This synthesis will conclude with directions for further research inquiry.

Statement of the Problem and Purpose of the Study

It is important that administrators, faculty, and support staffs at Montana Tech of the University of Montana know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation and persistence when compared to students who are not parents. The results of this study can be used by Montana Tech of the University of Montana administrators, faculty, and support staffs as they recruit students, enroll students, retain students, revise current programs, and create new programs.

The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents.

Review of Previous Literature, Findings, and Opinions:

Introduction of Student Categories

The student categories will first provide details about non-traditional students as a whole, second as student-parents (male, female, married, single, varied incomes) and last as students who are single mothers living in poverty.

According to NPSAS (2008), non-traditional students are identified by their status of living independently of their parents (those independent of their parents for financial support). Non-traditional students account for nearly fifty-one percent of the total student population.

Within nontraditional students, nearly fifty-three percent have dependents. Women have become the majority of the U.S. undergraduate population at nearly fifty-seven percent (NPSAS, 2008). A majority of these independent students (with dependents) are single, female and living in poverty. Because of the strong representation of single female students with dependents living in poverty, they will be explored as a separate population. By separating single female students living in poverty (with dependents), differences can be more clearly identified in an effort to understand their needs for services.

Non-Traditional Students

Non-traditional students' educational experiences have been metaphorically described as a kaleidoscope, maze, and mosaic; these students are diverse which necessitates a multifaceted approach to understanding their needs and how to classify

them (Kiely, Sandmann, Truluck, 2004). Non-traditional students are frequently identified by age or independent status (NCES, 2008; NPSAS, 2008). When identifying non-traditional students by their status of living independently of their parents (independent status), non-traditional students account for nearly fifty-one percent of the total student population (NCES, 2008). They can also be identified by other factors: delayed enrollment; student-parents who are married or single; part-time enrollment; without a traditional high school diploma (earned GED); have dependents (usually children); or full-time employee (CAEL, 2007; Bean & Metzner, 1985; Apling, 1991).

Horn (1996) categorized non-traditional students with a continuum, ranking them by their number of non-traditional characteristics “minimally (one characteristic), moderately (two or three), and typically non-traditional (four or more).” Horn’s categories include: delayed enrollment, attending school part-time, working full-time (35 hours or more per week), considered financially independent by financial aid, dependents other than a spouse (usually children), single parent, and a GED high school diploma. In studying all non-traditional categories, eighty-nine percent of students in community colleges and fifty-eight percent of students at public four year institutions were minimally (one characteristic) non-traditional students (NCES, 2000). More recent literature suggests increased numbers of undergraduate students who are typically non-traditional (CAEL, 2010; Horn, 1996). When considering calculations by the numerous identifiers and rankings, the non-traditional student can be considered the majority, and in fact, they can be identified as the “new” majority traditional student (Purslow & Belcastor, 2006, p.2).

Non-traditional students describe varied needs and responsibilities inside and outside the walls of higher education when compared to traditional students, and the negotiation of these needs and responsibilities are dynamic and reciprocal. Services needed may include outreach, life and career planning, financing, assessment of learning outcomes, teaching-learning process, student support systems, technology support, strategic partnerships, social, cultural, and reduction of enrollment barriers (Spellman, 2010; Chaves 2010; Flint, 2006; Kinser & Deitchman, 2008; Brown, 2004). First, a review of needs and responsibilities inside the walls of higher education will be provided, and second the needs and responsibilities outside of the walls of higher education will be studied for non-traditional students.

Internal Factors. Inside the walls of higher education which are identified as contributions or hindrances to students' success in attaining a degree will be explained in four categories: 1) enrollment (decision to attend, reducing barriers, and placement testing); 2) student and support services (cultural awareness, partnership, and scheduling); 3) learning and teaching environment (curriculum delivery, teaching styles, learning styles); and 4) academic environment (sense of community, classroom environment, campus environment).

Internal Factor One Enrollment (Enrollment Barriers). As adults enroll and begin to explore the option of attending college, it is beneficial for administration to convey its understanding of diversity in students' life experiences in both role (as a student) and existential (parent and employee). Improved communication shows respect for the

individualism of each student (Donough, & Stein, 2007). Student enrollment patterns can be more clearly understood with empirically based evidence which supports differing patterns of geographic location and student characteristics (Kelly & Ewell, 2009).

“Access without support is not opportunity” suggests the critical nature of helping students to navigate from enrollment throughout their academic experience for improved success (Engstrom & Tinto, 2008; Tinto, 2008). Professionals and students benefit from an understanding and support of socioeconomic barriers, differing perceptions by gender, timely services, and assessment of needs.

When professionals have an understanding and knowledge of the socioeconomic barriers which impact students’ perceptions of enrollment, this can assist to increase students’ access within higher education. For example, even when there is no difference in students’ academic ability, students in lower socioeconomic brackets often describe feelings of being “less than” by their social class (Hatcher, 1998, p.7). A knowledgeable professional can help students transition comfortably into higher education by melding their comfort zone of their own socioeconomic bracket within the boundaries of higher education.

Women have been identified as the fastest growing student population in higher education. Women’s perceptions have been seen to differ from those of men, and services responding to gender preferences can be of further assistance for academic success. For example, females reported “higher levels of overall motivation as well as intrinsic and extrinsic motivation” when compared to males in a study by Brouse, Basch, LeBland, McKnight, & Lei (2010). Single mothers face organizational barriers

beginning with enrollment, and these barriers persist impacting the students' college experiences (Yakaboski, 2010). Some non-traditional female students have been recognized as "reentry" students because they delay their entry for five or more years following high school graduation for varied reasons with child-bearing often cited (Bailey, Jeong, & Cho, 1999).

According to the Lumina Foundation & WICHE (2010), stop-out students account for twenty percent of adults ages twenty-five and older, and they have unique enrollment needs. Stop-out students are identified as those who have some college credit, but they have not obtained a degree and are not presently enrolled. Re-enrolling stop-out students with a one stop approach benefits these students as they often balance conflicting schedules among employment, parenting, and their renewed interest in the pursuit of an education. Reconsideration of enrollment holds at universities previously attended, assistance with preliminary transcript evaluation, prior learning assessments for credit, and services available beyond traditional eight to five scheduling shows improved responsiveness to enrollment needs (Fusch, 2010). Improved responsiveness indicates increased enrollment success.

Placement testing with under-assessed scores and inadequate preparation necessary for enrollment hampers success (Satterlee, 2002). When a student feels they have not been placed in the appropriate level of coursework, or feel a lower level of satisfaction in the classroom, they are more likely to drop out (Martinez & Munday, 1998). It is necessary for administrations, faculty, and support staffs to clearly identify

students' specific needs including placement levels, so appropriate placement and preparation can help them to succeed.

Internal Factor Two Student and Support Services (Student Services). Well-rounded student services are greatly improved with a “high-touch approach” (Hart, 2008). The “high touch approach” was described as hiring the right advisors, having pre-assessment conversations, and offering continuous rather than one-time support. Improved persistence, retention, and academic achievement have been seen when support services include technical, financial, registration, advising, and tutoring support (Dolan, Donohue, Hostrom, Pernell, & Sachdev, 2009).

Cultural awareness through “cultural initiatives” can positively impact change by improving campus communication, collaboration and ingenuity of staff (Massey, Locke, & Neuhard, 2009). Cultural sensitivity is consistently recognized as a significant student support. Early intervention programs assist in the navigation of a college campus for a student who may not have a pre-existing cultural frame of reference regarding college (Bryan & Simmons, 2009). For example, first generation college students do not have a cultural frame of reference for college.

Inconvenient scheduling or lack of support services for financial aid was described as a hindrance to students' success. When administration does not provide hours conducive to working around employment, adult students are placed at a disadvantage. Financial aid listening to non-traditional students' needs includes responsive scheduling combined with aid which reflects their needs; these needs are

different for traditional students. A study by Martinez and Munday (1998) identified higher rates of withdrawal for students who find course scheduling inadequate or have financial constraints. Convenience of scheduling was described by Purslow & Belcastro (2006) suggesting that an accessible location for all student services (one stop-one location) can enhance a student's ability to access multiple services such as: getting a parking permit, enrollment, and meeting with financial aid. These students are often balancing full-time employment and family needs which makes scheduling particularly challenging (Shank, Winchell & Myers, 2001). Lack of financial aid for part-time students was also a concern for many students who combine part-time academics with full-time employment or their family (Goodman & Simms, 2005).

Internal Factor Three Learning and Teaching

Environment (Classroom Experiences). Learning environments reflective of the

student's own life experience (experiential learning) within the classroom helps to achieve stronger learning outcomes (Ntiri, 1999). Teaching with varied instruction (experiential and problem based methods) in an environment with relevance to the student's individual life experience helps the adult learner to be more successful in connecting to the learning (Flint, 2005). Adult learners benefit from metacognitive strategies and have been seen to be more competent, particularly in reading, when epistemological frameworks are considered (Ntiri, Schindler, & Henry, 2004). When returning to the classroom, re-learning study skills can be critical to a non-traditional student's success (Tovar, 2008).

As adult students re-acclimate to a classroom environment (re-learning how to learn) their skill levels may require developmental coursework. When instruction of developmental coursework is responsive to individual needs, recognizing students' life skills outside of the classroom; this can improve their academic success (Stone, 2008). Partnerships for developmental students, who, by definition, are underprepared, benefit through a "centralized organizational structure" which will "treat the whole person" rather than focusing on problem areas as these create a form of isolation rather than a resolution of needs (Wilmer, 2005; Barnes & Piland, 2011). Remediation support with adult learning goals (identified in planning and then linking services to needs) can improve academic support and student success (Goodman & Simms, 2005).

Understanding gender differences in learning styles and autonomy can improve a student's learning environment (Derrick, Rovai, Ponton, Confessore, and Carr, 2007). In a study by Wilmer (2005) men preferred visual learning with more structure and mobility while women benefited from auditory, tactual, and kinesthetic learning with varied instructional approaches. Assessment of students helps to clarify gender preferences allowing for improved responsiveness to individual learning needs.

Internal Factor Four Academic Environment

(Continue Attending/Attainment goals). A successful establishment of a sense of community within the classroom (Harris, 2007) creates a "connecting classroom" (Kasworm, 2002). The feelings of connectedness encourage adults to incorporate their existing knowledge from outside of the classroom (life experiences – experiential learning) thereby enhancing "learning how to learn," and this reduces the anxiety of an

unfamiliar classroom environment (Tovar, 2008, p.1). Students who have withdrawn from school showed statistically significant correlations to their decision to withdraw when they had difficulty making friends on campus or felt inferior to their peers (Martinez & Munday, 1998). Social class statuses suggest a further concern for students' "class-cultural discontinuities such as not fitting in, not 'feeling university,' and not being able to relate to other students" (Lehmann, 2007, p.89). "Relationships (on campus) comprise a main pillar in the framework around which everything revolves" (Purslow & Belcastro, 2006).

Traditional campus environments can be intimidating to non-traditional students, and additional financial strains are added when there are geographic distances from a student's home to campus. In an effort to reduce these problematic factors, universities are introducing off-site locations through collaboration with "further education" sites (Lloyd & Griffiths, 2008, p.15). These off-site locations for further education attract non-traditional students, but they can pose limitations because of distances from supportive administrative services, tutoring, library, and computer services. Offering varying methods of delivery for a course in a safe and convenient environment were factors of concern described by adult learners (Purslow & Belcastor, 2006).

External Factors. Factors outside the walls of higher education which are identified as contributions or hindrances to a non-traditional student's success in attaining a degree will be explained in three categories outside the walls of higher education: 1) enrollment (decision to attend, barriers from family and employment); 2) social

environment (family, cultural, activities outside the classroom, socioeconomic constraints); and 3) employment.

External Factor One Enrollment (Enrollment Barriers). Enrollment is often a student's initial contact on campus, and this contact is the establishment of the relationship between the student and the institution. The students have additional relationships outside of the institution which include employment, family, and other responsibilities which are simultaneously impacting their enrollment. Support services which encourage feelings of security and trust help to establish a stronger commitment between the student and the institution (Kelly & Ewell, 2009). The security students feel in their initial contact can help them to feel more confident in prioritizing their academics with their external responsibilities (employment, family, and other responsibilities). This supportive connection to the institution can be necessary for students' success as outside forces (family, friends, and employment) may pull the students away from their academic pursuits (Engstrom & Tinto, 2008).

An assessment of career goals and existing employment outside of the institution is beneficial in aligning the students' past and future career plans with academic enrollment (Flint, 2005). An effort to include the student's family in the enrollment process has also proven beneficial to academic confidence (Bryan & Simmons, 2009). In conclusion, if nontraditional students (student-parents) feel secure with their enrollment, they are more likely to feel confidence in their commitment to academics which can improve persistence.

External Factor Two Social Environment
(Continue Attending / Attainment Goals): Family, friends and community

responsibilities factor into adult students' schedules as they negotiate time to balance their academic responsibilities. Non-traditional students were identified as having fewer sources of support on campus when compared to traditional students by Carney-Crompton and Tan (2002). This study also found psychological functioning for non-traditional students to be at higher levels in satisfaction and emotions when compared to traditional age students suggesting they may not need social interaction on campus. Bean and Metzner's (1985) conceptual model of non-traditional undergraduate student attrition would support these findings as their theory suggests non-traditional students "are more affected by the external environment than by the social integration variables affecting traditional student attrition".

First generation students often describe disconnect with their family as they try to share their academics with family members who do not understand because they have not attended college. Also, the student's family may have a completely different cultural environment which could include a different language (Bryan & Simmons, 2009). A different language being spoken at home can add to further feelings of separation between home and college. Early intervention programs with workshops can help parents of college students to achieve a greater understanding of college life to provide support to their adult-children who are college students (Bryan & Simmons, 2009). An inclusion of students' families in their academics helps to provide additional cohesion and support for both the family and student.

The negotiation of balancing personal lives and academics is often described differently by women when compared to men. Women have differing perspectives when compared to men in choices outside of the classroom, styles of learning, and pedagogical standards (Allen, Dean & Bracken, 2008). In a study by Donough and Stein (2007), women showed significant differences when compared to men in their increased choice to make independent decisions and lifelong commitments. Additional statistical significance showed individualism and norm compliance were identified by women as necessary for adulthood. These are indicators by women which help to understand some of the distinctive perceptions which potentially impact the balance between personal and academic success.

