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A PREDICTIVE MODEL FOR MSSW STUDENT SUCCESS

by

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B.A., Murray State University, 1993
M.S.S.W., University of Louisville, 1999

A Dissertation
Submitted to the Faculty of the
Graduate School of the University of Louisville
In Partial Fulfillment of the Requirements
For the Degree of

Doctor of Philosophy

Kent School of Social Work
University of Louisville
Louisville, Kentucky

and

College of Social Work
University of Kentucky
Lexington, Kentucky

May 2011

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A Dissertation Proposal Approved on

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DEDICATION

This dissertation is dedicated to my parents,
Rod and Judy Napier,
for giving me roots and teaching me how to fly.

I would not be here today if it were not for the tireless support and encouragement of Dr. Ruth Huber, who has served as my mentor throughout my doctoral studies. I would not have completed this program without her unending caring and support. She will truly be missed as the Director of the doctoral program.

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Lastly, I would like to thank my family and friends for their support throughout this long process: Grandma Brown, Grandma Josie, Judi Jones, Uncle Bob Brown, Carole Woods, Carrie Holstrom, and Christy Case. My support system is the best!

ABSTRACT

A PREDICTIVE MODEL FOR MSSW STUDENT SUCCESS

Angela Michele Napier

April 4, 2011

This study tested a hypothetical model for predicting both graduate GPA and graduation of University of Louisville Kent School of Social Work Master of Science in Social Work (MSSW) students entering the program during the 2001-2005 school years. The preexisting characteristics of demographics, academic preparedness and culture shock along with the subjective experiences of academic stability and academic performance were studied. A hierarchical multiple regression analysis was used to determine the best predictors of final GPA. The best predictors were age, undergraduate GPA, differences between undergraduate and graduate institution size, continuity index, and the course completion ratio. A hierarchical logistic regression analysis was used to determine the best predictors of graduation with an MSSW degree. The best predictors were age, prerequisite classes, rural/metropolitan nature of hometown, continuity index, course completion ratio and full-time student status in the first semester. Potential interventions and policy changes are detailed at both entry into and during the MSSW program. There is a need for future research in subsequent years at the Kent School of Social Work and other schools of social work that offer Master's degrees.

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CHAPTER I

PROBLEM STATEMENT

In 1973, only 28% of jobs in the United States required some college education. That number has skyrocketed to 59% in 2007 and is projected to increase to 62% by 2018 (Center on Education in the Workforce, 2010). Getting a college education is increasingly important in today's society. With the move toward globalization, in order to be competitive in this world, it is vital that our youth are educated at the college level.

There are both social and economic benefits to the individual and society for higher education attainment. Societal social benefits include lower crime rates, an increase in volunteerism and charitable giving, increased quality of societal life, better social structure and appreciation for diversity and an increased ability to integrate technology. Individual social benefits include an improved life expectancy/increased health, improved quality of life for children, better decision making for consumer products, higher personal status and more time for hobbies and leisure activities. Economic benefits to the society include higher tax revenues, less use of governmental public assistance, increases in flexibility of the workforce and higher rates of consumption. Economic benefits to the individual include an increase in benefits and salaries, increased chances of

employment, higher levels of savings and chances of mobility along with better working conditions (Institute for Higher Education Policy, 1998).

We are moving rapidly toward a knowledge-based global economy, one that requires the skills and knowledge of higher level degrees to keep it running (Student Tracking Early Alert Retention System, 2010). In order to be role players, we must focus our attention on the retention of college students from the time they start their college degree through completion. It is essential to fulfill the educational and economic requirements of this economy. To maintain the competitive edge, this nation's workforce must have training and education at the postsecondary level. This requires attracting and retaining a growing number of students (Lotkowski, Robbins, & Noeth, 2004). At the current rate, where less than half of students complete their college degrees within six years, there are areas for improvement in the retention of students through graduation (Student Tracking Early Alert Retention System, 2010).

Social work has adapted well to the knowledge-based global economy, and requires a master's degree to practice as a professional social worker in the field. Many higher education institutions regard students with master's degree in social work as the future leaders in this field. However, the National Association of Social Workers issued a press release in 2006 (Nadelhaft, 2006) warning of impending shortages of master level social workers in the very near future. Shortages in the number of professional social workers have led agencies to outsource and hire non-professionals to fill positions normally reserved for trained professionals who have MSWs. The Bureau of Labor Statistics, U.S.

Department of Labor (2010-11) predicts that due to the aging of America the employment of social workers is expected to increase by 16% in the 2008-2018 decade—much faster than the average of all occupations. Thus, it is imperative that the 196 schools of social work in the United States retain and graduate enough MSW students to fill this need—estimated in 2008 to be more than 642,000.

Another issue that causes the shortage of master level social workers, is the increasing demands placed on social workers in the field—often without adequate resources to support the demands of their clients. Such work is often very emotionally draining and at high risk of burnout (Söderfeldt, Söderfeldt, & Warg, 1995). This leads to many professional social workers leaving the field prematurely, even after acquiring the necessary skills and knowledge through graduate studies, placing more of a burden on educational institutions to train more social workers.

This shortage of professional social workers makes it imperative to ensure that those who do have an interest in social work and enter a higher education institution to get a masters degree, be retained through graduation. It will also be beneficial to get a better understanding of what are the characteristics of successful students who are able to attain this professional degree. This dissertation will add to the body of retention literature and knowledge by investigating a predictive model of potential factors leading to successful graduation from a master level graduate school of social work.

Historical Development of Retention Studies

Studies have been conducted to study the reason for, and develop models of, student attrition that can help increase school retention efforts. Spady (1970), Tinto (1975), Astin (1984), Pascarella (1985) and Bean and Eaton (2001-2002) have all contributed to the body of knowledge surrounding student retention. The following is an account of each of their findings.

Spady (1970) was recognized as the first person to propose a model concerning dropout among college students. Based on Durkheim's (1961) suicide model, Spady presented five variables that should be measured through the lens of family background—academic potential, normative congruence, grade performance, intellectual development, and friendship support—that are influential in social integration. He posited that a model for dropout is explained as “an interaction between the individual student and his particular college environment in which his attributes (i.e., dispositions, interests, attitudes and skills) are exposed to influences, expectations, and demands from a variety of sources (including courses, faculty members, administrators, and peers)” (Spady, 1970, p. 77). This allows the student to assimilate into the social and academic systems of the university. Lack of assimilation leads to dropout. Ultimately, after making some changes to his original theory, he concluded that formal academic performance is the main contributing factor when considering dropout (McClanahan, 2004).

Tinto (1975) was the next major contender in the quest to determine the reasons for college dropout. Also using Durkheim's (1961) suicide model, Tinto

focused on person-environment fit as a predictor of successful college retention. The degree to which a student is committed to his/her educational and career goals are a determinate of their success in school. The more students are committed to educational and career outcomes, the more likely they are to graduate. For example, students who are highly committed to their educational goals but have less commitment to their career goals are more likely to quit school before they finish their degree than students who have both strong educational and career goals. The combination of the two is the key to completion, according to Tinto. Institutional commitment (the degree to which students are attached to a school) also plays a part in whether students stay at a particular college or transfer to another school to complete their degrees (Tinto, 1975).

This theory was expanded by Tinto in 1987 with the addition of Van Gennepe's (1960) rites of passage model that included the degree to which students can separate from their previous ties, make the transition to the new environment and eventually integrate themselves with the academic and social nature of the new (academic) community. The more fluid the process of separation, transition and integration, the more likely students will stay in college. If there is a problem in one or more of these areas, students are more likely to dropout. Tinto also concluded that students from different groups (at-risk or adult, for example) each require a different form of retention strategy as do different types of colleges (private vs. public, for example) (McClanahan, 2004). Tinto's theories were the primary motive behind student retention programming

for over two decades (Braxton, 2000), though Lundberg (2003) criticized Tinto's work as being primarily based on white, middle class male students under age 23. Tinto (1990) concluded

. . . the secret of successful retention programs is no secret at all, but a reaffirmation of some of the important foundations of higher education. . . . In short, successful retention is no more than, but certainly no less than, successful education. (p. 47)

Astin (1984) presented a developmental theory based on the involvement of students (the amount of physical and psychological energy or effort given to attending school) that affected their persistence in higher education. Astin (1993) later determined three areas for student involvement that were most important to persistence: (a) academic interactions with faculty, (b) with peers, and (c) peers who were also students. His message concerning institutional support for students to increase retention involved an overarching approach. He believed that institutions could find their best solutions to retention within their existing structures. The commitment of the faculty and staff to the students' education was the most influential factor and could be enhanced with increased attention to student involvement with faculty and other students (Astin, 1984).