External Factor Three Employment (Enrollment Barriers). Adult students' enrollment may be necessitated by mandatory work-related training for their existing employment or further career advancement. This suggests enrolling in college is necessary to maintain one's employment. While the reason for students' enrollment may be to maintain their employment, they may find the reason for their enrollment (outside employment) places a drain on their academic goals (Frey, 2007). The balance between employment and academics often results in unexpected conflicts, and the institution can help a student to plan for these unexpected conflicts with supportive services on campus (Satterlee, 2002).

Students Who Are Parents

Literature will be reviewed for married and single students as a combined group of parents. When the literature is specific to mothers, this will be noted. In the next category, female student-parents who are single and living in poverty will be explored. When categorizing students who are parents (men, women, and varied socioeconomic brackets), they will be described in three categories: 1) maintaining balance between family and academics; 2) impact for children of student parents; and 3) academic support services.

Maintaining Balance between

Family and Academics – Motivation. The balance between family and academic responsibilities is often described with great angst by student-parents particularly by women (Marklein, 2010). Women often have the primary responsibility of childcare which adds to “tension between academic aspirations and the more traditional role of caregiver” (Devos, Biera, Diaz, & Dunn, 2007).

Social support can be a predictor of positive outcomes in maintaining the academic and family balance of responsibilities. According to a study by Quimby and O’Brien (2006), secure attachment, parent and student self-efficacy, and social support each contribute as a predictor of psychological distress. This suggests maintaining a healthy balance can be particularly challenging. The results of this study also concluded that mothers identified explicitly (outward expression) more with college education and implicitly (understood and unexpressed) more with motherhood. And, upon closer examination, motherhood plays a more important role in self-concept than self-reports

showed. Mothers may not verbalize the significance of their status of mother, yet it is a large part of their well-being. The roles of mother and career are completely intertwined, and are frequently described by mothers as a challenging balance to be maintained (Rizer, 2005; Rico, Sabet & Clough, 2009; Cox & Ebbers, 2010; Satterlee, 2002). Social support from family and friends increases positive outcomes in maintaining a healthy academic and family balance (Van Cleve, 1994).

Impact for Children of Student-Parents - Motivation. A potential positive impact of parents attending school is the likelihood that children will have an increased probability for enrollment in college; according to (Pacarella & Terrenzini, 2005, p. 440), “education begets education.” Literature consistently points out that parents who attend college will increase the potential for their children attending college and this indicates a long-term impact.

In a ten year study, families were documented in an effort to see the impact of the mother’s return to school on her children’s choices in academics. The outcomes showed no significant results on the children’s academics when the mother did not complete the degree, however when her degree was completed there was consistently a direct impact on the children’s educational outcomes. In this study, the most significant positive outcomes for the children were first when a mother enrolled with the father opposing her enrollment; and second when the mother was pursuing school because of personal motivation rather than a career (Suitor, Plikuhn, Gilligan, & Powers, 2008).

The immediate impact of parents attending college for their children has also been studied. A secondary effect for school age children (immediate impact) of student-

parents (mothers) showed implications for children's attitudes about grade school; children's "mastery orientation and academic self-efficacy" increased positively (Ricco, Sabet, & Clough, 2009).

Academic Support Services – Persistence. The academic support needs of college student-parents differ from other non-traditional students; these students describe feelings of being misunderstood and unsupported by family, friends, and universities (Lehman, 2007). While many of these feelings are described by non-traditional students, upon closer examination there are services which are unique to only college student parents: child-care on campus; support services coordinating both on and off-campus needs; and family counseling services.

McBride (2010) suggests that by not offering child-care on campus, colleges miss the opportunity for a good investment in human capital. The lack of childcare, "from a social justice perspective [is] a tragic mistake to make" (McBride, 2010, p.1). In an inner city study, mothers described a "substantially greater advantage for their education experience" when childcare was provided (Gonchar, 1995). The intervention of childcare was further described as helping the students to have a high level of satisfaction with administration as they felt their needs were being heard and responded to. Parents describe a preference for the overlap of family and parental involvement in childcare (Baumgartner & McBride, 2009). The overlap increases when childcare is provided on a college campus, and this is a predictor to positive parental beliefs. When childcare is not available, some students attempt to bring their children to class when inevitable scheduling conflicts with childcare arise (Forum, 2008). Some professors exhibit

encouragement to bring children to class when scheduling conflicts arise, and others feel children in class are completely off-limits (Bates, 2006).

Mothers describe support services for financial and personal needs to be limited on college campuses. Cox and Ebbers (2010) found a disconnect between support services, admissions and financial aid. This disconnect left mothers relying on other women in their classes for resources which were off campus: childcare, car repairs, housing, and financial assistance. For example, Child Care Access Means Parents In School (CCAMPIS) is a grant program for low income student-parents in need of day care. However, no new grants have been awarded since 2005 which is not enough to support growing needs (Family Care Solutions, 2010). Mothers perceived their children's care, transportation, housing, and finances as critical to their academic success, and resources were limited or non-existent.

Counseling services' hours were described as inaccessible for working parents or not available for families. The negotiations of student-parents' roles between academic and family responsibilities have significant potential for conflicts. The negotiation and resolution of conflicts between roles and responsibilities is necessary for students to achieve success, and some students may not have these skills; counseling services can prove to be particularly beneficial (Satterlee, 2002). Women seeking counseling describe concerns about finding a balance between the roles of wife, mother and student; low levels of confidence in their academic abilities; little or no support from family; and for some their academics were perceived by loved ones as a "leisure activity" (Stone, 2008).

Students Who Are Single Parents Living in Poverty

Over the past forty years, the numbers of women have increased on college campuses, and over the past twenty years women have been the majority of college students. Female single-parent households have also increased dramatically over the past forty years. In 1968 single-parent households were approximately twelve percent, and by 2005 these households had risen to one-third. According to the National Center for Health Statistics, nearly forty-one percent of all births are to single mothers. Poverty has continued to rise since the 1980s in these female single-parent households, generating the term, “feminization of poverty” (Burt & Nightingale, 2010, p.50).

Single student-parents account for more than half of the independent college student population with dependents; on college campuses today there are more single parents with dependents than married parents (NCES, 2008). Of these single student-parents, women living in poverty are the overwhelming majority (NCES, 2008). Single student-parents living in poverty will be reviewed in three categories: 1) perceptions of single mothers, 2) education for financial security, and 3) academic support services.

Perceptions of Single Mothers. Welfare and teen moms are often portrayed negatively with their single parent status which categorizes them as at risk college students (Peng & Lee, 1992). Yet literature suggests welfare women who are single moms and students, “forged identities against the grain of dominant images that depict all women on welfare as ‘lazy women’ and ‘bad mothers’” (Jennings, 2004). Program and service titles for single parents living in poverty can also convey a negative tone such as “Parents Too Soon” or “Displaced Homemaker” (Burac, 1992, Hitchens, 1994). Teens

who are student-parents showed a “decline in educational expectations” when teachers treat them “less smart than they really are” or with “perceptions of differential treatment” because of their status as a single parent (Kalil, 2002). In a study using data from the National Education Longitudinal Study of 1988, half of the teen mothers dropped out by the twelfth grade. Positive educational outcomes were found in family background, school environment and individual characteristics (Manlove, & George, 1996). Stereotypes portrayed of single mothers may not provide an accurate description, as mothers’ academic pursuits for higher education evidence improvement over time (Battle, 2007).

Many college student-parents who were teen single mothers did not seem to fit the disheartening stereotypes. One example of a student not fitting the stereotype who did better over time: Vice President of the American Indian Higher Education Consortium (AIHEC) Student Congress; age twenty-seven; married with five children and three stepchildren; gave birth to her first child at fifteen; salutatorian and National Honor Society member of her high school; and a college student who excelled (Deschenie, 2009). Teen mothers have been reported to “reevaluate their priorities and this motivated them to remain in or return to school” (Battle, 2007).

Generally, the perception of single mothers is negative. However, in a study of undergraduate students’ perceptions of single parents, undergraduate students perceived single parents as more mature than those without children. This was interpreted as a positive perception of single mothers (Eby, Allen, Noble & Lockwood, 2004).

Education for Financial Security. Students identified higher education as a necessity to improve future employment as a way to “ensure the economic security” of their families (Ray, Bratton, & Brandt, 2000). Students described the support given by a single parents’ program as in line with their thoughts which operated on the premise that an education is the “surest ticket out of poverty” (Marklein, 2010). Ten student-parents (social service recipients) participated in an ethnographic study, and they described their education as “instrumental and transformational” (Haleman, 2004).

Academic Support Services. Support services encompassing counseling, employment skills, and coordination of community services show improved support for single mothers living in poverty (Goldrick-Rab & Sorensen, 2010). Family friendly campuses offer support services at times of convenience for working parents (Haleman, 2004). These support services allow the parents additional time for their commitment to increase persistence and degree attainment.

Descriptors of single moms living in poverty suggest potentially high needs for counseling services, and counseling support results in positive outcomes for both the mothers and their children. Twenty single mothers living on welfare and attending college participated in a qualitative study, and almost all of the participants described themselves as “objects subjected to the power and control of men and social institutions, devaluation and subordination, sexual and physical abuse, male violence, and institutional contempt” (Scarborough, 1997, p.1). Single mothers in counseling in an adult education program showed positive gains in self-esteem by “increasing self-awareness and sense of worth in family living coping skills” (Melvin, 1987). Family play therapy

was seen as beneficial to “improving the present and future welfare of single student-parents in a community college setting (Ray, Bratton, & Brandt, 2000).

College students who become pregnant in college often become the primary caregiver for their child (single parent) and are faced with the responsibility of whether or not to continue their education (Brown and Amankwaa, 2007). These students found support services to be extremely limited. This study identified five themes for these single student-parents: mother’s unconditional love (student-parent and child); relationship with the child’s father (varied); responsibility for their education (transcending to themselves and their child); family and friends’ support; and lessons learned. Support services within higher education are beneficial as mothers merge a new found role of mother (most often single parent) with their former role of student.

Students who are single mothers living in poverty describe financial crisis in meeting month to month obligations (Marklein, 2010). Scholarships with financial rewards for academic progress have proven beneficial for retention, but these resources are extremely limited (Cha & Patel, 2010). Academic financial aid does not meet the scope of needs faced by these parents. Academic obligations then become impossible to manage because of the financial crisis and this may result in dropping out because of financial obligations. Financial crises which necessitated consideration of dropping out was varied: technical challenges with computers; unexpected household financial constraints; a child’s health; or the student was unable to keep up with childcare expenses (Marklein 2010). Despite a multitude of crises, some students exhibit immense resiliency and creativity as they find ways to continue with school. One student describes enrolling

in a for profit institution with “streamlined” administrative service which reduced her time spent in admissions, enrollment, and financial aid unlike the state institution she attended previously “spending torturous hours in the bursar’s office” (Fogg, 2010).

Mothers benefit from a blending of support services including financial, childcare, academic, and housing (Huff & Thorpe, 1997). Positive retention rates have been described in programs created for single mothers: themed classrooms, service learning, and remedial coursework (Van Cleve, 1994; Trinity College, 1994). In an effort to lower attrition rates and increase self-esteem, a child development class was offered for only single parents. For this class with only single parents there was a decrease in attrition of nine percent, and an increase in self-esteem in this community college study (Van Cleve, 1994). A Community Service Scholars Program offering single parents living on welfare the opportunity to volunteer six hours a week in a community service project, which in turn gave them financial assistance to absorb tuition expense, showed positive retention rates (Trinity College, 1994). When remedial and preventive programs are created for single student-parents, this shows that mothers and their children are helped both academically and financially by reducing the negative economic consequences of single motherhood (Astone, 1993).

Housing offered on campus to meet the needs of single parents is extremely limited. When housing is available, communal settings, childcare partnering, and mentoring programs work hand in hand within the housing complex (Wiens, 2001). Trinity Women’s College introduced dorms for single mothers in part due to struggling enrollments (Calefati, 2009). Misericordia College provides free housing for low-income

single parents while earning their bachelor's degree (Boston, 2010). There is an unmet need in the percentage of on-campus housing available to the number of single college student-parents. This shortage appears even more pronounced for single student-parents living in poverty.

Factors of Motivation and Persistence for All Student Parents

Motivational Factors

Children. Parents describe their children as a primary motivator for their academic success. "Giving up on college would be a little like giving up on them [her children]" states a single mother (Marklein, 2010). "In my experience there is no better motivation to finish college and to appreciate the marrow of the experience than a child whose future depends on your decisions" (Rizer, 2005, B5) states a married mother.

I figure that if I go to school, my children, when they grow up, they'll look at my life and say well, 'Mom went to school; we can finish school.' I want them to ... know right from wrong so they won't get out there and make the same mistakes that I made Candice, teen mom / college student (Jennings, 2004, p.124).

Personal Satisfaction. Three critical turning points for female student-parents identified in their self-transformation included, "motherhood, male betrayal, and a pattern of change tied to higher education" (Scarborough, 1997, p. 264).

I know that I'm changing! I just feel like education is the key to everything. I just feel like, if you want to know something, go to school. I feel like that's the key to this whole world. Jean Ella, college student (Haleman, 2004, p. 777).

Improved Lifestyle. As parents describe their academic motivation, children and personal satisfaction are often intertwined. An improved lifestyle may include increased financial structure or the ability to secure careers providing financial stability for one's family (Ray, Bratton, & Brandt, 2000).

Persistence to Degree Attainment Factors

It is critical to understand that relationships between parents, children, families, employers, faculty, administration, and support staffs are a part of persistence (Baumgartner & McBride, 2009). When institutions consider the entire family as a part of the student, retention efforts to enhance persistence can be improved particularly for single women, as their time is divided between family, employment, academic, and financial responsibilities (Hitchens, 1994). Mentoring programs, support services, themed classrooms, learning communities and housing designed specifically for female student parents can help prevent dropping out (Sherr, 2010).

In conclusion, persistence toward degree attainment is improved with partnering between the student and their institution of higher education. This partnership is dynamic and reciprocal as the institution listens and responds to the students' individual needs both inside and outside of the walls of higher education. Enrollment factors are the beginning of a student's persistence, and with a single point of contact concerns are reduced about financial aid, re-enrollment, class scheduling, transcript issues, anxiety, fear, and prior learning assessment. This can be described as "a concierge" for students' persistence toward degree attainment (Lumina & WICHE, 2010). Student (family) oriented services, teaching methods, accessibility, and creative problem solving (by the

administration, faculty and support staffs) increases student persistence to attain their degree.

Introduction of Theories

Theories provide the opportunity to look at the world through a lens which is grounded by empirical evidence, words, concepts, or constructs. There are not theories specific to students who are parents. An overview of retention, cultural and developmental theories will be reviewed in an effort to consider their application to student-parents.

Retention Theories

Retention theories relate to performance issues through constructive concepts which help to achieve understanding of students' retention (Friedman & Mandel, 2010).

There are three retention theories which will be reviewed: Astin's (1991) Input – Environment - Outcome (IEO) Model; Tinto's (1993) Longitudinal Model of Individual Departure; and Bean & Metzner's (1985) Nontraditional Student Attrition Theory.

Retention theories are rooted in multiple perspectives: 1) organizational (influencing characteristics and process); 2) sociological (explaining social impact); 3) psychological (focusing on psychological process); and 4) economic (with the cost/benefit to the student or institution) (Braxton, 2002; Ackerman & Schibrowsky, 2008).

Astin's Input - Environment - Outcome (IEO) Model was originally described with three sets of elements in a schematic published in 1967. The elements are understood more by concept than theory: 1) student inputs (talents and inspirations, etc.);

2) the college environment (independent variables); and 3) student outputs (criteria of student development). These elements serve as a guide to study college effects on students (Astin, & Panos, 1968). The student inputs (both internal and external) combined with the environment have an effect on the student outcomes. This theory (model) has been described as “one of the first and most durable and influential college impact models” (Pascarella & Terenzini, 2005).

Tinto’s Longitudinal Model of Institutional Departure helps to understand the relationship between the students and institutions prior to their entry in school and also the outcome of persistence to earn a degree or drop out (Tinto, 1993). This association between student and institution is affected by social and academic systems and by experiences and characteristics before entering college, life outside of college, and life within college (Rovai, 2003). Academic and psychological outcomes (voluntary or involuntary) in a student’s decision to persist or drop-out are described in a flow chart. The chart begins with pre-entry attributes, followed by going into college, and concluding with departure (Pascarella & Terenzini, 2005; Tinto, 1993).

Bean & Metzner’s Non-traditional Student Attrition Model is about non-traditional students and the differences they have when compared to traditional students. While there are similarities noted to Tinto’s Theory, there are differences in social variables. First, non-traditional students are less involved in social activities on campus, but this “should have only minimal effects on retention”; and secondly, they spend more time with social activities and family off campus which “can play a significant role in the attrition process” which was perceived as a negative impact (Bean & Metzner, 1985,

p.530). Metzner and Bean (1987) conducted a later study to validate their model and the study revealed that weak social activity on campus did not have an impact on dropping out, and this concurred with their model (minimal effects on retention). However, social activities off campus and with family did not impact retention negatively; this part of the findings did not support their model. Despite the lack of agreement between the model and their findings in this study, this theory continues to be a widely referenced study for the retention of non-traditional students.

Cultural Theory

The role of culture represents 1) unequal power and 2) cultural practices which are embedded in peoples' perceptions of reality (Bourdieu, 1993). First, the distinctions of unequal power are seen in systems of domination which are evident within the strata of higher education. This unequal power is particularly evident when viewing non-traditional student-parents (married or unmarried) and first generation students as they acclimate to the system of higher education. When applying the culture of reproduction (higher education), the institutions (faculty, administration, and support staffs) attempt to reproduce culture in learning through a system of domination which is predisposed to an existing cultural agenda improvised by the powers that reign within higher education. Bourdieu suggests the system of domination is much like a magician's power, "the miracle of the signature or personal trademark is merely an outstanding example, is a valid imposture, a legitimate abuse of power" (Bourdieu, 1993, p.81).

Second, the cultural practices which are embedded in peoples' perceptions of reality are observed. This power (institution of higher education) is applied to people

(students) with symbolic identities which were formed outside of higher education, particularly non-traditional students with years of life experience. Adult students have different backgrounds with varied cultural frames of reference. These frames of reference may prove useless as the student attempts to navigate a college campus. They can understand a campus with support from the institution through: symbolic power, symbolic capital, and cultural capital. When a student (student-parent) enters this habitus and field of control or power (higher education), they are often unaware of the symbolic power which is not economic; it is academic and linguistic. The symbolic capital which is economic does not have to do with money, but rather prestige. The cultural capital may be economic, but cultural knowledge is necessary for understanding. The institution can help the non-traditional student to understand, “the degree of conscious strategy, cynical calculation, in the objective strategies which observation brings to light” (Bourdieu, 1993, p.72). In summary, student-parents may have a different cultural knowledge that does not fit the norm. This theory helps to better understand student-parents from a cultural frame of reference which helps to understand student’s comments about feelings of not fitting in (Lehman, 2007).

Developmental Theories

Developmental theories enhance meaning, and they are supported by moral and ethical issues which shape and identify development. Understanding student-parents as an individual, parent and the combination of these roles, with the application of developmental theory can help to clarify behavior. Each theory (Identity, Cognitive, and Moral Development) will be explained to help understand the learning of student-parents.

Erickson's Theory of Identity and Psychosocial Development includes eight stages of identity development which involve tensions and conflicts between transitions of change. Teaching implications include being sensitive to transitions of identity development beyond the classroom (Swenson, Hiester, & Nordstrom, 2011). "Fidelity" is the highest commitment level to learn, and this can be accomplished with the establishment of trust (Kurfiss, 1994, p.154). The strategies for learning include mentoring in small groups, demonstrating sensitivity, and supportive constructive feedback while setting goals. A critique of this theory suggests it is ethnocentric with no cultural diversity. Second, crises may occur at different rates; and lastly, it is more inferential than observational.

Piaget's Theory of Cognitive Development explores four stages of development which propose that remaking a mental model requires physical and mental work (Svinicki, 1999). Students participate with hands-on activities and the use of concrete examples. The student is remaking their existing model but not re-building it as they are applying learned skills for where they actually are rather than being categorized by external factors i.e. age. Strategies in the discipline include organization, elaboration, and support with a top to bottom model and no walls. Peer group learning summarizes ideas. A critique of this model is that the emotional aspects of growth are left out. This leaves out the humanistic feeling because it is more concrete.

Kohlberg's Theory of Moral Development provides a description of identity and its impact on learning. He believed that ethical behavior was based on moral reasoning. Learning can be divided by three phases of cognitive development: 1) Pre-Conventional

– following family rules; 2) Conventional – following family and social rules; and 3) Post-Conventional – questioning rules in grey. A critique of this theory is that it lacks cultural differences in context. Some contradictions suggest that what people think is not how they behave (Jewell, 2001).

Overall Strengths and Weaknesses of the Literature

Identifying Student-Parents

The representation of the types of student-parents (female) are varied and for some categories (male) non-existent. Student parents are represented in literature most often as type one: single parents who are females and living in poverty. A secondary representation includes type two: a mixture of student-parents who are female (single, married, all socioeconomic brackets). Lastly, there was not a single study or article with males who are student-parents unless they were a small percentage mixed with the females. This is reflective of the majority of female student-parents on college campuses; however the slight representation of male student-parents on college campuses is not found as their own category in literature.

Theories which Enhance Meaning about Student-Parents

There is not any theory designed which specifically identifies student-parents. With the lack of a student-parent theory, a variety of theories were reviewed to enhance an understanding of and define characteristics for student-parents. Retention, cultural, learning and developmental theories are each helpful to securing an understanding of the

individual nuances of student-parents attaining a degree. There is complexity in understanding the student parent because they are extremely diverse.

Historically, theory and literature are further complicated by a weak representation of women in a male dominant society. For example, from a psychodynamic perspective, Erik Erikson explains the identity of women in relation to their marriage, and Sigmund Freud describes a woman as feeling the need to have a male partner to feel complete (Rathus, 2009). Theories have begun to include women on college campuses, as they have become the majority of college students, yet their representation seems limited by the scope of theories. Barnett and Hyde (2001) describe an expansionist theory to better understand the social changes in roles and marital structure of men and women because previous theory often suggests the role of parents as a two-parent household and describes the woman as a housewife rather than someone working outside of the home. To limit theory to a two-parent household and homemaker neglects representation of many female student-parents.

The roles of female student-parents are partially represented in more recent feminist theory promoting gender equality of women while studying psychological well-being, learning styles, and gender discrimination on campus (Allen, Dean & Bracken, 2008). Holland and Eisenhart (1990) explored the role of women in college and the impact of their romantic lives. This partially represents the student-parent. Feminist perspectives and theory have evolved through the lens of liberal feminism, cultural feminism, and feminist post-structuralism (Allen, Dean & Bracken, 2008). These feminist applications could be helpful for the context of female student-parents

How Student Parents Have Been Studied

For this literature review, articles, reports, quantitative, qualitative, and mixed methods studies were reviewed about non-traditional students and types of student-parents. By focusing on existing literature about student-parents, it helps to understand the quantities of each type and to better understand a general focus of existing works for this literature review. The categories and quantity of each study/article are: single female parents living in poverty (15); single women with varied income levels (9); single and married women with low incomes (2); single and married women with varied incomes (6); women married with varied incomes (1); women married with low incomes (0); single men and women with low incomes (1); single men and women with varied incomes (2); single and married men and women with low incomes (2); single and married men and women with varied incomes (3); men and women married with varied incomes (0); men and women married with low incomes (0).

The table on the next page provides an overview of the literature used in this study. The literature is organized by the category of student parent and the type of study (quantitative, qualitative, mixed methods, and articles/reports).

Table Three. Literature Pertaining to Student Parents

Gender, marital status and income level	Quantitative	Qualitative	Mixed Methods	Article/Report
Women (single) poverty	(Astone, 1993) (Manlove & George, 1996) (Trinity College, 1994) (Zhan & Pandey, 2004)	(Battle, 2007) (Haleman, 2004) (Jennings, 2004) (Scarborough, 1997) (Van Stone, Nelson & Nieman, 1994)		(Bates, 2006) (Boston, 2010) (Chronicle, 2008) (Fogg, 2010) (Marklein,, 2010) (Wiens, 2002)
Women (single) varied incomes	(Gulf Coast Community College, 1987) (Hitchens, 1992) (Melvin, 1987) (Shank, Winchell, & Myers, 2001)	(Ray, Bratton & Brandt, 2000) (Yakaboski, 2010)		(Calefeti, 2009) (Deschenie, 2009) (Gonchar, 1995)
Women married & single low incomes			(Kalil, 2002)	(Goodman & Simms, 2005)
Women married & single varied income	(Devos, Diaz, Viera, & Dunn, 2007) (Quimby & Obrien, 2006) (Rico, Sabet, & Clough, 2009) (Suitor, Plikohn, Gilligan, & Powers, 2008)	(Cox & Ebbers, 2010)	(Suitor, Pikuhr Gilligan, 2008)	
Women married varied income				(Rizer, 2005)

Table Three Continued

Gender, marital status and income level	Quantitative	Qualitative	Mixed Methods	Article/Report
Men and women (single) poverty		(VanCleve, 1994)		
Men and women (single) Varied income	(Eby, Allen, Lockwood, 2004)	(Brown & Amankwaa, 2007)		
Men and women (single & married) low income	(Cha & Patel, 2010)			(Goodman & Simms, 2005)
Men and women (single & married) varied income		(Baumgartner & McBride, 2009)		(Gonchar, 1995) (Satterlee, 2002)

Studies about single women living in poverty were the most frequently studied group followed by single women of varied incomes. Single parents (women) were represented the most frequently followed by single and married parents combined (men and women). The category of married parents (men and women) was not represented separately from single parents and only one article represented a married woman. There were no studies including only men as parents or gay and lesbian couples.

The ways student-parents have been studied categorized by types of studies and quantities of studies in this literature review are: quantitative (14); qualitative (11), mixed methods (2), and article and report (14).

The qualitative studies described the lived experience of being a student-parent. The ethical and substantive meaning of attaining a degree in higher education enhances the understanding of the lived experience of the student-parent dyad. There are parallels in existing literature as the lived experience of student-parents are organized to enhance understanding of the extreme challenges to find a balance between academic responsibilities, employment, and caring for their children. These experiences are described with details intrinsic and extrinsic to institutions of higher education. Sample populations were student-parents within 1) specific institutions, 2) programs, 3) learning communities, or 4) varied housing settings (dorms and communal type housing).

Quantitative studies focused primarily on understanding differences between groups or clarifying individual characteristics and behaviors of groups. Methods of analysis were varied, but a majority of studies were correlational without causal conclusion (cause and effect relationship). There were predominantly non-probability samples in quasi-experimental designs (parents were not randomly assigned). Inferences in any of these studies seemed challenged. For example, one's socio-economic bracket or role of parent may not be chosen, but the status of student is chosen. Probability sampling studies were the most limited with national data sets studying student-parents' financial scenarios and individual characteristics.

Directions for Further Inquiry

While men are a minority of student-parents on campus, they are present. This population as an individual group was unrepresented in literature. Although we know some details about men as they are combined with women in literature, we do not have literature to provide description of their individual characteristics.

Married students seem marginalized in literature. They represent slightly less than half of student-parents, but the existing literature is not proportionate to represent this population. They are under-represented in literature.

A student-parent theory would be helpful for further understanding. The application of feminist theory would help to more clearly represent women's lives on college campuses. There were few theories within these studies which may be reflective of no specific student-parent theory.

Lastly, a comparative analysis between students who are parents and students who are not with an added classification between community colleges and four-year institutions was not found. While community colleges and four-year institutions were studied separately, there was not a study to show comparisons or correlations between these two groups.

CHAPTER III

METHODOLOGY

Introduction

This study used a quantitative comparative analysis using a non-experimental approach with a quasi-experimental design. The comparison was between two populations: undergraduate students who are parents and undergraduate students who are not parents attending Montana Tech of the University of Montana.