Pascarella (1985) reviewed the literature on the effects of college environment on learning and cognitive development and offered a causal model to assess these effects. In this model, Student Background/Pre-College Traits and Structural/Organizational Characteristics of Institutions had a direct effect on learning and cognitive development. The model also included the interactions

with agents of socialization (faculty and peers, for example), the institutional environment and the quality of student effort as factors influencing the outcome variable of learning and cognitive development. More specifically, he noted that residential facilities and dominant peer groups were the strongest influences. An additional influence, though not as strong, was faculty/student (informal) interactions outside of the classroom.

Bean and Eaton (2001-2002) professed the importance of looking beyond the sociological models of retention to the four psychological theories underlying the decision to remain in college, more specifically the reasons for integration into the school setting both academically and socially. These theories are attitude-behavior (the belief that attitudes affect behaviors), self-efficacy (the ability to improve upon one's own situation through personal effort), coping-behavioral (the ability to adjust to one's situation by assessing and adjusting to the environment), and the locus of control portion of attribution theory (the belief that one's own actions are attributable to one's self and actions (internal locus of control) or outside influences (external locus of control)). These theories are then used to examine the psychological processes that highlight why some retention programming is successful (Bean & Eaton, 2001-2002).

Of the most important psychological processes are self-efficacy assessments, normative beliefs and past behaviors that lead students to assess their goodness of fits within their academic community. As the student tries to assimilate with the bureaucratic, academic and social realms of the academic community, the psychological response is the sense that they are academically

and socially integrating. This integration leads them to the attitudes that they have institutional fit and loyalty (the idea that students feel they have chosen the correct school to attend and that they fit in at that school). Institutional fit and loyalty lead to the intention to continue their studies which leads to actual persistence. Retention of students is dependent upon academic integration (Bean & Eaton, 2001-2002).

As is clear from the above historical overview, traditional retention theory evolved over the years to account for not only sociological processes that play a role in retention but also psychological factors that can contribute to academic integration and retention.

Current Practices, Theories and Knowledge about Retention

Extensive research has been devoted to undergraduate college student retention (chronicled by Girves & Wemmerus, 1988) and has resulted in important practices that have been used repeatedly in studies focused on increasing retention at higher education institutions. This has resulted in scientific articles focusing on potential predictors of retention. McClanahan (2004) analyzed this 40-year body of literature, including that from the American College Testing (ACT) *Information for Life's Transitions* program that has amassed an extraordinary library of literature, literature reviews, and data sets. Despite the attention it has received, attrition rates are still relatively high (McClanahan, 2004).

Girves, Zepeda and Gwathmey (2005) promote mentoring as an effective tool for retaining undergraduate students and defined mentoring as one-on-one

relationships between a student and a member of the academic community. This support leads to better academic integration in the university setting, and academic integration leads to a higher retention rate. Lundberg (2003) also held that social integration can lead to a higher retention rate. Grosset (1991) found that integration was more important to students' persistence in younger students than in older students.

Hurtado (1992) indicates that a positive campus racial climate can lead to greater retention of undergraduate students. Racial climate is a part of every campus and harmonious equality is one of the goals for bettering student development in campus environments. Student perceptions of a negative environment can influence their decisions to stay in school. In this study, Black and Hispanic students were more likely to perceive a negative racial environment than Whites, resulting in the potential of more diverse students fleeing the university setting, thereby leading to a poor retention of minority students.

Grosset (1991) proposed two factors that relate to students' propensity to remain in college through their Bachelors degree: (a) pre-entry characteristics such as age (younger students were more likely to persist than older ones), and (b) the importance of goals and commitments (important to both younger and older age groups). Students who felt fully integrated into campus life (as one with the campus) were more likely to return until they completed their bachelor's degrees. Lundberg's (2003) work also found that social integration was key to younger students returning to campus year after year, and cited support from

Astin (1993), Pace (1984), Pascarella and Terenzini (1991), Pascarella, Edison, & Whitt (1996), and Tinto (1987 & 1993).

For doctoral students, studies focus on the socialization of students (Golde, 2003; Taylor & Antony, 2000); ethnicity and time-to-degree (Crayton, 2005); financial support, advising, clarity of program expectations and requirements, and length of time to degree completion (Ehrenberg, 2005); and the impact of faculty expectations on student success (Taylor, 2005), to name a few. These studies are concerned with predicting student completion of a doctoral degree.

The main focus of retention studies have traditionally been on undergraduate programs, with some studies focused on Ph.D. education. Retention studies focused on master level education is very rare. Isaac (1993) posits that graduate school is more individualized and less structured than undergraduate education, making retention studies more complicated in graduate programs. Each graduate degree has different requirements and lengths of time to degree, making it difficult to establish norms across disciplines for graduate degrees. As with undergraduate programs, the data from Ph.D. only studies can potentially point to a viable direction for future retention studies focused on master degree programs. This dissertation has the potential to fill the current void with a study exclusively focused on master level retention.

Conclusion

This chapter first discussed the historical development of retention theories and the current research addressing retention in higher education. The

purpose of this dissertation is to determine the factors influencing MSW students as they pursue and attain their degrees so that a model of predictive factors can be created. Chapter II investigates a model for social work retention.

CHAPTER II

LITERATURE REVIEW

This chapter covers social work specific theories that can be applied to retention studies as well as the different prediction models and variables identified in previous retention studies. The literature is organized by (a) a social work specific theoretical framework for understanding retention, (b) a transition from theories to models, and (c) the variables associated with a proposed social work model for retention.

Theoretical Framework for Understanding Retention

In Chapter 1, the specific theoretical framework that was developed over the years to study retention was discussed. In this chapter, the focus will be on two social work specific theories that informed this work, namely ecological theory and its predecessor, systems theory. Systems theory requires the consideration of forces outside of individuals that affect their lives. Ecological theory looks at persons' life courses and emphasizes that different people take different paths to get where they are today. That path is influenced not only by their past experiences, but also by their current daily experiences and interactions (Germain & Gitterman, 1980).

Systems Theory

The notion here is that a system is composed of interrelated parts that, together, are greater than the sum of the separate parts. A system can be conceptualized as linear. Applied to a school of social work, the school is the system that receives inputs (students) and produces outputs (outcomes, or students who earned their MSWs). Between the inputs and outputs is a conceptual black box that transitions inputs into outputs and can be seen as doing this via two different mechanisms (in computer jargon), hardware and software. Hardware are those components that can be touched or seen, e.g. rules, policies, curricula, and schedules. Software can be seen as what actually *happens* to convert incoming students into MSWs—the actual results of teaching, mentoring, and advising—phenomena that cannot be touched or seen, but that affect retention (Huber, Nelson, Netting, & Borders, 2008).

Surrounding the system is the suprasystem that both sends students to the school because of its success rate, among other reasons, and hires MSWs when they graduate. If the output (MSWs) were not acceptable to the suprasystem, e.g. agencies that hire MSWs, students would cease entering the school of social work system and the school would experience entropy (death) (Huber, Nelson, Netting, & Borders, 2008).

More specific to this study, Tinto (1987) conceptualized universities as systems with students as inputs and the campus and classroom atmospheres as subjective experiences that occur in the transition (software in the black box) from student to graduate (output). Suprasystems surround systems, and

systems are both dependent upon and responsible to the systems. For example, when students graduate with sufficient knowledge and skills to succeed as professional social workers, the system accepts them by employing them, thereby validating the veracity of the university/school of social work system (the system was held accountable by the community of social work employers in the suprasystem). Thus, the suprasystem recognizes the value of the academy and sends other students to the school of social work (new input); thus, the academic system is dependent upon its suprasystem for ongoing feedback and new input to sustain itself.