Montana Tech of the University of Montana is a public institution that has two locations within the same community (eight and three quarter miles apart); a two year institution, Montana Tech of The University of Montana College of Technology (south campus); and a four year institution Montana Tech of The University of Montana (north campus). This study also identified students who are earning a certificate, two year degree, four year degree or undecided. When analysis began, certificate and undecided students were eliminated from the study because the samples of these categories were too small creating concerns for reliability.

This study explored a detailed accounting and categorizing of both traditional and non-traditional students in an effort to more clearly understand the characteristics and numbers of students who are parents. Students who are parents can be both traditional and non-traditional by age. Montana Tech data organizes students by traditional (18-24) and non-traditional age (25+). Some literature and data banks categorize traditional age as eighteen to twenty-three, so this number varied in tracking. Eighteen to twenty-four

was chosen for this study because it matched with Montana Tech's data. There is no accounting of students who are parents within the Montana Tech Data. This study explored the accounting and categorizing of students who are parents with dependent and independent variables in an effort to achieve a deeper understanding of who student parents were; what factors contributed to or hindered their motivation to enroll and persist in achieving degree attainment success when compared to students who are not parents.

Population Studied

The sample population was an accessible population. I had access to this population because I teach at Montana Tech College of Technology. The selected sample (accessible population) included undergraduate students attending freshman English and math classes on both the two year and four year campuses. I teach for the English department which gives me further accessibility.

Institutional Review Board approval was obtained from Montana State University and the University of Montana. Montana State University met necessary criteria for the dissertation studies (see appendix B Pg. 132). The University of Montana met necessary criteria for Montana Tech of the University of Montana (see appendix C Pg. 134).

The sample population studied was students from both the two year institution and four year institution. The two year institution had sixty-three percent traditional students (twenty-four and younger) and thirty-seven percent non-traditional students (twenty-five and older). The four year institution had seventy-one percent traditional

students (twenty-four and younger) and twenty-nine percent non-traditional students (twenty-five and older) (Tech Data, 11/2010). Both students seeking a two year and four year degree were measured separately and as a combined group to identify if there were differences between these groups.

Sampling Method

The sampling design was a non-probability as there was not a way for me to estimate the probability that all Montana Tech students were being included.

Surveys were distributed over one week of classes during the spring 2011 semester (the last week of classes – the week before finals). Distribution of surveys had received informal approval from most writing instructors and formal approval from administration on both campuses. I personally delivered surveys to each classroom, and waited for the response of students upon distribution. In several classes, it was not possible to distribute surveys, so the instructors of the classes distributed the surveys acting as gatekeepers distributing surveys. The option of gate keepers was not considered a desirable option, but it was necessary to maximize the number of surveys collected during a one week time period. I originally planned to distribute 200 surveys to all freshman English classes (Writing 101 and Developmental Writing). Ultimately, as enthusiasm spread among faculty, freshmen math classes were also included which increased participation to 356 surveys.

Variables

Dependent Variables

Initially, eight dependent variables which were indices with a Likert scale began this study. The indices were as follows: 1) enrollment barriers, 2) decision to attend college 3) decision to continue attending college 4) social engagement 5) classroom experiences 6) student services, 7) motivation, and 8) attainment goals.

The eight variables were narrowed to six dependent variables (indices) and placed into two categories in an effort to increase reliability. The two categories are 1) persistence (variables specific to academics working toward academic success) and 2) motivation (variable with an internal locus of control). The indices are distributed as follows: Category I persistence: 1) enrollment barriers, 2) decision to continue attending college, 3) classroom experiences, and 4) attainment goals, 5) student services; Category II has one variable for motivation: 6) motivation.

Independent Variables

The original seven independent variables: 1) Seven attribute: Gender; age of student; student parent or non-student-parent; degree pursued; age of children, grandparent raising grandchildren or grandparent not raising grandchildren; single or married(partnered); 2) Four dichotomous: Gender; student-parent or non-student-parent; grandparent raising grandchildren or not raising grandchildren; single or married (partnered); 3) Three ordinal: Type of degree being earned, age of children; and age of college students.

The independent variables were reduced from seven to five due to limited sample sizes. These five variables were each changed into dichotomous because of limited sample sizes. The final variables were as follows: Parent/Non-Parent; gender, age (traditional 18-24) / (non-traditional 25+), single/married, degree plan (two year / four year); age of children (0-5) / (6-12).

Original Survey Indices with Questions

Originally, there were eight dependent variables in this study, and all of these are listed with the defining factors of internal: variables within the school and external: variables outside of the school. The variables were narrowed to six to improve reliability.

Enrollment Barriers

(External) Transportation problems, money problems, home study space with computer, child care problems, friends support education, employer supports education, family supports education.

(Internal) courses scheduled at convenient times, staff hours adequate, financial aid hours adequate, and too much red tape – admissions.

Decision to Attend College

(External) To be able to get a better job, do something for myself, for my kids or for my family, my current job needs college skills, a mentor/role model encouraged me.

Decision to Continue Attending College

(Both Internal & External) not motivated to do the work, computer skills lacking, difficulty with time to study, difficulty with studying, too many other demands in my life affecting the classroom, good job balancing school and personal.

Social Engagement

(External) hours spent with friends I knew before college, hours spent with my family, hours spent caring for my kids, hours spent working at a job off campus, hours spent social networking, hours spent watching TV.

(Internal) hours spent working at a job on campus, hours spent with clubs and organizations I belong to on campus, hours spent with new friends that I met at school, hours spent with friends I am going to school with that I knew before school, hours spent in class, hours spent studying.

Classroom Experiences

(Internal) Professors helpful, professor is effort in teaching, professor is interested in students' development, Professor is unreasonable in demands, content is relevant, courses challenging, student participation valued.

Student Services

(Internal) financial aid adequate, tutoring adequate, counseling services adequate, on campus housing adequate, day care on campus.

Motivation

(External) lack self-confidence to complete studies, not enough energy to complete studies, enjoy studying in general, tired of schools and classrooms, stress level.

Degree Attainment Goals

(Internal /External: Earn a degree) eventually achieve my academic goals, earn a degree from my current college, and transfer to another college.

(Internal/ External: Stop out) choose to stop attending college for at least a semester, be forced to stop attending college for at least a semester.

Final Survey Indices Used

The eight indices were narrowed to six indices to increase both reliability and dependability and some questions were removed and added prior to the distribution of the survey in an effort to respond more clearly to the research questions. The focus to internal and external factors was eliminated for analyses in the study because this became concerning to reliability.

Persistence - Five Indices

Enrollment Barriers. Transportation problems, money problems, home computer with internet, friends support education, employer supports education, family supports education, courses scheduled at convenient times, staff hours adequate for enrollment, financial aid hours adequate, and too much red tape – admissions.

Decision to Continue Attending College. Not motivated to do the work, computer skills lacking, difficulty with time to study, difficulty with studying, too many other demands in my life affecting the classroom, good job balancing school and personal, studies rewarding, enjoy what I'm learning, studies can help me make more money, feel safe in classroom, feel safe on campus.

Classroom Experiences. Professors helpful, professor's effort is high in teaching, professor is interested in students' development, Professor is unreasonable in demands, content is relevant, courses challenging, student participation valued, feel comfortable talking with professors.

Student Services. Financial aid is adequate, tutoring adequate, counseling services adequate, on campus housing adequate.

Degree Attainment Goals. Eventually achieve my academic goals, earn a degree from my current college, and transfer to another college, choose to stop attending college for at least a semester, be forced to stop attending college for at least a semester.

Motivation - One Index

Motivation. I lack self-confidence to complete studies, don't have enough energy to complete studies, enjoy studying in general, like schools and classrooms, stress level, family motivation.

Instrumentation

The instrument for assessment was a survey which was designed for the purpose of this study by merging two existing surveys together. The survey was a self-report measure with comparative, associational and descriptive approaches (see appendix A pg. 125). The survey items were a combination of close-ended, unordered items, and close-ended questions with ordered choices. Internal consistency for reliability was established with a Likert scale with questions in six indices: Persistence (Category I variables specific to academics) : 1) enrollment barriers, 2) decision to continue attending college, 3) classroom experiences, 4) student services, 5) attainment goals, Motivation (Category II variable with an internal locus of control): 6) motivation. Convergent and discriminate evidence was enhanced by research questions which were used from two studies pertaining to non-traditional students by (Kinser & Deitchman 2007; Grayson, 1996).

Since previous literature for this population was particularly limited, and no studies were found which compared characteristics of student-parents to students who are not parents; there was not an existing survey to use. The two surveys by Kinser & Detichman (2007) and Grayson (1996) were adjusted slightly to be more specific to the student-parent. The overall scope of questions remained the same. The survey created in 1996 was also adjusted to be more current with technology usage. Validity generalization included collaboration with my dissertation committee, two Montana State University Administrators, and one Montana Tech of the University of Montana

Administrator. A Cronbach's alpha was run for each index to assure relationships among each group of questions (factors) to assure measurement validity.

Data Analysis Summary

There was limited literature about students who are parents; the results of this study were ultimately meant to understand more about motivation and persistence of parents. The data was analyzed to determine if there was any statistically significant difference in student responses between student-parents and non-parents. There were two sections to this analysis. The first section reviewed the descriptive analyses by the entire sample and the subgroups of 1) student-parent and 2) student non-parent with mean, standard deviation, and frequency (percentage) distribution. The second section reviewed statistical analyses to further explore differences between sub-groups (student-parent and non-parent): *t* tests, bivariate correlation, linear and multiple regressions.

Analysis

This analysis had two sections: Section I was a descriptive analysis of parents and non-parents; Section II was a statistical analysis of parents and non-parents.

Section I Descriptive Analyses of Parents and Non-Parents

An inventory of all variables was completed by the entire sample and two sub-populations (student-parent and non-parent) with mean, standard deviation, and

frequency (percentage) distribution. A Cronbach's alpha was used to test internal consistency reliability of questions grouped by indices.

Why Cronbach's Alpha Were Chosen

The Cronbach's alpha was chosen to measure the reliability of each index; this test is recommended with a Likert scale. Since the questions and indices for this survey came from two existing surveys, Kinser & Detichman (2007) and Grayson (1996), no further tests were run for the reliability of questions grouped by indices.

Section II Statistical Analyses of Parents and Non-Parents

Differences were explored between student-parents and non-parents beginning with Levene's test for equality of variances for dependent variables and Pearson's chi-squared test for independent variables followed by Phi correlations and linear regression and multiple regression.

Description of Independent Samples *t* Tests:

Independent samples *t* tests were run with the following independent variables (Pearson's chi-squared test): 1) student-parent or non-parent 2) gender; 3) Age of student 4) marital status and 5) type of degree being earned. Independent samples *t* tests were run with the following dependent variables (Levene's test for equality of variances) including all dependent variables: enrollment barriers, decision to continue attending college, classroom experiences, student services, attainment goals, and motivation.

Why Independent Samples t Tests Were Chosen. These t tests showed the differences between the groups identified in an effort to show statistical significance with the indices by group. These results will help to have a deeper understanding of differences between the groups to better understand the differences in characteristics of students who were parents and non-parents.

Description of Bivariate Correlation-Regression

A bivariate correlation regression (Phi correlation) was run with all dependent and independent variables. Mean and standard deviation were used to describe and summarize this data.

Why a Bivariate Correlation-Regression Was Chosen. A bivariate correlation was chosen to show the relation (covariation) with the variables both independent and dependent to investigate whether student-parents or non-parents differed or showed a relationship by their parental status for each of these variables.

Description of Regression Analyses

Six simple regression analyses were run with the independent variable – parent and non-parent and all six indices (dependent variables). Six multiple regressions were run with each dependent variable (six indices) and independent variables: parental status, gender, age, marital status, and degree plan.

Why Regression Analyses Were Chosen. A simple linear regression analysis was utilized to understand how parent status predicted motivation and persistence by

analyzing the six indices: enrollment barriers, decision to continue attending college, classroom experiences, student services, attainment goals and motivation. A multiple regression was used to understand how parent status predicted motivation and persistence and semipartial correlations to further explore individual relationships between the independent variables and indices by the contribution of each variable and their intercorrelation. All four variables were used simultaneously with each index.

Assumptions, Limitations and Delimitations of the Study

This study had the following assumptions: 1) there were differences between students who are parents and those who are not; 2) shifting demographics would continue to increase the number of female college student-parents; 3) that many of these lifelong learners will have children.

This study has the following limitations: 1) the quality of responses may be limited if students discredited the significance of the surveys (those who answered quickly rather than thoughtfully); 2) the sample was not a random sample.

This study used the following de-limitations: 1) the researcher chose to divide students by student-parents and students without children. This could have made it difficult to compare variables and data with other studies – limiting the scope; 2) the study included students from only one university.

Chapter Summary

This study used a quantitative comparative analysis using a non-experimental approach with a quasi-experimental design. The data analyses included a descriptive analysis and statistical analyses with t Tests, bivariate correlation regressions, and regression analyses. The data from these analyses were used to answer the two research questions to explain the purpose of this quantitative comparative analysis. The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents.

R1 Is there a difference in motivation between students who are parents and students who are not parents?

R2 Is there a difference in persistence between students who are parents and students who are not parents?

CHAPTER IV

RESULTS OF THE STUDY

Introduction

Chapter four reviews results from the data analyses of this study. The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents. Motivation for students was defined as a state of being which induces or perpetuates a positive result. Motivation can be an internal locus of control which may be academic or personal. Persistence for students was defined by working toward degree attainment rather than dropping out. Persistence had an academic focus rather than personal in this study. Five persistence variables included: overcoming enrollment barriers, decision to continue attending college, classroom experiences, student services, and academic attainment goals. There was one motivation variable titled motivation. The difference between motivation and persistence was that motivation for academic success may be both academic and personal while persistence was more specific to academics.

The null hypothesis was the assumption that there was no difference between students who were parents and those who were not parents in their motivation and persistence toward academic success. The null hypothesis is tested against a confidence level of ninety-five percent; p values were lower than .05 which resulted in a rejection of

this null hypothesis. This was a two tailed significance test. The null hypothesis was disproven as evidence was provided to support the alternative.

This data analysis responded to two research questions: R1 Is there a difference in motivation between students who are parents and students who are not parents? R2 Is there a difference in persistence between students who are parents and students who are not parents?

The first section reviewed the descriptive analyses by the entire sample and the subgroups of 1) student-parent and 2) student non-parent with mean, standard deviation, and frequency (percentage) distribution. The second section reviewed statistical analyses to further explore differences between sub-groups (student-parent and non-parent): *t* tests, bivariate correlation, linear and multiple regressions.

Section I Descriptive Analyses of the Parents and Non-Parents

The data were described as a whole with the entire sample and by sub-populations of student-parent and non-parent status: the entire study sample (n=323), subgroup of student-parents (n=94) (29%), and subgroup of non-parent students (n=229) (71%) in table 4.1. These samples were viewed by independent variables: gender, age, marital status, degree plan, and dependent variables (five persistence variables): enrollment barriers, decision to continue attending college, classroom experiences, student services, and attainment goals; and dependent variable (on motivation variable) motivation. The coding and responses used for the Likert scale included four levels: 1= strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. Five independent variables are coded: 1)

gender (0 = male and 1 = female), 2) traditional or non-traditional student status (0 = traditional age and 1 = non-traditional age, 3) marital status (0 = single, separated, widowed, divorced, 1 = married or living with a partner), 4) degree plan of study (0 = two year degree and 1 = four year degree), and 5) parental status (0 = parent and 1 = non-parent)..

Frequency distributions showed females represent a majority of both the entire sample (54%) and the student-parent sample (70%) while males represented the majority of student non-parents (53%). Traditional age students (18-24) represented a majority of both the entire sample (71%) and also student non-parents (86%) while non-traditional students (age 25+) represented a majority (74%) of student-parents. Marital status of single/separated/widowed/divorced students showed a majority for both the entire sample (71%) and student non-parents (84%). Married/living with a partner represented the majority of student-parents (65%). Degree plan of study indicated a majority earning a four year degree (58%) for both the entire sample and the student non-parents (65%) while student-parents were earning a majority of two year degrees (60%).

The survey had two questions (age and degree being earned) which were adjusted because sample sizes were too small for individual categories generating concern of weakened reliability. Age was originally collected by six ranges: 1 = 18-20, 2 = 21-24, 3 = 25-30, 4 = 31-40, 5 = 41-50, and 6 = 51 or more. The categories were reduced to zero = 18-24 (traditional age students) and one = 25 + (non-traditional age students). In part, these categories were also selected to match with ages consistently provided in literature for traditional (18-24) and non-traditional ages (25 +). Some data banks determined

traditional age as 18-23 and non-traditional as 24+, ultimately the selection for this analysis was based on Montana Tech's age categories for traditional and non-traditional students. The question on the survey for the type of degree being earned had categories reduced from certificate, 2 year degree, 4 year degree, graduate degree, and undecided by removing surveys in three categories: certificate, graduate degree, and undecided. They were removed because the sample sizes in these categories were too small. This reduced the original sample by thirty-two participants in an effort to increase reliability by sample sizes.

The dependent variables were described in two categories (persistence and motivation). The category of persistence had five variables with higher levels of median scores for persistence for parents in the decision to continue attending college (parents 2.87 / non-parents 2.77), classroom experiences (parents 3.09 / non-parents 2.98), student services (parents 2.98 / non-parents 2.89) and attainment goals (parents 2.48 / non-parents 2.47). Enrollment barriers had higher levels for non-parents (parents 3.09 / non-parents 3.12). The category of motivation had one variable titled motivation, and parents had higher levels of motivation (parents 2.88 / non-parents 2.78).

Coding for variables shown in Table Four on the next page were as follows:

Likert Scale: 1=strongly disagree, 2 = disagree, 3 = agree, 4= strongly disagree. 0 = male, 1 = female; 0 = traditional age, 1 = non-traditional age; 0 =single/separated/widowed/divorced, 1= married/living with partner; 0 = 2year degree plan, 1 = Four year degree plan

Table Four. Inventory of All Variables by the Entire Sample and Two Sub-Populations (Student-Parent and Non-Parent)

Variable	Entire Sample (n=323)		Student- Parents (n=94)		Non Student-Parents (n=229)	
	(M)	(S)	(M)	(S)	(M)	(S)
Persistence Variables						
Enrollment Barriers	3.11	.40	3.09	.38	3.12	.42
Decision to Continue Attending College	2.80	.27	2.87	.28	2.77	.26
Classroom Experiences	3.01	.36	3.09	.39	2.98	.34
Student Services	2.91	.49	2.98	.49	2.89	.49
Attainment Goals	2.47	.37	2.48	.37	2.47	.37
Motivation Variable						
Motivation	2.81	.48	2.88	.47	2.78	.50
Independent Variables						
Gender	46%		30%		53%	
Male						
Female	54%		70%		47%	
Age						
18- 24 (Traditional)	71%		26%		86%	
25 + (Non- Traditional)	29%		74%		14%	
Marital Status						
Single/separated/ widowed/divorced	71%		35%		84%	
Married/living with partner	29%		65%		16%	
Degree						
Two year degree	42%		60%		35%	
Four year degree	58%		40%		65%	

A Cronbach's alpha was used to test internal consistency reliability of questions grouped by indices. The alpha for questions in enrollment barriers, decision to continue attending college, classroom experiences, student services, attainment goals and motivation each showed reliability: (Persistence indices) enrollment barriers (.711) with ten questions, decision to continue attending college (.779) with eleven questions, classroom experiences (.803) with eight questions, student services (.734) with four questions, and attainment goals (.748) with five questions; (motivation index) motivation (.746) with seven questions. Since the questions and indices for this survey came from two existing surveys, Kinser & Detichman (2007) and Grayson (1996), no further tests were run for the reliability of questions grouped by indices.

Section II: Statistical Analyses of the Parents and Non-Parents

This section displays nine tables. Exploring differences between student-parents and non-parents began with Levene's test for equality of variances for dependent variables (Table 4.2) and Pearson's chi-squared test for independent variables (Table 4.3), followed by Phi correlations (Table 4.4) linear and multiple regression (Table 4.5 through Table 4.10).

In table 4.2, Levene's test for equality of variances for dependent variables (persistence variables) enrollment barriers, decision to continue attending college, classroom experiences, student services, and attainment goals indices; (motivation variable) motivation index, were used for reporting significant results for independent groups between student-parents and non-parents ($\mu^1 \neq \mu^2$): Results showed that student-

parents had significantly higher scores in two persistence variables: the decision to continue attending college and classroom experiences. The results for the decision to continue attending college for student-parents ($M = 2.87$, $SD = .28$) and non-parents ($M = 2.77$, $SD = .26$), ($p = .002$) showed a higher persistence level for student-parents to persist toward academic success. Although this difference was higher for student-parents, Cohen's interpretation of the strength of the relationship provided clarity for further understanding. Cohen's explanation of these results in a social science setting would suggest this was a small effect or smaller than typical. The value of Cohen's d is 0.37 and the effect-size was .18. Cohen would suggest this effect size was small meaning it was very difficult to detect the difference in persistence levels between student-parents and non-parents.

The classroom experiences for student-parents showed higher scores ($M = 3.09$, $SD = .39$) compared to non-parents ($M = 2.98$, $SD = .34$), ($p = .020$). These results showed student-parents found their classroom experiences more positive than non-parents thereby enhancing persistence toward academic success. By using Cohen's explanation and calculations for the interpretation of these differences, Cohen's d value was small 0.30 and the effect size was small 0.14 meaning it was very difficult to detect the differences in classroom experience levels between student-parents and non-parents. Questions for this index included the professors' accessibility, interest, teaching skills, course content relevancy and challenge. Enrollment barriers, student services, motivation and attainment goals did not show significant results. Motivation was approaching significance with parents showing higher values than non-parents, ($p=.008$). Mean (M),

standard deviation (SD), *t* values (*t*), degrees of freedom, and significance (*p*) are listed in table 4.2 for all variables. Motivation index questions described self-confidence, energy levels, enjoyment of studying, stress level, and motivation from family involvement.

Table Five. Levene's Test for Equality of Variances for Comparison of Student-Parent and Non-Parent Scores for Survey Indices

Variable	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Enrollment Barriers Index			-.541	321	.589
Parent	3.09	.38			
Non-Parent	3.12	.42			
Decision to Continue Attending Index			3.12	320	.002**
Parent	2.87	.28			
Non-Parent	2.77	.26			
Classroom Experiences Index			2.36	152.82	.020*
Parent	3.09	.39			
Non-Parent	2.98	.34			
Student Services Index			1.55	321	.121
Parent	2.98	.49			
Non-Parent	2.89	.49			
Attainment Goals Index			.26	321	.799
Parent	2.48	.37			
Non-Parent	2.47	.37			
Motivation Index			1.76	321	.080
Parent	2.88	.47			
Non-Parent	2.78	.49			

A Pearson's chi-squared test was used to investigate whether student-parents or non-parents differ by their parental status. In table 4.3, Pearson's chi-squared tests were run to determine if there was a statistically significant relationship between independent variables (dichotomous). The relationship of student parental status was statistically significant showing significance for each relationship analyzed between parents and non-parents with each variable (gender, age, marital status and two year/four year degree) $p < .001$. The results were as follows: Gender ($\chi^2=14.25$, $df=1$, $N=323$, $p < .001$) Age

($\chi^2=111.93$, $df=1$, $N=323$, $p<.001$) Marital Status ($\chi^2=82.32$, $df=1$, $N=323$, $p<.001$) Degree Plan($\chi^2=13.35$, $df=1$, $N=323$, $p<.001$). This indicated greater certainty that student parents and non-parents were statistically significant in their relationship by their parental status to gender, age, marital status, and degree plan. Gender among all students ($\chi^2=14.25$, $df=1$, $N=323$, $p<.001$) showed females as a slight majority, and it was interesting to note that females were the minority of non-parents and majority of parents; despite these differences there was a significant relationship between parents and non-parents and variables. Age among all students ($\chi^2=111.93$, $df=1$, $N=323$, $p<.001$) showed a majority by traditional age students and nonparents, yet non-traditional age students were a majority of parents; understanding these differences, there was a significant relationship with variables. Marital status for all students ($\chi^2=82.32$, $df=1$, $N=323$, $p<.001$) showed a majority by traditional age students and non-parents, yet non-traditional age students were a majority of parents; recognizing these differences there was a significant relationship with variables. For degree plan, ($\chi^2=13.35$, $df=1$, $N=323$, $p<.001$) parents were enrolled in a majority of two year degrees while non-parents were enrolled in a majority of four year degrees; acknowledging this difference, a significant relationship exists with variables.

Table Six. Pearson's Chi-Squared Test of Student-Parents and Non-Parents by Gender, Age, Marital Status and Degree Plan

Variable	n	Parent Status		χ^2
		Parent	Non-Parent	
<i>Gender</i>				14.25***
Male	149	28	121	
Female	174	66	108	
<i>Age</i>				111.93***
18-24 Traditional	228	27	201	
25+ Non-Traditional	95	67	28	
<i>Marital Status</i>				82.32***
Single/separated/widowed/divorced	229	33	196	
Married/living with partner	94	61	33	
<i>Degree</i>				13.35***
Two Year Degree	135	54	81	
Four Year Degree	188	40	148	

*p < 0.05. ** p < 0.01. ***p < 0.001 (two-tailed)

In table 4.4, Phi was used to determine the strength of the association between two variables (Effect Sizes) between parent status and all other variables. Enrollment barriers, phi (.245) medium effect; decision to continue attending college, phi (.276) large effect; classroom experiences index, phi (.237) medium effect; student services, phi (.175) small effect, motivation, phi (.262) large effect, and attainment goals, phi (.195) small effect, gender, phi (-.210) small effect; age, phi (-.589) large effect; marital status, phi (-.505) large effect; degree status – two year or four year, phi (.203) medium effect. A synopsis of effect sizes showed age, marital status, decision to continue attending college and motivation as having the strongest associations. All independent variables showed significance, and all dependent variables did not show significance.

Table Seven. Phi Correlations for Student Parents and Non-Parents

<i>Variable</i>	<i>n</i>	Parent Status		ϕ
		Parent	Non-Parent	
Enrollment Barriers	323	94	229	.245
Decision to Continue Attending College				.276
Classroom Experiences				.237
Student Services				.175
Attainment Goals				.195
Motivation				.262
Gender				
Male	149	29	121	-
Female	174	66	108	.210***
Age				-
18-24 Traditional	228	27	201	.589***
25+ Non-Traditional	95	68	28	
Marital Status				-
Single/Separated/Widowed/Divorced OR	229	34	193	.505***
Married/Living with Partner	94	61	33	
Degree				.203***
Two Year Degree/ Four Year Degree	135	55	81	
	188	40	148	

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$ (two-tailed)

A simple linear regression analysis was utilized to explore how parent status predicts motivation and persistence by analyzing indices: (five persistence indices and one motivation index). Assumptions were tested by examining normal probability plots of residuals and scatter diagrams of residuals versus predicted residuals. No violations of normality, linearity, or homoscedasticity of residuals were detected. In addition, box plots revealed no evidence of outliers.

The regression analysis in Set 1, Model 1 (enrollment barriers DV¹ = parent/non-parent) revealed enrollment barriers were not significantly predicted, $F(1,321) = .293$ observed F value, significance level ($p < .05$). R-squared was .001. Table 4.5 displays the

Unstandardized regression coefficients (.03), Standardized regression coefficients β (.03) Observed t value (.54), Significance level (.589). The adjusted R^2 (-.002) showed insignificant variance between parents and non-parents for enrollment barriers. The regression analysis revealed that the Set 1, Model 2 (enrollment barriers DV¹ = parent/non-parent, gender, age, marital status, and degree) significantly predicted enrollment barriers, $F(5,317) = 2.57$ observed value, significance level ($p < .01$). R-squared was .04. The adjusted R^2 (.03) showed significant variance between parents and non-parents (parenthood status) for enrollment barriers showing a variance of three percent. Table 4.5 displays the unstandardized regression coefficients, Standardized regression coefficients β , Observed t value, Significance level, and partial correlations for each independent variable. In terms of individual relationship between the independent variables and enrollment barrier, age (-2.62, $p < .01$) showed significant influence for predictions. The negative direction of the relationship represented non-traditional age students age 25+. The negative coefficient suggested non-traditional students had lower levels of enrollment barriers (see Table 4.5).