Conversely, if students exited the academic system and were not well prepared for social work positions in the suprasystem, they would not be hired (or if hired, possibly not retained very long), and the suprasystem would give negative feedback by not sending fresh input (new students) to the school of social work. When this happens with an open system such as described here, two results are possible: (a) the system learns from the feedback loop and corrects the errors of its ways, or (b) entropy occurs—the system dies—the school of social work is closed in the next budget cuts. “A distinctive feature of open dynamic systems is that they are both self-maintaining and self-transforming” (Robbins, Chatterjee, & Canda, 2006, p. 41).

One of the great advantages of the systems theory is its versatility. Virtually anything, anyone, and most of their subparts can be examined from a systems perspective. The human body is an absolute marvel of a system that takes in all kinds of foods, liquids, vitamins, poisons, and good and bad ideas,

and turns them into a human being that is unique to every other human being, past, present, or future. The brain itself is a complete system, as are other organs, i.e. hearts and lungs. Academicians, therefore, have carte blanche to identify our own systems for study, be they churches, agencies, families, businesses, schools, focus groups, classes, cohorts, faculty senates, political parties, and athletic teams.

Similar to Tinto's (1987) study, but more relevant to this study, a school of social work is the system of interest. The signal input here is an incoming social work student and education occurs in the transition from student to graduate (students entering the school is a signal for the system's wheels to start turning—for policies to work and teachers to teach). In this system's suprasystem are a plethora of entities to which a school of social work is responsible, including, for example, private and public social service agencies, the public school system, corrections facilities, myriad medical settings, and the political arena.

Another way in which the systems theory is flexible is that it can accommodate other systems within its own structure. For example, ecological theory, discussed below, can be seen as codified in the hardware of the transitory black box, and its effect on signal inputs (students) as part of the software (the dynamics of change). However, it can also be used as different kind of systems theory and be a useful, independently functioning tool.

Ecological Theory

Two components of the ecological theory are especially relevant to this dissertation: habitat and niche. Habitat refers to the resources, or lack thereof, to

which students have access for support during life stressors (e.g. graduate education). Niche refers to students' roles in their environments and the goodness of those fits with others (Hepworth & Larsen, 1993). How these components fit into a general systems way of thinking is clear: resources constitute input and roles played by students in their environments represent dynamic human interactions (software).

Habitat. Habitat refers to the physical and social environment within a cultural context (Hepworth & Larsen, 1993). When the habitat is rich with resources relevant to growth and development, humans tend to grow. When the environment is deficient in those areas, humans struggle to thrive. Those with abundant resources tend to flourish when they experience stressful life events such as undertaking an MSW. Those with limited resources tend to turn to coping mechanisms to control the stress by becoming depressed, chemically dependent, or, in the case of the MSW student, stopout¹ or drop out of school. Applied to the current study: because the MSW program is sure to increase stress in students' lives, considering the environments from which the student came and how they differ from life at school may help determine who will react negatively to the stress, and thus might benefit from extra support.

Niche. Students who come from similar backgrounds, races, etc. are more likely to find positive goodness of fits (niches) with their school environments

¹ Stopout: students who stop attending school for a number of semesters before returning to finish their degree.

(Hepworth & Larsen, 1993). This research is geared toward discovering whether those students who do not fit into the majority student population are at increased risk of dropping out. Because students are transitioning from their roles as students to professionals, this is a stressful time. When various cultures, environments, and backgrounds come together in a program, is there a significant difference in their completion rate? Ecological Systems Theory is useful in the endeavor to answer this question and determine the areas in which more resources would improve their abilities to cope with their life stressors and complete their degrees.

Tinto's (1987) work also emphasized niche as one factor contributing to student retention. The more familiar the university setting, the less adjustment required of the student. The less adjustment time required of the student, the more attention they can focus on their education. Those students who are learning how to navigate large cities and campuses for the first time have to pull their attention away from their educational experiences to learn how to navigate their new environments. It seems logical that a student from a larger university would be able to adjust more quickly to another large school, thereby allowing them to target their attention elsewhere. Extending that one step farther, those students who have already taken classes at the university to which they are applying to pursue their graduate education may have a significant advantage over those who are not familiar with the processes of large universities. Taken even farther, international students have significant cultural adjustments to make, regardless of whether they are from urban settings in other countries.

From Theories to Model

The above two theories have been used to develop a hypothetical model for this study. The final developed model focuses on five factors that fall under 2 domains: *Preexisting Characteristics* and *Subjective Experiences*. The domains help describe students from the time before they started the program (preexisting characteristics) through when they leave (subjective experiences)—regardless of whether they earned their degrees. In the developed hypothetical final model *Preexisting Characteristics* can be seen as input into the school of social work system, student *Subjective Experiences* are conceptualized as the transition between inputs (students) and outputs (MSWs), and *Academic Outcomes* represents the systems' outputs (Final GPA and graduating with an MSW).

This hypothetical model will be analyzed in stages to appropriately inform Schools of Social Work in each stage of the important characteristics in students that can be predictive of success. In the first stage, the preexisting characteristics will only be used to see how these characteristics predict final GPA and graduation with an MSW. This first stage is important in helping Admission Committees in Schools of Social Work making informed decisions about which of the preexisting characteristics students bring can maximize success in graduate school. The goal is not necessarily to accept only students who meet the characteristics that can lead to the most success, but to be aware early on in the process of admission which students may need support to be successful. In the second stage, the subjective experiences (inputs) will be analyzed independently from the preexisting characteristics to see which characteristics are the most

important when students are actively engaged in their studies. This can help Academic Review Committees in Schools of Social Work to determine early warning signs where students may need additional support. This model will be a hybrid model, where students' final GPA will first be treated as an outcome variable and then included as a predictor in the final analysis where graduation will be the outcome variable. Finally, in stage 3, the preexisting characteristics and subjective experiences will be analyzed in one model, first with final GPA as the outcome variable and then with graduation as the final outcome variable to see which of all these characteristics stand out as the main indicators of success in graduate school, both in terms of final GPA and in terms of graduation.

Stage 1: A Hypothetical Model of Preexisting Characteristics Predicting Academic Outcomes

The part of the model that will be tested in Stage 1 is displayed in Figure 1 below. As can be seen from the figure, the three factors that represent preexisting characteristics are demographics, academic preparedness, and culture shock that together can predict final GPA and graduation.