Table Eight. Regression Analysis – Enrollment Barriers

	Model	B	β	t	p	R ²	Partial
Enrollment Barriers							
Set 1, Model 1	(enrollment DV ¹ = parent/non-parent)	.03	.03	.54	.589	-.002	
Set 1, Model 2	(enrollment DV ¹ =parent, gender, age, marital status, degree plan)				.027*	.03	
Parent/non-parent		-.08	-.09	-1.16	.245		-.07
Gender					.059		.11
Age		.09	.11	1.89			
Marital Status		-.16	-.18	-2.62	.009**		-.15
Degree Plan		-.04	-.05	-.77	.440		-.04
		.04	.04	.75	.452		.04

The regression analysis revealed in Set 2, Model 1 (decision to continue attending college DV² = parent/non-parent) significantly predicted the decision to continue attending college, $F(1,320) = 9.71$ observed F value 9.71, significance level ($p < .05$). R-squared was (.029). Table 4.6 displays the Unstandardized regression coefficients (-.10), Standardized regression coefficients β (-.17), Observed t value (-3.12), Significance level (.002), adjusted R^2 (.03) indicated that 3% of the variance in the decision to continue attending college was explained by parent status. The negative direction of the relationship represented those who were non-parents. The negative coefficient suggested that non-parents had lower levels on their decisions to continue attending college compared to parents. Although this was statistically significant, this difference would be

difficult to see Cohen (1988). The regression analysis revealed that the Set 2, Model 2 (decision to continue attending college DV² = parent/non-parent, gender, age, marital status, and degree) did not significantly predict decisions to continue attending college, $F(5,316) = 2.07$ observed value, significance level ($p < .05$). R-squared was .032. Table 4.6 displays the unstandardized regression coefficients, Standardized regression coefficients β , Observed t value, Significance level, and partial correlations for each independent variable. When all variables were combined, there was not significant prediction for the decision to continue attending college, but in terms of individual relationship between the independent variables and decision to continue attending college, parent/non-parent (-2.49, $p < .01$) significantly influenced the decision to continue attending college for non-parents which is shown in the negative direction of the relationship. The negative coefficient suggests that non-parents have lower levels of response on the survey in their decision to continue attending college.

Table Nine. Regression Analysis – Decision to Continue Attending College

Variable	Model	<i>B</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Partial</i>
Decision to Continue Attending College							
Set 2, Model 1	(continue DV ² = parent/non-parent)						
		-.10	-.17	-3.12	.002**	.03	
Set 2, Model 2	(continue DV ² =parent, gender, age, marital status, degree plan)						
Parent/Non-parent					.068	.02	
		-.11	-.19	-2.50	.013*		-.14
Gender		-.00	-.00	-.04	.969		-.00
Age		-.03	-.05	-.78	.439		-.04
Marital Status		.02	.03	.45	.654		.03
Degree Plan		-.00	-.01	-.14	.890		-.01

The regression analysis revealed in Set 3, Model 1 (classroom experiences DV³ = parent/non-parent) significantly predicted classroom experiences, $F(1,321) = 6.28$ observed F value, significance level ($p < .05$). R -squared was (.019). Table 4.7 displays the Unstandardized regression coefficients (-.11), Standardized regression coefficients β (-.14), Observed t value (-2.51), Significance level (.013*), the adjusted R^2 (.02) indicated that 2% of the variance in classroom experiences was explained by parent status. The negative direction explained significant variance for non-parents. It appeared that non-parents reported fewer quality classroom experiences compared to their parent counterparts with lower response rates on the survey. The regression analysis revealed that the Set 3, Model 2 (classroom experiences DV³ = parent/non-parent, gender, age,

marital status, and degree) did not significantly predict classroom experiences $F(5,317) = 1.39$ observed value, significance level ($p < .05$). R^2 was .02. Table 4.7 displays the unstandardized regression coefficients, Standardized regression coefficients β , Observed t value, Significance level, and partial correlations for each independent variable. In terms of individual relationship between the independent variables and classroom experiences, there was no significance. This finding suggested that parental status is no longer important once all variables were controlled. The control variables appeared to explain or account for the earlier significant influence of parent status.

Table Ten. Regression Analysis - Classroom Experiences

Variable	Model	B	β	t	p	R ²	Partial
Classroom Experiences							
Set 3, Model 1	(classroom experiences DV ³ = parent/non-parent)	-.11	-.14	-2.51	.013*	.02	
Set 3, Model 2	(classroom experiences DV ³ =parent, gender, age, marital status, degree plan)				.230	.006	
Parent/Non-parent		-.08	-.11	-1.42	.158		-.08
Gender		.02		.37	.711		.02
Age			.02				
Marital Status		.03		.48	.632		.03
			.03				
Marital Status		.00		.06	.953		.00
			.00				
Degree Plan		-.02	-	-	.630		-.03
			.03	.48			

The regression analysis revealed in Set 4, Model 1 (student services DV4= parent/non-parent) did not significantly predict student services, $F(1,321) = 2.41$ observed F value, significance level ($p > .05$). R-squared was (.007). Table 4.8 displays the Unstandardized regression coefficients (-.09), Standardized regression coefficients β (-.09), Observed t value (-1.55), Significance level (.12), adjusted R^2 (.004) indicated that .4 of the variance in student services was explained by parent status which was not significant. The regression analysis revealed that the Set 4, Model 2 (student services DV4 = parent/non-parent, gender, age, marital status, and degree) significantly predicted student services when all variables were combined, $F(5,317) = 2.91$ observed value, significance level ($p < .05$). R –squared was .044. Table 4.8 displays the unstandardized regression coefficients, Standardized regression coefficients β , Observed t value, Significance level, and partial correlations for each independent variable. In terms of individual relationship between the independent variables and student services, parent/non-parent (-2.07, $p < .01$), and gender (2.77, $p < .01$), were significant. The negative direction for parent/non-parent represented non-parents. The negative coefficient suggested non-parents had lower levels for student services. The positive direction of gender represented females. The positive coefficient suggested females had higher response levels on the survey in student services. In summary, in Model 1 parent status was not significant in predicting student services, but changed to significant in Model 2 when all variables were included. When variables were viewed individually, parent status and gender emerge by non-parents with lower levels of response on the

survey in student services and females with higher response levels on the survey in student services.

Table Eleven. Regression Analysis - Student Services

Variable	Model	B	β	t	p	R ²	Partial
Student Services							
Set 4, Model 1	(student services DV4 = parent/non-parent)	-.09	-.09	-1.55	.121	.004	
Set 4, Model 2	(student services DV4=parent, gender, age, marital status, degree plan)				.014*	.03	
Parent/Non-parent		-.17	-.15	-2.07	.040*		-.12
Gender		.16	.16	2.77	.006**		.15
Age		-.09	-.08	-1.18	.239		-.07
Marital Status		-.12	-.11	-1.68	.095		-.09
Degree Plan		-.01	-.01	-.09	.925		-.01

The regression analysis revealed in Set 5, Model 1 (attainment goals DV5 = parent/non-parent) did not significantly predict attainment goals, $F(1,321) = .065$ observed F value, significance level ($p > .05$). R-squared was (.000). Table 4.9 displays the Unstandardized regression coefficients (-.01), Standardized regression coefficients β (-.01), Observed t value (-.26), Significance level (.80), adjusted R^2 (-.003). The regression analysis revealed that the Set 5, Model 2 (attainment goals DV5 = parent/non-parent, gender, age, marital status, and degree) did not significantly predict attainment, $F(5,317) = 1.60$ observed value, significance level ($p > .05$). R-squared was .03. Table 4.9 displays the unstandardized regression coefficients, Standardized regression

coefficients β , Observed t value, Significance level, and partial correlations for each independent variable. In terms of individual relationship between the independent variables and attainment goals, marital status (-2.07, $p < .01$) was significant with the negative direction which explained married students as having lower level responses on the survey for their experiences in their attainment of goals.

Table Twelve. Regression Analysis - Attainment Goals

<i>Variable</i>	<i>Model</i>	<i>B</i>	β	<i>t</i>	<i>p</i>	<i>R²</i>	<i>Partial</i>
<i>Attainment Goals</i>							
<i>Set 5, Model 1</i>							
	<i>(attainment DV5 = parent/non-parent)</i>	-.01	-.01	-.26	.80	-.003	
<i>Set 5, Model 2</i>							
	<i>(attainment DV5=parent, gender, age, marital status, degree plan)</i>				.161	.009	
Parent/Non-parent		-.03	-.04	-.50	.616		-.03
Gender		.05	.07	1.23	.220		.07
Age		.06	.08	1.14	.255		.06
Marital Status		-.11	-.13	-2.07	.040*		-.12
Degree Plan		.06	.09	1.47	.142		.08

The regression analysis revealed in Set 6, Model 1 (motivation DV6 = parent/non-parent) did not significantly predict motivation, $F(1,321) = 3.08$ observed F value, significance level ($p > .05$). R -squared was (.01). Table 4.10 displayed the Unstandardized regression coefficients (-.09), Standardized regression coefficients β (-.09), Observed t value (-1.55), Significance level (.121), adjusted R^2 (.006) indicated that .6% of the variance in motivation was explained by parent status. The regression analysis revealed

that the Set 6, Model 2 (motivation DV5 = parent/non-parent, gender, age, marital status, and degree) did not significantly predict motivation, $F(5,317) = 2.90$ observed value, significance level ($p < .05$). R-squared was .01. Table 4.10 displays the unstandardized regression coefficients, Standardized regression coefficients β , Observed t value, Significance level, and partial correlations for each independent variable.

Table Thirteen. Regression Analysis – Motivation

Variable	Model	B	β	t	p	R ²	Partial
Motivation							
Set 6, Model 1	(motivation DV6 = parent/non-parent)	-.11	-.09	-1.76	.080	.006	
Set 6, Model 2	(motivation DV6=parent, gender, age, marital status, degree plan)				.098	.01	
Parent/Non-parent		-.03	-.03	-.38	.703		-.02
Gender		.11	.11	1.88	.062		.10
Age		.13	.12	1.76	.077		.10
Marital Status		-.04	-.04	-.59	.556		-.03
Degree Plan		.03	.03	.59	.553		.03

Summary of Analyses

A summary of the analyses in this study showed parent status significantly predicted the decision to continue attending college and classroom experiences; non-parents had lower levels of response on the survey in both the decision to continue attending college and classroom experiences when compared to parents. Significant

results by individual independent variables (parent status, gender, age, marital status, and degree plan) explained differences in enrollment barriers, the decision to continue attending college, student services, and the attainment of goals. No significant differences were found by individual independent variables (partial correlations) for classroom experiences or motivation. For enrollment barriers, non-traditional aged students had lower levels of response on the survey. For the decision to continue attending college, non-parents had lower levels of response on the survey. For student services, non-parents had lower levels of response on the survey and females had higher levels of response on the survey. For the attainment of goals, married students had lower levels of response on the survey.

Six analyses results were organized by five dependent variables for persistence (enrollment, decision to continue attending college, classroom experiences, student services, attainment of goals), and one variable for motivation showing predictions and explanations.

Result One. Enrollment barriers could not be significantly predicted by solely parent status, but when all independent variables were included (enrollment barriers DV¹ = parent/non-parent, gender, age, marital status, and degree), enrollment barriers could be significantly predicted by variance. Enrollment barriers viewed by each independent variable (parent status, gender, age, marital status, and degree plan) showed only age as a significant predictor suggesting non-traditional age students have lower levels of enrollment barriers on the survey when compared to traditional students.

Result Two. The decision to continue attending college was significantly predicted by solely parent status, suggesting non-parents had lower levels of response on the survey in the decision to continue attending college when compared to parents. When all variables were included, the decision to continue attending college could not be significantly predicted by variance. The decision to continue attending college viewed by each independent variable showed only parent status as a significant predictor suggesting non-parents had lower levels of response in deciding to continue attending college when compared to student-parents.

Result Three. Classroom experiences were significantly predicted by solely parent status, suggesting non-parents had lower levels of response on the survey for classroom experiences when compared to student-parents. When all variables were included, classroom experiences could not be significantly predicted. Classroom experiences viewed by each independent variable showed no significant predictions or explanations.

Result Four. Student services was not significantly predicted by solely parent status, but when all variables were included student services could be significantly predicted by variance. Student services viewed by each independent variable showed parent status and gender to be significant predictors. Parent status showed non-parents had lower response levels on the survey for student services when compared to student-parents. Females had higher levels of response for student services when compared to males.

Result Five. The attainment of goals was not significantly predicted by solely parent status or when all variables were included. Attainment of goals showed marital

status to be a significant predictor when viewed by each independent variable. Married students had lower response levels on the survey for the attainment of goals compared to single, separated, widowed and divorced students.

Result Six. Motivation showed no significance for predictions or explanations

CHAPTER V

CONCLUSIONS

Introduction

The purpose of this quantitative comparative analysis study was to determine the factors that contribute to motivation and persistence among undergraduate college students who are parents compared to those students who are not parents. The study was guided by the following research questions:

Research Question 1: Is there a difference in motivation between students who are parents and students who are not parents?

Research Question 2: Is there a difference in persistence between students who are parents and students who are not parents?

It is important that administrators, faculty, and support staffs at Montana Tech of the University of Montana know what undergraduate college student-parents report as factors which are contributions or hindrances to their motivation to enroll and persist in achieving degree attainment success when compared to students who are not parents.

Overview

In meeting the purpose of this study, further consideration was given to statewide initiatives to increase degree holders in Montana by 2018 to meet employment needs targeting non-traditional students age twenty-five and older (Applegate, 2010). Non-traditional students are categorized in numerous ways with diverse characteristics and

differing needs when compared to traditional students. Students who are parents are one category of traditional students. In addition to Montana Tech of the University of Montana, faculty and administration at other institutions may also find these results of value as they continue to identify factors which are contributions or hindrances to their student-parents' motivation and persistence as compared to students who are not parents.

The differences between student-parents' and non-parents' motivation and persistence were explored by factors of persistence (five indices): overcoming enrollment barriers, decision to continue attending college, classroom experiences, student services, and academic attainment goals, and by motivation (one index). The difference between motivation and persistence is that motivation for academic success may be both academic and personal while persistence is more specific to academics. To understand differences between student-parents and non-parents, personal and demographic factors were used: gender, age, marital status and degree plan.

This chapter provides the answers to research questions, a comparison to the literature with a discussion of the results, conclusions and recommendations for future programs and research.

Methods and Data Collection

This study is a quantitative comparative analysis using a non-experimental approach with a quasi-experimental design. This comparison is between two populations: undergraduate student-parents and undergraduate students who are not parents. All students were attending Montana Tech of the University of Montana. The

selected sample included undergraduate students attending freshman English and math classes. Survey distribution was conducted over one week of classes during the last week of the spring 2011 semester.

The instrument for assessment was a survey which was designed for the purpose of this study by combining two existing surveys. The survey was a self-report measure with comparative, associational, and descriptive approaches. The survey items were a combination of close-ended, unordered items, and close-ended questions with ordered choices. Internal consistency for reliability was established with a scale of services needed. Convergent and discriminate evidence was enhanced by using research questions from two studies about non-traditional students by Kinser & Deitchman (2007) and Grayson (1996).

Since previous literature for student-parents is particularly limited, and no studies were found which compared student-parents to students who are not parents with a survey; there was not an existing survey to use. The two surveys were adjusted slightly to be more specific to the student-parent. Validity generalization included collaboration with my dissertation committee, two Montana State University Administrators, and one Montana Tech of the University of Montana Administrator. A Cronbach's alpha was run for each index to assure relationships among each group of questions (factors) for measurement validity.

Analyses initially included eight dependent variables which are indices (categories) within a Likert scale and seven independent variables. Dependent variables were narrowed to six indices corresponding to research questions, and independent

variables were narrowed from seven to five variables because samples were too small for some variables with concerns for reliability.

Data Analyses

The null hypothesis is rejected because it was disproven. There were differences found between parents and non-parents.

Research Question 1: Is there a difference in motivation between students who are parents and students who are not parents?

There was not a significant difference found in motivation between parents and non-parents.

Research Question 2: Is there a difference in persistence between students who are parents and students who are not parents?

There were significant differences found in persistence between parents and non-parents.

Table 5.1 shows differences in persistence were predicted by parent status (parent / non-parent) for students' decisions to continue attending college, classroom experiences, and student services. Notably, the decision to continue attending college and classroom experiences showed low levels of significant differences. Additionally, age, marital status and gender were significant predictors respectively for enrollment barriers, the attainment of goals and student services. Levels of persistence by each independent variable were as follows. Non-parents had lower levels of persistence for decisions to continue attending college, classroom experiences, and student services. Non-traditional

age students had lower levels of enrollment barriers. Married students had lower attainment goals. Females had higher levels of response for student services. Degree Plans were not significant for any of the dependent variables (see table 5.1).

Table Fourteen. Significant Predictors of Persistence

<i>Parent Status</i>	<i>Age</i>	<i>Marital Status</i>	<i>Gender</i>	<i>Degree Plan</i>
Decision to Continue Attending College (lower levels on survey for non-parent)	Enrollment Barriers (lower levels on survey for non-traditional age 25+)	Attainment of Goals (lower levels on survey for married)	Student Services (higher levels on survey for females)	-----
Classroom Experiences (lower levels on survey for non-parent)				-----
Student Services (lower levels on survey for non-parent)				

Comparison of Results to Literature

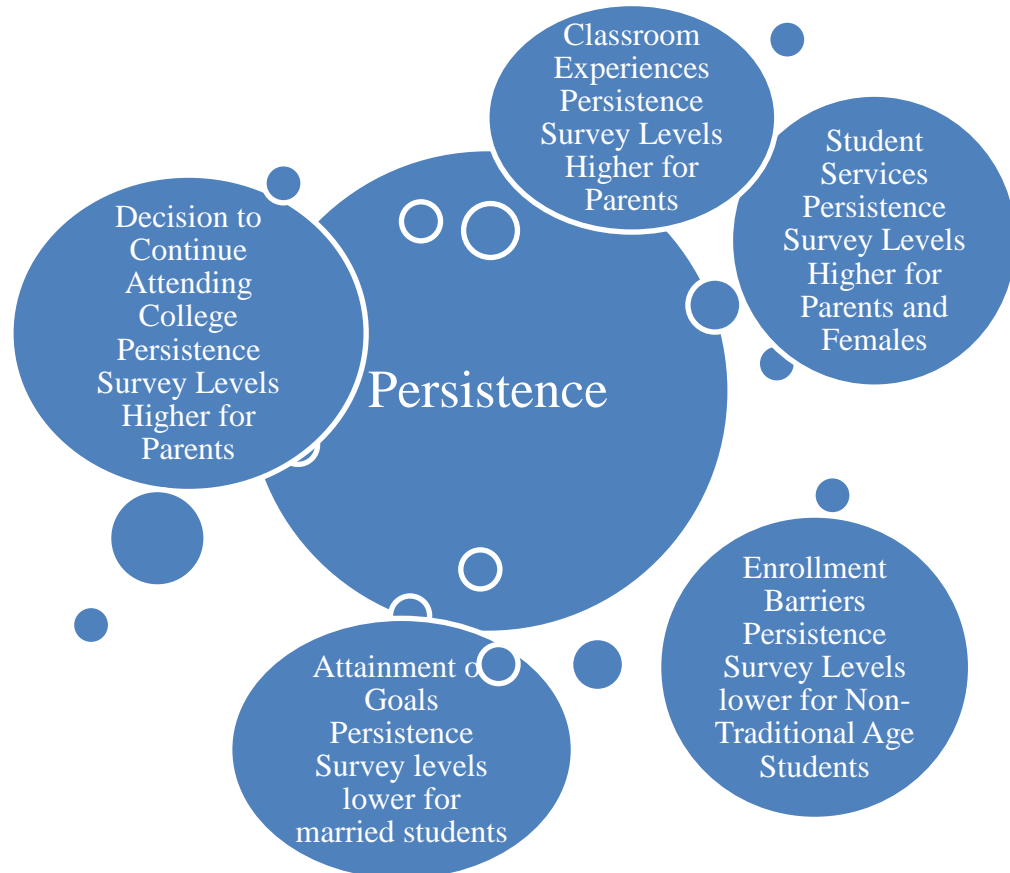
Introduction

There was significant literature written describing differences between non-traditional and traditional students, however limited literature describing differences between parents and non-parents. In the literature review for this study, comparisons were made between student-parents and non-parents through the lens of non-traditional

and traditional status. Non-traditional students at Montana Tech are classified by age 25+. Classifications by age for non-traditional status vary with some national data using age 24+. There are not any other sub-categories or classification for non-traditional students at Montana Tech of the University of Montana. Within national data, there are numerous categories of non-traditional students, and some of these categories are represented in this literature review. Non-traditional students have been metaphorically described as a kaleidoscope, maze, and mosaic; these students are diverse and this necessitates a multifaceted approach to understanding their needs and classifying them (Kiely, Sandmann, Truluck, 2004).

The comparison of the significant results from this study to the existing literature was organized by dependent variables for persistence in the following sequence: continuing to attend college, classroom experiences, student services, enrollment barriers, and attainment of goals. The dependent variable for motivation was not included because there was no significance found. Figure 2 provides an overview of the significant results found.

Figure Two Significant Persistence Analyses by Parents and Non-Parents



Continuing to Attend College. The results of this study showed student-parents have higher levels of persistence responses on the survey for continuing to attend college when compared to non-parents. Questions on the survey about the decision to continue attending college (persistence) included motivation to complete academic work, computer skill confidence, studying abilities, balancing demands outside of the classroom (work and personal life), overall satisfaction with learning, perceptions of safety on campus, and a desire to earn more money with a degree completed. It is consistent with

literature that non-traditional students (parents) typically have greater constraints on their time as they balance family, academics, and often employment.

Greater persistence to continue attending college may be necessary to attain parents' goals as they balance multiple roles off campus compared to traditional students who usually have fewer external demands off campus. Carney-Crompton and Tan (2002) found non-traditional students have few sources of support on campus compared to traditional students and higher psychological functioning in satisfaction and emotion. This suggested their psychological functioning to continue attending college may be higher than traditional students despite fewer sources of support on campus. Bean and Metzner's (1985) conceptual model of non-traditional undergraduate student attrition (retention theory) suggested student-parents are more affected by external factors rather than socialization factors on campus. This study was inconclusive on the concept advanced by Bean and Metzner that non-traditional students (parents) were more affected by the external environment because external environmental factors were not measured. It is clear that student-parents in this study showed higher levels of persistence scores on the survey for continuing to attend college than non-parents.

Classroom Experiences. In the results of this study, student parents showed higher levels of positive classroom experiences when compared to non-parents. Questions for classroom experiences included: professor is helpful, professor's effort is high in teaching, professor is interested in students' development, professor is unreasonable in demands, content is relevant, courses challenging, student participation valued, and feel comfortable talking with professors. From this study, the results in

classroom experiences for student- parents were not surveyed by each classroom. There were numerous classes of freshmen math and English in this study, so it remains unclear what specific classroom experiences contributed to the student-parents' more positive classroom experiences when compared to non-parents.

Previous studies reflect varied needs for student-parents' learning success including themed classrooms, study skills, and metacognitive strategies. In a study by Van Cleve (1994), a themed classroom (child-development) for student-parents showed increased self-esteem. There was also a decrease in attrition. Tovar (2008) described returning to the classroom by non-traditional students often includes re-learning study skills which can be critical to non-traditional students' success. Ntiri, Schindler, & Henry (2004) found adult learners benefit from metacognitive strategies and have been seen to be more competent, particularly in reading, when epistemological frameworks are considered. Piaget's Theory of Cognitive Development is helpful to respect and appreciate learning differences between student- parents and non-parents. Piaget's theory explores four stages of development which propose that remaking a mental model requires physical and mental work (Svinicki, 1999). Students participate with hands-on activities and the use of concrete examples. Students are remaking their existing model but not re-building them as they are applying learned skills for where they actually are rather than being categorized by external factors i.e. age.

Student Services. First, the results of this study showed that student services survey response levels were lower for non-parents (mostly traditional students) when compared to parents (non-traditional students). Questions pertaining to student services

included: financial aid is adequate, tutoring is adequate, counseling services are adequate, and on campus housing is adequate. The results of this study contradict the literature, because most research describes non-traditional students as having difficulty with student services when compared to traditional students. For example, Cox and Ebbers (2010) found a disconnect between support services, admissions and financial aid for mothers.

Secondly, the results of this study showed females had higher survey scores for student services when compared to men showing a significant difference in their perceptions of student services. Allen, Dean & Bracken (2008) showed the negotiation of balancing personal lives and academics is often described differently by women when compared to men, and that women have differing perspectives when compared to men in choices outside of the classroom, styles of learning, and pedagogical standards. In a study by Donough and Stein (2007), women showed significant differences when compared to men in individualism and norm compliance. In understanding the findings for this study, the norm compliance differences for women described in the Donough and Stein study may suggest a greater appreciation for student services by women as services are organized for groups (norms).

Enrollment Barriers. The results of this study showed age difference was a predictor for enrollment barriers. Non-traditional age students showed lower levels of enrollment barrier survey responses when compared to traditional age students. Questions for enrollment barriers included: transportation problems, money problems, home computer with internet, friends support education, employer supports education, family supports education, courses scheduled at convenient times, staff hours adequate for

enrollment, financial aid hours adequate, and too much red tape – admissions. Results for enrollment barriers were inconsistent with the literature in that non-traditional students are described as having more barriers. Access to higher education with the ability to enroll, but not followed by support services particularly for non-traditional students is not opportunity (Engstrom & Tinto, 2008; Tinto, 2008). Most of the questions on the survey in the enrollment index pertained to barriers before a person gets to the enrollment office: transportation, money, home computer, and support for education by friends, employer and family. These barriers are outside of the college campus. This may suggest the traditional age students have difficulty accessing enrollment while non-traditional students have higher levels of access to enrollment.

Attainment of Goals. In the results of this study, marital status was a predictor for the attainment of goals. There were lower survey response levels for attainment of goals from married students. Questions for attainment of goals included: eventually achieve my academic goals, earn a degree from my current college, transfer to another college, choose to stop attending college for at least a semester, be forced to stop attending college for at least a semester. In this study, married students were the majority of parents, and this was not consistent with the literature. The accounting for married students is traditionally by marriage, however on this survey married and partnered (living together but not legally married) were counted as married. Couples living together are normally categorized as single parents in national data (NCES, 2008). This may have confused overall results on this survey. Literature was found for single mothers who face organizational barriers beginning with enrollment, and these barriers

persist impacting the students' college experiences (Yakaboski, 2010). Because of the categorizing on this survey, some of these single parents with a partner would have been counted with married students.

The results of this study showed married students as having lower survey response levels for the attainment of goals which would be consistent with existing literature particularly in the tracking of this survey with single parents living together counted as married. The majority of these married students with lower survey response levels would be considered non-traditional, and literature suggests non-traditional students face greater hurdles in overcoming access and retention barriers toward the attainment of their goals.

Conclusions

Continuing to Attend College

In conclusion, student parents had higher scores on surveys suggesting higher levels of persistence to continue attending college. In the literature, student-parents have been reported to have fewer sources of support on campus and yet higher levels of functioning in satisfaction and emotion (Carney-Crompton and Tan, 2002). Bean & Metzger's (1985) retention theory for non-traditional students suggests external forces are more influential to retention than socialization on campus. In this study, higher levels of coping abilities may have helped to achieve a successful balance of student-parents' multiple roles thereby achieving higher levels of persistence to continue attending college

despite potentially having fewer sources of support on campus when compared to traditional students.

Classroom Experiences

In conclusion, the results of this study showed parents have higher response scores on surveys suggesting more positive classroom experiences. It is unclear what classroom experiences are generating positive results for these parents when compared to non-parents. Previous literature describes improved classroom experiences with learning success including themed classrooms, study skills, and metacognitive strategies. It is clear that student-parents show higher overall levels of response for classroom experiences when compared to non-parents.