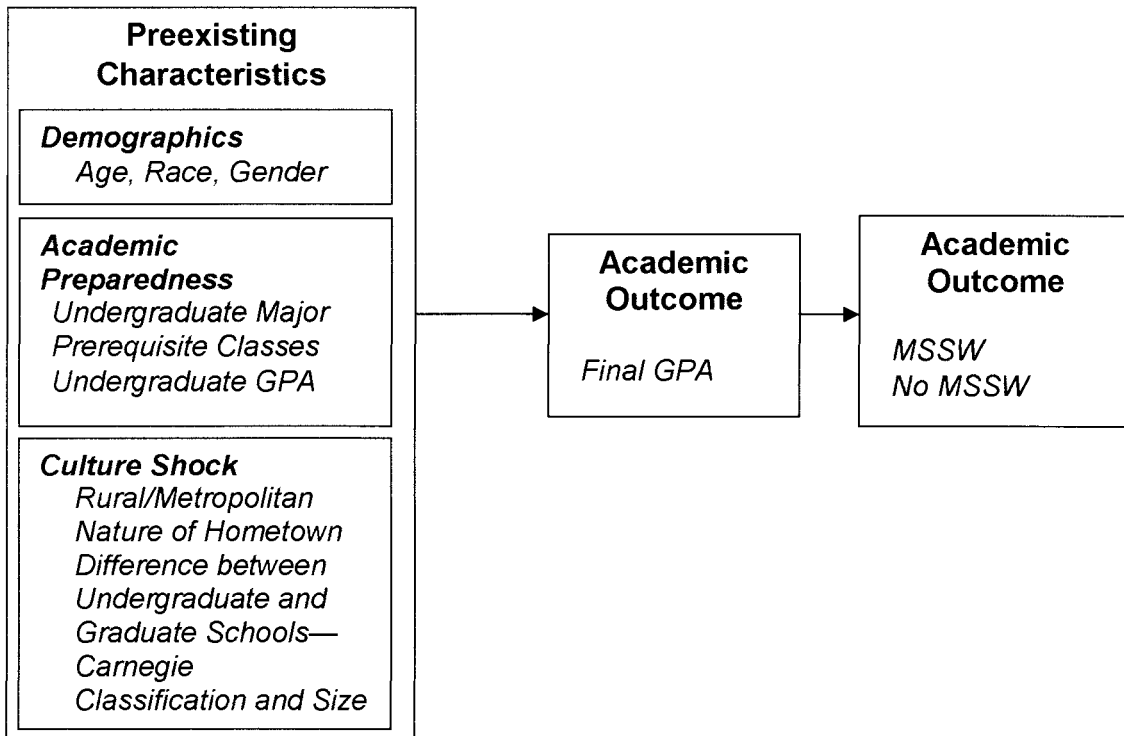


Figure 1. Stage 1: A Hypothetical Model of Preexisting Characteristics

Predicting Academic Outcomes

Variables Associated with Stage 1 Model

Preexisting Characteristics. Preexisting characteristics consist of demographics, academic preparedness and culture shock. These three factors are detailed below.

Demographics. Demographics is the first factor in the preexisting characteristics domain. With the exception of Grosset (1991), most studies include basic demographics such as race, age, gender and socioeconomic status (e.g. Bash, 2003; Bowie & Hancock, 2000; Lundberg, 2003). In today's campus environment, age has a different meaning than in previous decades. For example Lundberg (2003) has found that the typical undergraduate student is nowadays a non-traditional adult learner. Also, gone are the days when students

go directly from their Bachelor's degree into their Master's with few responsibilities outside of schoolwork. Cross (1981) described this as the "linear life plan" where "education is for the young, work for the middle aged, and leisure for the elderly" (p. 9). Today's graduate students simply do not fit that mold. They are much more diverse, older, more likely to be female, usually married, have responsibilities to their families, and are attending school part-time while remaining employed full-time. Because of their multiple roles, more than half of the graduate students in the United States attend classes on week nights and weekends (Bash, 2003; Syverson, 1999). They are juggling these multiple roles and attempting to increase their education simultaneously. The time constraints of their everyday lives do not leave much time for them to attend classes and complete their assignments, making them impatient with assignments that do not seem to relate to their personal goals for learning (Bash, 2003).

Berger (1992) found age to be nonlinear in predicting retention through to graduation. In other words, the younger and older students were more likely to remain in school until they graduated with those in the middle age group (35-44) less likely to graduate. She speculated that the students in the middle age group might have had more outside commitments (i.e. adolescent children) that took more of their time than those in the younger and older age groups, preventing them from graduating.

Race is another important demographic variable to consider in any retention study. Ten years ago, the profession of social work announced a call to all schools issuing MSW degrees to enroll more minority students (Bowie &

Hancock, 2000). African American and Hispanic enrollment in MSW programs doubled between the 1993/1994 and 1999/2000 school years (Ghali, 2002). Although the number of MSW degrees awarded to all minorities has remained steady over the past decade, the rates of degrees awarded to African Americans have steadily declined over the past 25 years (Bowie & Hancock, 2000). They reported that “the fluctuating percentages of African-American MSW enrollees and graduates are not even close to being consistent with increases in the total U.S. African-American population” (p. 444). These students of color seem to face greater problems doing college work (Landry, 2002-2003) and are more likely than any other race to drop out of college (Ott, 1988). For social work as a helping profession, this is problematic because “one reason for underutilization of mental health services by people of color is the underrepresentation of nonwhite service providers” (Bowie & Hancock, 2000, p. 432).

Gender is another important demographic variable to consider. There is much research on the difference between how women and men experience higher education (e.g., Landry, 2002-2003, Tinto, 1993). Student gender may affect the students' level of social integration. Many studies in education have investigated the role of female faculty and female students in male-dominated professions. Some of these studies clearly showed how students from different genders act differently in the classroom and also how they act differently to instructors of the same and different gender (Krupnick, 1985; Little, 2004; Watson, Modgil & Modgil, 1997). For example, a woman in a field dominated by men may not have the social support that can lead to retention (Ott, Markewich,

& Ochsner, 1984). Female students also tend to be less talkative in the classroom, with men speaking two and a half times longer during class in one study, especially when the instructor is also male. When the instructor is female, female students tend to talk more—almost three times longer when they had female instructors than when the instructor was male (Krupnick, 1985).

Social work is not a male-dominated profession. According to Schilling, Morrish and Liu (2008), master's degree programs in social work produce on average 85% female graduates taught by two thirds female faculty. Not much research has been done to investigate this female dominated environment and what it does to the learning environment, specifically for male students. Some studies say men and women have different learning styles (Wehrwein, Lujan & DiCarlo, 2007), making one wonder if female faculty in social work programs are alerted to these differences. Other studies report that the support system surrounding women is closer and more helpful than those around men. Women seek outside support from faculty more often than men; according to Tinto's (1990) theory of retention, this could mean that women develop and maintain healthier habitats while in school. In contrast, other studies report that men tend to progress through degrees more easily than women (Landry, 2002-2003). Now that women are the new majority in graduate education (Syverson, 1997) and also in social work education specifically, there may be implications for gender influences in this study.

Findings on the three variables of the Demographics factor (age, race, and gender) are detailed in the following table (Table 1).

Table 1

Retention Studies Related to the Three Variables in the Demographics

Factor

Variable	Variables & Method	Population	Findings
Age (Reason, 2009)	Meta-analysis	Undergraduate college students	Between 2000 and 2010, the number of students over the age of 25 may increase, the proportion of students of "traditional" age (18-22) may decrease slightly.
Age (Berger, 1992)	Logistic regression model including 8 potential predictors of retention.	352 BSW students at Lehman College, 1980-1987.	The oldest and youngest groups of students were most likely to graduate. Students aged 35-44 were least likely to graduate.
Race (Reason, 2009)	Meta-analysis	Undergraduate college students in the U.S.	21% of all undergraduate degrees went to students of color in 2000; A 40% increase in the number of students of color in 2000-2010 is expected.
Gender (University of Virginia Teaching Resource Center, 2010)	Meta-analysis	Kindergarten through graduate school	Teachers are more likely to call on male students, even when female students raise their hands or when no one does; female students make shorter and quieter statements [in class]; female students present their statements in a more hesitant, indirect or "polite" manner or use "I" statements; female students qualify their answers and/or apologize for their statements.
Gender (Reason, 2009)	Meta-analysis	Undergraduate college students in the U.S.	Women accounted for 55% of undergraduate population in 1999, this is expected to increase to 58% by 2011.

Academic preparedness. Academic preparedness is the second factor in the preexisting characteristics domain and refers to how applicants have performed academically prior to admittance to the MSW program as such factors hold significant weight in admission decisions. A few studies have addressed the importance of performance in undergraduate education as a predictor of retention and doing well in MSW programs (e.g. Dunlap, 1979; Pfouts & Henley, 1977). The importance of admissions criteria cannot be overstated. "Because

dropout and failure rates are low (in social work programs), entry is highly correlated with graduation. Thus, admissions practices exert a large influence on the human resources of the [social work] profession” (Dunlap, Henley, & Fraser, 1998, p. 455). Girves and Wemmerus (1988) also reported that selection of the right students at admission is a critical factor toward degree completion stating “faculty need to give greater attention to and emphasis on entrance criteria” (p. 184).

Students' *undergraduate major* is the first variable to consider under academic preparedness. For this study, the undergraduate major will be classified according to Biglan's classification system (Biglan, 1973a, 1973b), where the different majors will be classified as either hard or soft and either pure or applied. The underlying premise in investigating the undergraduate major is that it is hypothesized that students coming from a social work undergraduate major or at least a major in a related discipline that is also soft and pure like social work will be able to be more successful in their graduate studies than a student who majored in a hard and applied scientific field.

Although most educators in social work agree that students from a hard, applied scientific undergraduate field will have more difficulty being successful in a social work graduate degree, it is unclear if an undergraduate degree directly in social work is better than a degree in a related field. In the social work profession, there are two views of whether it is better for MSW students to have their bachelor's degrees in social work or if it is better to have a bachelor's degree in a related soft and pure discipline. One view is that the background in

different academic perspectives, e.g. from sociology, psychology, humanities—the broader the undergraduate education an MSW student brings to an MSW program—the better rounded/better educated will be the MSW graduate. The additional advantage is that the student coming to graduate school in social work from another related field, has to go through a longer masters degree than someone coming directly from a bachelors degree in social work. Typically, students with a Bachelor's in Social Work (BSW) degree complete their MSW in half the time required from a student without a BSW. Concern has been expressed that it is difficult for students in these short programs to acquire the specialized knowledge and skills to practice as professional master level social workers (Aguilar, Brown, Cowan & Cingolani, 1997). The opposing preference of many MSW educators is that it is advantageous for MSW students to already know the basic tenets and roots of the social work profession acquired in BSW studies. Some studies found no difference in the skill level of incoming students with a BSW degree and students without a BSW who receive the basic tenets and roots of the social work profession content in their first year of MSW study (this content is exempt for BSW graduates). It may simply be easier to produce well-grounded professional social workers if the ground work is already laid before students enter MSW programs (Aguilar, Brown, Cowan & Cingolani, 1997).

Applicants to MSW programs, particularly if the undergraduate degrees were not Bachelors in Social Work, are often required to take certain *prerequisite classes* upon acceptance into MSW programs. These classes are conditions of

enrollment and include human biology, research methods, and statistics. If applicants have not met these prerequisite classes in their undergraduate studies, they are expected to complete them within their first semester in Kent School's MSW program. When students are allowed to enter MSW programs without the required prerequisites, is there a higher likelihood that they will encounter problems as they try to undertake both preparatory and graduate studies simultaneously? The importance of prerequisite education on the success of students is still under review. Potolsky, Cohen, and Saylor (2003) found that prerequisite courses were positively correlated with better academic performance for nursing students, especially with first semester performance. In contrast, Abou-Sayf (2008) found that, among community colleges, if prerequisite classes were *waived*, students' grades actually *increased*, calling into question the relative importance of prerequisite classes. Is it possible that the more prerequisites the student is lacking at admission, the worse they will do in their graduate studies? Or does taking prerequisites immediately before and during the first semester of study actually enhance the graduate education experience and lead to a greater likelihood of graduating? The rationale for including prerequisite classes in this study relates to determining the significance of these courses on degree completion.

Undergraduate GPA is the cumulative grade point average for students upon completion of their bachelor's degrees, and students with higher undergraduate GPAs are more likely to do well in MSW programs (Dunlap, Henley, & Fraser, 1998). Likewise, Maggio, White, Molstad, and Kher (2005)

reported that higher high school GPAs positively affected college GPAs, which then predicted retention (Bean, 1985). While Pelech, Stalker, Regehr and Jacobs (1999) reported that undergraduate GPA is one of the most valid predictors of success in their BSW program, they also stated

“social workers generally do not believe that the best candidates for graduate education are simply those with the highest grade point average (GPA). The professions mission and values, especially those which value life experience and respect for diversity, have influenced our thinking about selection criteria. Volunteer and paid work experience in social service areas have come to be seen as useful preparation for social work education, and such experience has increasingly been credited in admissions decisions in addition to written personal statements, references, performance in interviews, and prior academic performance” (¶ 1).

MSW admission committees often see applicants with low undergraduate GPAs (often at applicants' younger ages) yet read glowing references of applicants' capabilities and sense great potential. This is often a simple reflection of a little growing up, along with applicants' realization that graduate degrees are required if they are to reach their career goals. Dawes (1975) explains that students who have performed poorly in one key admissions area (for example, undergraduate GPA) but done well in other areas are likely to get admitted to graduate school. The undergraduate GPA may or may not be a predictor of success in the MSW program.

Results of research on the three variables (undergraduate major, prerequisite classes, and undergraduate GPA) of the Academic Preparedness factor are detailed in the table below (Table 2).

Table 2

Retention Studies Related to the Three Variables in the Academic Preparedness Factor

Variable	Variables & Method	Population	Findings
Undergraduate Major (Baird, 1990)	Correlations; Program Size, Characteristics of graduates, Reputational survey results, University library size, research support, and publication record	Research-Doctorate programs in 32 disciplines from 228 universities, studying doctoral students	Doctoral students are advised to enter the same discipline as their undergraduate major to minimize the amount of time it takes to earn their degree.
Prerequisite Classes (Abou-Sayf, 2008)	Independent samples t-test; Enrollment, withdrawal rates, GPA, English and math prerequisite courses	1,614 students at Kapiolani Community College during the Fall 2006 semester	There was a small overall loss in mean GPA (-0.05) when prerequisites were waived or recommended, although this overall difference between 2005 and 2006 was not statistically significant... These results suggest that, for the courses that were included in this study, changing a mathematics or English prerequisite from "required" to "recommended" was detrimental to student grades, whereas completely waiving an English prerequisite led to an improvement in student performance. Instructors by and large did not find a difference in students' preparedness as a result of the elimination of prerequisites.
Prerequisite Classes (Potolsky, Cohen, & Saylor, 2003)	A two-tailed Pearson correlation coefficient. Prerequisite course grades versus final grade in nursing classes Pathophysiology	37 students enrolled in first semester nursing courses.	There is a high positive correlation between the average prerequisite science course grades and mean Pathophysiology grade ($r=.77$, $p=.01$). There is a moderate positive correlation between mean prerequisite science course grades and mean Pharmacology grade ($r=.60$, $p=.01$).

Variable	Variables & Method	Population	Findings
Undergraduate GPA (Dunlap, Henley and Fraser, 1998)	Blockwise multiple regression (comprehensive exam score, undergraduate GPA, GRE score at admission)	654 MSW-level students at one state university between 1985 and 1992 who took a comprehensive exam prior to graduation as a measure of academic performance	With background variables controlled, undergraduate GPA ($r=.141$) and total GRE score ($r=.367$) were significantly correlated with outcomes on the comprehensive exam (higher undergraduate GPA and GRE scores resulted in higher scores on the comprehensive exam). Together, they explained 13% of the variance in comprehensive exam scores.

Culture shock. Culture shock, as the third factor in the preexisting characteristics domain, is identified as the degree of difference between students' home environments and that of their new academic settings. Oberg (1954, 1960) described the stages of culture shock as incubation, crisis, recovery, and full recovery. Students who have changed settings in order to attend graduate school at the University of Louisville are at risk of progressing through these stages. In the incubation stage, everything seems to be going well as students adjust to their new environment. During the crisis stage, a situation happens that students do not feel they can handle and stress increases. This is the stage where students are at risk of dropping out of school or performing poorly in their classes. Recovery is a stage when the specific situation has been resolved and full recovery comes when students are back to a manner of equilibrium.

The first variable under the culture shock factor that will be considered is the *rural or metropolitan nature of the student's hometown* and whether that status is the same as the metropolitan (sometimes known as urban) status of Louisville, KY where the University of Louisville is located. If, for example,

students are attending metropolitan universities when their life experiences have included only rural settings, they have larger adjustments to become familiar with not only the new school, but also the metropolitan environment surrounding the school. Graduate school offers many challenges to a new student—advanced learning and expectations—students who are adjusting to a new geographical area in addition to the adjustments of all students who are changing from undergraduate to graduate education can provide additional barriers to successful completion of the MSW degree.