Student Services

In conclusion, the results of this study showed parents had higher levels of response on surveys for student services. This contradicts existing literature which shows non-traditional students having lower levels of positive responses from student services.

A second conclusion of this study showed women had higher survey response rates than men for student services. Some literature was found about gender differences, within higher education, but it wasn't specific to student services. In a study by Donough and Stein (2007), differences of perception for norm compliance and individualism were found by gender. The reasons for gender differences within student services were unclear.

Enrollment Barriers

In conclusion, enrollment barrier survey scores were lower for non-traditional age students. This contradicts the literature, because frequently enrollment barriers are considered to be higher for non-traditional students. In this study, traditional age students experienced higher levels of enrollment barriers which may have been a reflection of the questions pertaining to access to enrollment rather than actual barriers in enrollment services.

Attainment of Goals

In conclusion, for this study marital status was a predictor showing lower response scores suggesting reduced attainment of goals for married students. This is consistent with the literature when looking at non-traditional students considering that a majority of married students would meet the non-traditional status. It was the intent of the researcher to negate some of the negative stereotypes of unmarried parents living together by including them with married students. Ultimately this may have confused the overall results when compared to the literature, but it remains clear that most of the married students in this study were non-traditional and survey response levels for the attainment of goals were lower when compared to single students.

The Culture of Montana Tech.

In the context of this study, the culture of Montana Tech may have an impact on these results. Montana Tech has a unique, long-standing mission in the engineering and extractive minerals disciplines, offering no Associate of Arts, Bachelor of Arts or Master of Arts degrees. Demographically, institutional data shows Montana Tech's combined

campuses (two year and four year) have a majority of male and traditional age students. Additionally, there is no childcare which is individual to this institution when compared to others in the state. In the literature there was no institution found which had a comparable portfolio of disciplines and unique demographics. Small size of classes in this institution, as compared to those in other research studies, may also have had an impact on these results by increasing persistence rates and satisfaction with class experiences of students.

Recommendations

Introduction

The following recommendations and suggestions are made for administrators at Montana Tech based on the results of this study and what has been written on this topic in the literature. These recommendations are made in light of the goals of the state of Montana to increase enrollment of all students in higher education institutions by the year 2025.

Recommendation One: Enrollment Barriers

The results of this study showed a student's age as a predictor for enrollment barriers; non-traditional age students had lower levels of response for enrollment barriers suggesting they perceived fewer barriers. These results were contradictory to the literature which says non-traditional age students often have additional responsibilities combined with their pursuit of higher education causing greater barriers to enrollment. Consistent with the literature, a majority of parents in this study were non-traditional age

(74%) while the majority of non-parents were traditional age (76%). In the survey for this study, access variables affecting a student before they enrolled were transportation, family support, employment, and finances. With the distribution of the survey during the last week of the spring semester and academic year, one might surmise that currently enrolled student-parents (non-traditional age) included those that had overcome enrollment barriers. Administrators at Montana Tech should consider that it is conceivable that student parents may not be enrolling at all at Montana Tech or unable to continue their studies because of the enrollment barriers asked about in this survey. It is difficult to know why people do not enroll at an institution. However, listening sessions held with the community as to what ideas they have for increasing enrollments and increasing persistence may be helpful and may be warranted based upon the results of this study. Since the community in which Montana Tech is located is fairly small, the reputation of the institution is most likely well known and would have an impact on who decides to enroll and not enroll most specifically for the college of technology. Exit interviews or surveys with students leaving the institution may also yield valuable information. For example, the literature about non-traditional age students states that lack of finances is a common challenge for this age group. If this holds true for either potential Montana Tech students or students who enroll and then have to drop out, administrators may want to look at ways to help students with this challenge.

Recommendation Two: Student Services

Students' parental status was shown as a predictor in this study for the variable of student services. Parents had higher levels of survey responses. Student services included

questions about financial aid, counseling, tutoring, and housing. These results are also in contrast to the literature which says parents often have greater challenges with student services. Similarly to recommendation number one, administrators at Montana Tech should consider that it is conceivable that student parents may not be enrolling at all at Montana Tech because of the lack of adequate students services available to them either before they enroll (financial aid, and/or housing) or that, once enrolled, they do not continue to the end of the academic year because of lack of sufficient student services. The community listening sessions suggested under recommendation one is also made in regard to increasing their knowledge of community perception and experience with student services at Montana Tech. In addition, exit interviews or surveys with students who do not persist may yield valuable information about student services.

Recommendations Three and Four: Persistence

Students' parental status was shown as a predictor in this study for the variable of continuing to attend college. Parents had higher levels of survey responses. It should be remembered that this measurement was one of intention to persist rather than actual persistence; therefore student parents have higher intentions of persisting. The literature tells us that non-traditional age students and student parents can expect to experience numerous challenges throughout their journey in college (Kinser & Deitchman, 2007; Brown, 2004; Chaves, 2006).

Recommendation three is that administrators at Montana Tech capitalize on this increased intention to persist but anticipate parent's experiences of numerous challenges by creating support groups for student parents. These groups could meet twice a month

during the school year for individuals to discuss what is working well for them and any challenges they might be experiencing. Facilitators of this group, perhaps trained individuals from student affairs or counseling services would then be able to identify individuals who may need help before any challenge becomes too overwhelming to continue. While attendance at these sessions may be low, the ability to prevent just a few from dropping out and communicating the message that the college wants them to succeed may be helpful to all students. Administrators may also send out periodic communications to all students encouraging them to contact the student parent coordinator if they begin to experience any difficulties with their college attendance. Another possibility is that continuing to attend college could be encouraged by Student-Parent Study Family Fun Nights offering study-time for parents and entertainment for children to help balance roles and responsibilities of student and parent increasing a parent's study-time on campus.

Examining these results from the perspective of the earlier recommendations, they are in stark contrast to the literature which says parents often have greater challenges with persistence. Once again, since the survey in this study was distributed during the last week of the spring semester and academic year, one might surmise that the student-parents who were still enrolled at this time included only those that had overcome persistence barriers. In light of this, recommendation four is that administrators at Montana Tech carefully examine retention rates of all students at the institution to discover if there may be differences in actual persistence rates of parents and non-parents by implementing pre and post assessments. Presently, the Perkins grant is being utilized

to provide a student-parent support program for single student-parents earning two year degrees because of low retention rates from previous years as stated in the Perkins data. The reader is reminded Perkins grant participants are students living in poverty which is a sub-set of the sample in this study. Lower retention rates are being addressed with a student-parent support program which was introduced in September 2011. If administrators discover that other categories of student-parents persist at lower levels, married and/or four year degrees, as would be expected from reading the literature, they would want to look at additional methods to increase persistence of student-parents. While it is outside the realm of this study to anticipate what these methods might be, the literature provides ways that administrators could consider.

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APPENDICES

APPENDIX A

SURVEY

Student Perceptions

Instructions: Please answer the following questions. The purpose of this survey is to understand student's perceptions about enrollment, decisions to attend and continue to attend college, classroom experiences, student services, motivation, and goals in college. The results of this survey will be used to meet the criteria of a study about college students for a dissertation. This survey should take 5-10 minutes of your time. Your answers are anonymous.

You are to circle the appropriate letter or place a check mark in the appropriate box for each of your answers, and return this survey to your instructor. The survey is four pages and each page has directions of where to make check marks or circles.

By completing this survey you are giving your consent. This is voluntary and you may stop at any time. You do not need to answer any questions that make you feel uncomfortable.

I appreciate you taking the time to complete this survey for this dissertation study. It is my hope that the results from this survey can help administration to understand and provide services which students prefer

Please circle the answer that fits best:

- 1) I am presently earning a
 - a. certificate
 - b. 2 year degree
 - c. 4 year degree
 - d. graduate degree
 - e. undecided
- 2) After I finish this degree I would like to
 - a. Consider my degree as finished
 - b. Earn a 2 year degree
 - c. Earn a 4 year degree
 - d. Earn a graduate degree
 - e. undecided
- 3) What is your gender?
 - a. Male
 - b. Female
- 4) I am
 - a. Single / separated / widowed / divorced
 - b. Married or living with a partner
- 5) My age falls within this range:
 - a. 18 - 20
 - b. 21 - 24
 - c. 25 - 30
 - d. 31 - 40
 - e. 41 - 50
 - f. 51 or more
- 6) I am a parent
 - a. Yes
 - b. No
- 7) I am a grandparent raising grandchildren
 - a. Yes
 - b. No
- 8) I spend time coordinating or caring for my elderly parents (elder-care responsibilities)
 - a. Yes
 - b. No
- 9) If you are a parent please answer this question (**If you are not a parent please go to next the next page**)

How many children do you have who are dependents? _____

What are the ages of all of your children under 18 _____ over 18 _____

<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
--------------------------	-----------------	--------------	-----------------------

Please put a check mark in the box which

fits best

Environment

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I do not have transportation problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I do not have money problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I have a computer at home with internet | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. My friends support my education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. My employer supports my education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. My family supports my education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Courses are scheduled at convenient times | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. I can enroll at convenient times with my schedule | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Financial Aid Office hours are adequate | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. There is too much red tape for admissions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Decision to Attend College or Continue Attending:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 11. I decided to attend college to get a better job | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. I decided to attend college for myself | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. I decided to attend college for my family | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. I'm here because my current job needs college skills | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. A mentor/role model encouraged me to go to school | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. I haven't been motivated to do the work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. I need more computer skills for college | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. I have difficulty finding time to study | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. I have difficulty with studying | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. I have too many other demands outside of school | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. I do a good job balancing school and personal life | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. I find my studies rewarding | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. I enjoy what I'm learning | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. I feel my studies can help me make more money | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. I feel safe in my classrooms | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. I feel safe on campus | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
------------------------------	-----------------	--------------	---------------------------

Classroom Experiences

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 27. My professors are helpful | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. My professors' effort is high in teaching | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Professors are interested in my development | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. My professor is unreasonable in demands | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. The content is relevant | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. The courses are challenging | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. My participation is valued | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. I know and feel comfortable talking to my prof | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Student Services on Campus

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 35. Financial aid on campus is adequate | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. Tutoring on campus is adequate | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. Counseling services on campus are adequate | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. Housing on campus is adequate | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Motivation

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 39. I have self-confidence to complete studies | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. I have enough energy to complete studies | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. I enjoy studying in general | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. I like schools and classrooms | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. I don't feel extremely stressed | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. My family motivates me to study | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. The school recognizes the importance of family | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Goals

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 46. I will eventually achieve my academic goals | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. I will earn my degree from this college | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. I will transfer to another college | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. I will stop attending college for one semester | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. I will be forced to stop college a semester | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL MSU



INSTITUTIONAL REVIEW BOARD
For the Protection of Human Subjects
FWA 0000165

960 Technology Blvd. Room 127
 Immunology & Infectious Diseases
 Montana State University
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 Telephone: 406-994-6783
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Administrator:
 Cheryl Johnson
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MEMORANDUM

TO: Elyse Lovell and Marilyn Lockhart

FROM: Mark Quinn, Ph.D. Chair *Mark Quinn CJ*
 Institutional Review Board for the Protection of Human Subjects

DATE: April 25, 2011

SUBJECT: "Motivation and Perceptions of College Students Who Are Parents Compared to Non-Parent College Students" [EL042511-EX]

The above research, described in your submission of April 21, 2011, is **approved for oversight by the University of Montana**. The protocol is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal Regulations, Part 46, section 101. The specific paragraph which applies to your research is:

- (b)(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- (b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.
- (b)(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
- (b)(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.
- (b)(5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.
- (b)(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL U OF M



INSTITUTIONAL REVIEW BOARD
for the Protection of Human Subjects
FWA 0000078

Research & Development
University Hall 116
The University of Montana
Missoula MT 59812
Phone 406-243-6670 | Fax 406-243-6330

Date: March 14, 2011

To: Elyse Lovell/John Garic, Montana Tech

From: Dan Corti, IRB Chair

[Handwritten signature] 3/14/2011

Your IRB proposal cited above is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal Regulations, Part 46, section 101. The specific paragraph which applies to your research is:

- (b)(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- (b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.
- (b)(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) The human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
- (b)(4) Research, involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
- (b)(5) Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.
- (b)(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

University of Montana IRB policy does not require you to file an annual Continuation Report (Form RA-109) for exempt studies. However, you are required to timely notify the IRB if there are any significant changes or if unanticipated or adverse events occur during the study, if you experience an increased risk to the participants, or if you have participants withdraw from the study or register complaints about the study.

APPENDIX D

SURVEY INDICES AND QUESTIONS USED IN FINAL ANALYSES

Survey Indices and Questions Used in Final Analyses:

Continue to Attend College

- I haven't been motivated to do the work
- I need more computer skills for college
- I have difficulty finding time to study
- I have difficulty with studying
- I have too many other demands outside of school
- I do a good job balancing school and personal life
- I find my studies rewarding
- I enjoy what I'm learning
- I feel my studies can help me make more money
- I feel safe in my classrooms
- I feel safe on campus

Classroom Experiences

- My professors' effort is high in teaching
- Professors are interested in my development
- My professor is unreasonable in demands
- The content is relevant
- The courses are challenging
- My participation is valued
- I know and feel comfortable talking to my professors

Survey Indices and Questions Used in Final Analyses (Continued)

Student Services

Financial aid on campus is adequate

Tutoring on campus is adequate

Counseling services on campus are adequate

Housing on campus is adequate

Enrollment Barriers

I do not have transportation problems

I do not have money problems

I have a computer at home with internet

My friends support my education

My employer supports my education

My family supports my education

Courses are scheduled at convenient times

I can enroll at convenient times with my schedule

Financial Aid Office hours are adequate

There is too much red tape for admissions

Attainment of Goals

I will eventually achieve my academic goals

I will earn my degree from this college

I will transfer to another college

I will stop attending college for one semester

Survey Indices and Questions Used in Final Analyses (Continued)

I will be forced to stop college a semester

Motivation

I have self-confidence to complete studies

I have enough energy to complete studies

I enjoy studying in general

I like schools and classrooms

I don't feel extremely stressed

My family motivates me to study

The school recognizes the importance of family