The difference between students' undergraduate and graduate schools—Carnegie Classification is a second variable under the culture shock domain. The Carnegie Classification system provides a way to differentiate between levels of homogeneity across institutions (The Carnegie Foundation for the Advancement of Teaching, n.d.). The Carnegie Classification systems have been widely used to research colleges and universities since their inception in 1973 (McCormick, Pike, Kuh, & Chen, 2009) and provide a way to consider the level of adjustment needed by student's moving from undergraduate to graduate education. Typically universities classified as research I and II give high priority to research and many of their lower level classes are taught by either doctoral student assistants or part-time faculty. If students did their undergraduate studies at one of these universities, they are more used to classes being bigger and taught by faculty other than the tenured track faculty at the School of Social Work, resulting in less adjustment issues. On the other end of the continuum, masters I and II universities put their emphasis on undergraduate rather than

graduate education, with small classes and greater faculty involvement in teaching. If students received their bachelor's degrees from these types of universities, the culture shock will be much more prominent if they do their masters degree at a research I and II university (Morton & Beard, 2005).

The difference between students' undergraduate and graduate schools—size of undergraduate university is the third and final variable under the culture shock domain. A review of the literature revealed no studies of the size of the undergraduate university on the potential for culture shock when changing from a larger to a smaller school when going to graduate school or vice versa. There was also no literature on the size of the undergraduate or graduate university on retention of students. However, this topic is richly researched in reference to elementary to high school education. In *A Review of Empirical Evidence About School Size Effects: A Policy Perspective*, Leithwood and Jantzi (2009) did a meta analysis of 57 articles on school size effects for elementary through high school. They discovered that the research supports the notion that smaller schools equal better academic achievement, especially for those from disadvantaged social and economic backgrounds. Larger school size is also negatively associated with school drop-out (Leithwood & Jantzi, 2009). The smaller schools allow for greater student engagement, supporting Tinto's (1987) theory that habitat is essential to student retention.

Results of research on the three variables (rural or metropolitan status of students' hometown, difference between students' undergraduate and graduate schools—Carnegie Classification, and difference between students'

undergraduate and graduate schools—size of undergraduate university) of the Culture Shock factor are detailed in the table below (Table 3).

Table 3

Retention Studies Related to the Three Variables in the Culture Shock

Factor

Variable	Variables & Method	Population	Findings
Rural or Metropolitan status of students' hometown (Summerskill, 1962)	Correlation, rural/urban nature and size of hometown, retention	Undergraduate students	There was a significant negative correlation between the size of the hometown and dropping out. Students from rural areas and students from small towns had higher attrition rates.
Difference between students' undergraduate and graduate schools—Carnegie Classification (Pike, Kuh and Gonyea, 2003)	ANOVA tests, effect sizes, latent variable models in LISREL 8.3	1,500 Undergraduate students nationwide who completed the College Student Experience Questionnaire, 4 th ed.	Institutional differences as indicated by Carnegie type were not directly related to differences in students' gains in learning. They are instead the result of the differences in the students' background characteristics.
Difference between students' undergraduate and graduate schools—size of undergraduate university (Leithwood and Jantzi, 2009)	Meta-analysis	Elementary and secondary schools	Small schools are better for students who traditionally struggle at school and who are from disadvantaged social and economic backgrounds. Elementary schools with students who fit these categories should not exceed 300 students. Elementary schools with other populations should not exceed 500 students. Secondary schools should not exceed 1,000 students, 600 or fewer if the students are from diverse or disadvantaged backgrounds.

Stage 2: A Hypothetical Model of Subjective Experiences Predicting

Academic Outcomes

The part of the model that will be tested in Stage 2 is displayed in Figure 2 below. As can be seen from the figure, the two factors that represent subjective

experiences are academic stability and academic performance that together can predict final GPA and graduation.

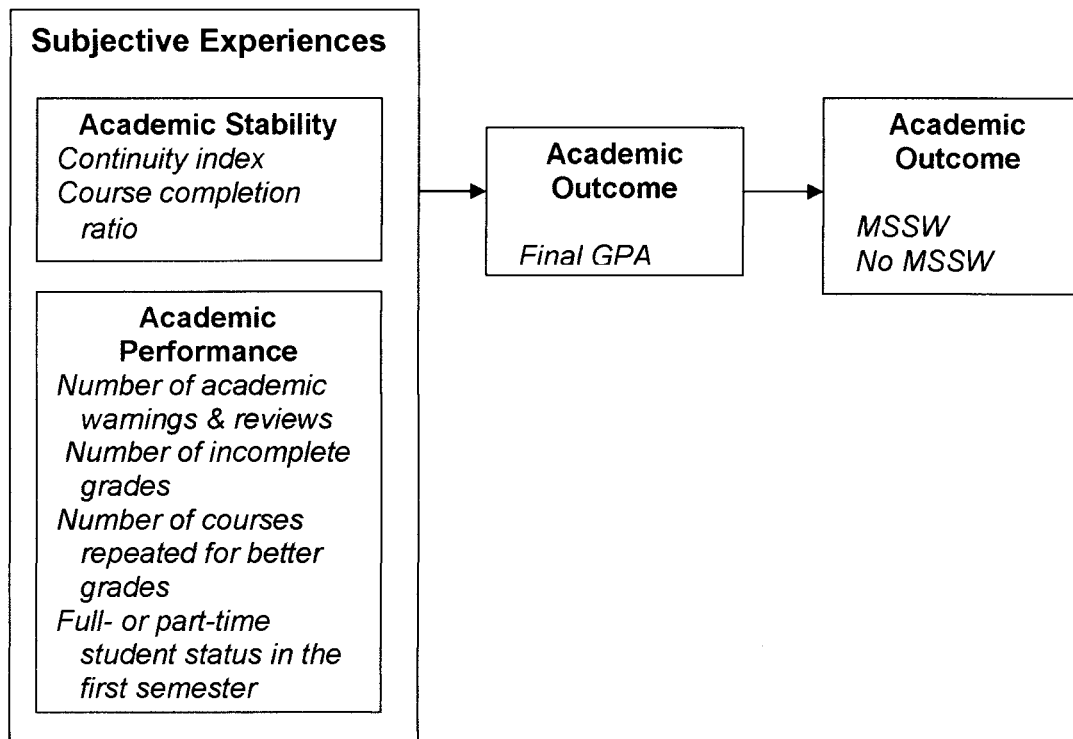


Figure 2. Stage 2: A Hypothetical Model of Subjective Experiences

Predicting Academic Outcomes

Variables Associated with Stage 2 Model

Subjective Experiences. Two factors, namely academic stability and academic performance, represent the impact of the subjective experiences in graduate education on retention. While previous studies have emphasized the value of the preparedness of the student for graduate education (Grosset, 1991; Lundberg, 2003; Golde, 2003; Taylor & Antony, 2000), studies have also emphasized the importance of the actual experience of attending school on overall retention (Girves, Zepeda, & Gwathmey, 2005; Hurtado, 1992; Ehrenberg, 2005; Taylor, 2005).

Academic stability. Academic stability is the first factor under the subjective experiences domain and universities typically express this as continuous enrollment. But Hagedorn (2004) advocates for a different view in looking at academic stability. She is of the opinion that if a student stops out of school for a semester, it does not necessarily mean they are unstable and that they will not finish their degrees. It is not unlikely for the newer generation graduate student to “stop out” or stop attending school for any number of semesters and return when their life situations are more conducive to continuing (p. 25). The reasons for stop outs are varied, from the personal—having a baby, getting married, caring for an elderly parent; to the financial—starting a new job, inability to pay tuition, employer restrictions on education assistance; to the educational—students feel under prepared for a course and decide to take a remedial course before continuing, students feel overwhelmed by the number of classes they have taken on; or any combination of these factors. A break from their studies can eventually be beneficial to some students. Berkovitz and O’Quin (2006-2007) found that stopping out of college is not necessarily a predictor of not graduating. Students who stop out, for whatever reason, can return to schools and successfully complete their undergraduate program. However, if students keep stopping out of school for too many semesters, it may in the end be detrimental to their ultimate success.

The academic stability factor includes two variables created by Hagedorn (2004) to study stop out rates. These measures help create a vivid picture of a students’ attendance per semester and the number of classes completed

compared to the number attempted. These measures create ratios related to academic stability and are called a *continuity index* and a *course completion ratio*.

Results of research on the two variables (continuity index and course completion ratio) of the Academic Stability factor are detailed in Table 4 below.

Table 4

Retention Studies Related to the Two Variables in the Academic Stability Factor

Variable	Variables & Method	Population	Findings
Continuity Index (Hagedorn, 2004)	Division of the number of semesters completed over the number of semesters attempted	Students in an urban community college	White students had an index of 0.778 and students of color of 0.771 (not statistically significant). Also not significant was White students and Hispanic students (0.797).
Course Completion Ratio (Hagedorn, 2004)	Proportion of the number of courses completed versus the number attempted	Students in an urban community college	White students had a ratio of 73.9%, statistically higher than the non-white students at 66.1% and Hispanic students at 66.9%.

Academic performance. Academic performance is the second factor under the subjective experiences domain and refers to the students' educational progress after entering their MSW programs. Academic performance includes the following variables: number of academic reviews or warnings, the number of incomplete grades assigned, the number of classes repeated for a better grade, and full- or part-time status during the first semester of enrollment at the Kent School.

Most schools have a system in place to identify students who are potentially in academic trouble before they are dismissed from the program. *The*

number of academic warnings or reviews is the most pronounced way students are identified as potentially at risk of not succeeding in the MSW program. Such reviews are held when students' cumulative GPA falls below 3.0 and/or they acquire two or more C grades. Academic reviews can also be held when there are violations to the National Association of Social Workers (NASW) Code of Ethics, the university's codes of conduct, e.g. signs of plagiarism, or other unprofessional behaviors. Another identifying variable of students potentially at risk is by *the number of classes in which a grade of incomplete was assigned*. Incomplete grades are indicative of students' failure to follow through and complete assignments on time, or of life events that impinge upon their ability to focus on their studies. Incomplete grades must be remediated before studies can progress in the program. The final warning sign that a student may be in academic trouble involves *the number of classes that must be repeated due to a grade being too low to graduate* with a required GPA of 3.0. If students have more than two C grades those courses must be retaken for higher grades. Any course with a failing grade must also be retaken before they can graduate.

Full- or part-time student status in the first semester at the Kent School is another variable to be considered when assessing the predictors of retention. Ott, Markewich, and Ochsner (1984) found that students who started graduate school full-time were predicted to have higher retention. Ott (1988) speculated that the full-time status of a newly enrolled student may show a commitment to doing college-level work as well as possibly having an effect on their integration academically. Girves and Wemmerus (1988) found that students who started

their studies as full-time Master's level students had higher grade point averages and graduated at a higher rate than those who started as part-time students.

Results of research of the four variables (number of academic warnings and reviews, number of classes in which a grade of incomplete was assigned, number of classes that must be repeated due to a grade being too low to graduate, and full- or part-time status in the first semester) in the Academic Performance factor are detailed in Table 5 below.

Table 5

Retention Studies Related to the Four Variables in the Academic Performance Factor

Variable	Variables & Method	Population	Findings
Full- or Part-Time status in the first semester (Girves & Wemmerus, 1988)	Hierarchical regression analysis of department characteristics, student characteristics, financial support, and perceptions of faculty	948 Graduate students entering one university in fall 1977	Being registered full-time was positively associated with higher grades and increased retention of students through degree completion. After controlling for department size, White or Asian, gender, Life/NonLife Dimension, own resources, parental status, and satisfaction/alienation, 29% of the variance in master's level students' degree progress was explained by full time status ($p < .01$).
Full- or Part-Time status in the first semester (Ott, Markewich & Ochsner, 1984)	Used Logit analysis to predict the retention of graduate students using age at entry, sex, race/visa status, academic division, full- or part-time registration in first semester	All University of Maryland at College Park graduate students who were new registrants for master's or doctoral programs who entered the university in summer, fall, or spring of 1977-78 or 1978-79 for a total of 3,120 master's students and 1,467 doctoral students	Controlling for race, academic division, and retention status, predicted retention rates for full-time master's students in their first semester were greater than those for part-time master's students ($p < .05$).

Stage 3: A Hypothetical Model of Preexisting Characteristics and Subjective Experiences Predicting Academic Outcomes

Putting these two domains together—Preexisting Characteristics and Subjective Experiences—creates the final proposed model for predicting successful completion of the MSSW program.

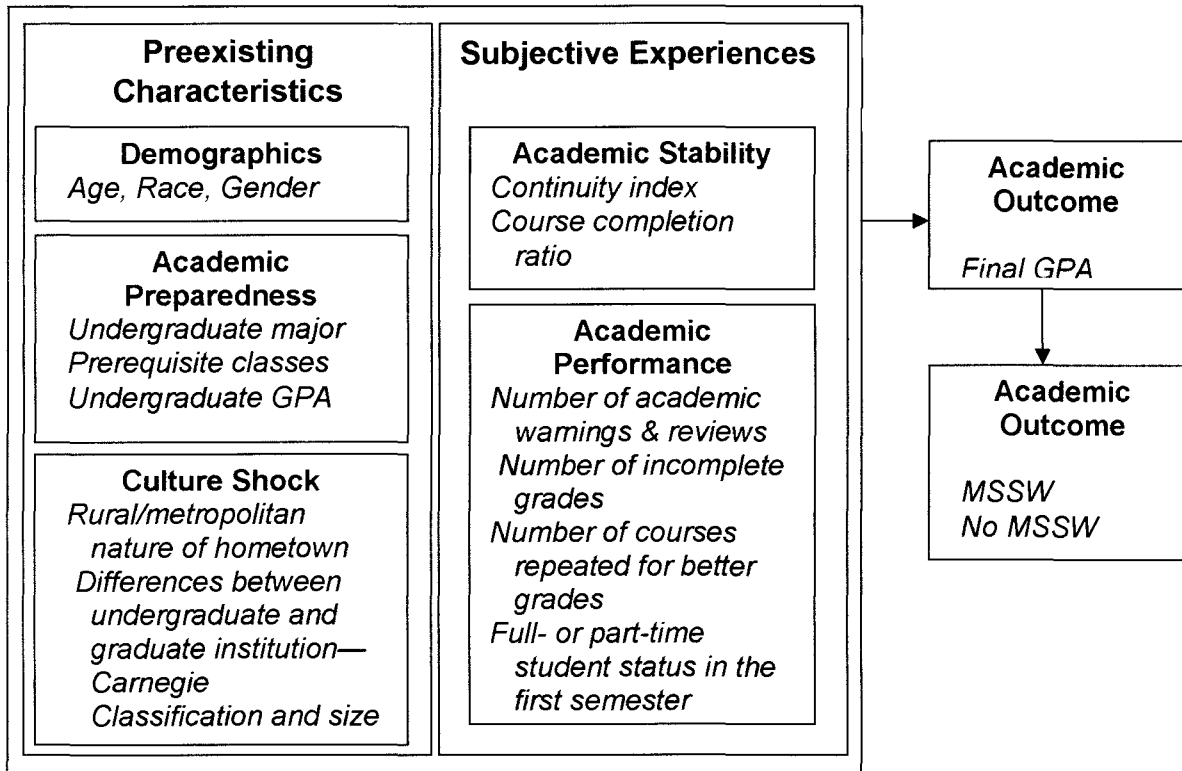


Figure 3. Stage 3: A Hypothetical Model of Preexisting Characteristics and Subjective Experiences Predicting Academic Outcomes

Summary

In summary, programs that issue MSSW degrees are unable to determine their retention rates in anything other than the broadest terms—numbers enrolled versus numbers graduated. This method does not take into account the nuances of new graduate students and their potential for successfully completing their

MSW degree. Given this broad view of retention, innovative ways to increase retention are difficult to conceptualize. Without a comprehensive definition of the variables that affect retention, research into the probability of success is problematic. Previous models for predicting success (as they are applied to mostly baccalaureate and doctoral programs) have been inconclusive in determining consistent predictive factors that contribute to the retention of MSW students.

This chapter presented a potential model of retention for graduate social work education that can give the profession better guidance in how to deal with the shortage of professional social workers by providing effective education. In the next chapter the methodology used to test this model in different stages will be discussed in more detail.

CHAPTER III

METHODOLOGY

The purpose of this study was to determine the factors influencing retention of Master of Science in Social Work (MSSW) students at the Kent School of Social Work through graduation. Using existing data, the factors that contributed to success (graduation and final GPA) among MSSW students were determined. Each of the elements described in the proposed model were considered for its potential influence in the successful completion and final GPA of each student.

The study was conducted at the Raymond A. Kent School of Social Work at the University of Louisville, Kentucky (U of L). The School has been continuously accredited by the Council on Social Work Education since 1937 and graduates approximately 140 students with a Master of Science in Social Work degree each year. The mission statement for school years 2002-2005:

The Kent School of Social Work seeks to prepare competently trained social workers who practice from a strong professional value base to serve the metropolitan mission of the university. These social workers are educated to practice with individuals, families, and communities and to promote social justice. In the context of a research institution, the Kent School is committed to knowledge development that informs the practice

of social work, recognizing the importance of collaboration among differing disciplines to solve complex social problems (Kent School of Social Work, 2004, p. 7).

The Kent School's curriculum during the chosen time period (2001-2005) was stable and not undergoing any changes. Since that time, starting in 2006, in preparation for re-accreditation by the Council on Social Work Education, the curriculum was revised and updated. The Kent School education program during the chosen time period was as follows:

The school provides a broad-based education for college or university graduates wishing to continue their studies and for professionals returning to school to enhance their skills. The Master of Science in Social Work (MSSW) degree program is designed to help students achieve their maximum potential through a carefully structured curriculum of foundation and advanced course work. Preparation for leadership in advanced professional practice is a vital part of the School's curriculum. Within this context, the educational goals and objectives of the School include:

Goal 1: Students will be prepared for competent social work practice.

- Objective A: To prepare students with a generalist practice base, framed by a strengths perspective, to engage social problems at multiple levels of social systems.
- Objective B: To ensure that students will gain specific understanding of practice sensitive to the issues of women,

poverty, persons with disabilities, and individuals of diverse cultural, ethnic, racial, religious, and sexual orientations.

- Objective C: To prepare self-directed social work practitioners with advanced practice knowledge and skills in either direct or macro practice.

Goal II: Kent School faculty and professional staff will contribute to the development of social work knowledge.

- Objective A: To provide students with an educational environment that promotes scientific and critical inquiry, and a capacity to test and improve knowledge, methods and skills.
- Objective B: To engage the development of new social work knowledge through scholarship and research, including theory development and inquiry into social work practice.
- Objective C: To collaborate with university colleagues from other disciplines and community partners in activity leading to greater scholarly development.

Goal III: Kent School faculty members, professional staff and students will provide leadership and community service to the profession of social work, community organizations and the University.

- Objective A: To provide social work leadership to the profession.
- Objective B: To participate in services to the urban community and metropolitan region.

- Objective C: To provide leadership and service to the University through participation in governance and academic program initiatives.

Goal IV: The faculty will systematically engage in program assessment, continuous quality improvement and strategic planning.

- Objective A: To survey Kent students annually to inform the School regarding educational needs.
- Objective B: To survey Kent's Alumni and community social service agencies systematically to assess long-range outcomes.
- Objective C: To engage faculty in a process that continuously assesses outcomes and refines the program using assessment data (Kent School of Social Work, 2004, pp. 7-8).

Research Questions

This study proposed the following research questions:

Stage 1

- I. To what extent can the academic outcome of final GPA be explained by demographic variables (age, race, and gender), academic preparedness variables (undergraduate major, prerequisite classes and undergraduate GPA) and culture shock variables (rural or metropolitan status of the student's hometown, difference between students' undergraduate and graduate schools—Carnegie Classification and size of undergraduate university) (Preexisting Characteristics)?

- II. To what extent can the academic outcome of earning an MSSW degree be explained by demographic variables (age, race, and gender), academic preparedness variables (undergraduate major, prerequisite classes and undergraduate GPA) and culture shock variables (rural or metropolitan status of the student's hometown, difference between students' undergraduate and graduate schools—Carnegie Classification and size of undergraduate university) (Preexisting Characteristics)?

Stage 2

- III. To what extent can the academic outcome of final GPA be explained by the academic stability variables (continuity index and course completion ratio), and the academic performance variables (number of academic warnings and reviews, number of incomplete grades, number of courses repeated for better grades, full- or part-time student status in first semester) (Subjective Experiences)?
- IV. To what extent can the academic outcome of earning an MSSW degree be explained by the academic stability variables (continuity index and course completion ratio), and the academic performance variables (number of academic warnings and reviews, number of incomplete grades, number of courses repeated for better grades, full- or part-time student status in first semester) (Subjective Experiences)?

Stage 3

- V. To what extent can the academic outcome of final GPA be explained by the most significant variables in the preexisting characteristics block and the subjective experiences block?
- VI. To what extent can the academic outcome of earning an MSSW degree be explained by the most significant variables in the preexisting characteristics block and the subjective experiences block?

Due to the exploratory nature of this research, no specific hypotheses were defined for these research questions.

Research Design

An exploratory pre-experimental one group posttest only design with predictive analysis was used to determine the best predictors that can explain final GPA and acquiring an MSSW degree. Maturation and history were possible threats to the internal validity of this research design (Singleton & Straits, 1999). Maturation takes into account the physiological and physical changes taking place within the students while they are in the MSSW program. These changes could affect whether or not a student persists to degree completion that are not related to the variables under study (a student who drops out because of a difficult pregnancy could possibly be very different from the average student who drops out for other reasons, for example). History allows for the events going on around the students that may affect their attendance at the Kent School through degree completion that, again, are not related to the variables being analyzed for the purposes of this study (factors such as access to financial aid, job-related

interference, or familial responsibilities, for example). The use of previously collected, available data precludes the ability to control for these threats to internal validity that could have an influence on the dependent variables, earning an MSSW degree and final GPA.

Sample

The sampling frame consists of all students who were accepted and enrolled into the MSSW program at the Kent School of Social Work between the Fall of 2001 and the Fall of 2005. Therefore, the following inclusion criteria applied for all of the students in this study:

1. They had an undergraduate grade point average of 2.75 on a 4.00 scale (or had adequately completed either the MAT with a minimum score of 397 or the GRE with a minimum score of 850 if their GPA was below admission requirements);
2. They completed a personal statement indicating their reasons for pursuing a social work degree;
3. They provided at least three letters of recommendation from educators and/or professionals who were supportive of their potential for success in an MSSW program;
4. They submitted their transcripts from all post secondary institutions they attended,
5. They were accepted by the Kent School Admissions Committee and they indicated that they were going to attend the Kent School, and
6. They started to attend classes at the Kent School.

Those who were excluded from the study due to an insufficient number of students in particular categories were international students and those students who were actively in progress, but had not yet completed their MSSW degree requirements. This sampling frame produced a list of 690 admitted and enrolled students between the selected time frame.

The next step in the sampling was to determine if the student completed their MSSW degree. This created 2 groups: those who had graduated (596 students) and those who had not (94 students). All students who did not graduate from the Kent School MSSW program and did not return within three years from their last semester at Kent School were included in this category (94 students). From all the graduates (596), a representative sample was drawn, accepting a 5% margin of error and a 95% confidence interval (Krejcie & Morgan, 1970). Based on these parameters a sample of 236 students was selected. The representative sample was stratified using two variables, namely: (a) Accepted Program: MSSW students can be accepted into 2 different programs, a 30-hour Advanced Standing program (have a Bachelor's degree in Social Work) or a 60-hour Regular Standing program (have a Bachelor's degree in any subject other than Social Work); and (b) start year, detailed in Table 6 below. After all eligible students were selected from the graduate group based on the matching; a stratified random sample was drawn from this group.

Table 6***Students Who Did and Did Not Graduate, Separated by Start Year and Program***

Start Year	Not Graduated (n=94)		Graduated (n=596)	
	30-Hour Program	60-Hour Program	30-Hour Program	60-Hour Program
2001	1	12	35	44
2002	4	17	35	82
2003	2	21	50	93
2004	5	16	54	73
2005	1	15	45	85
	13	81	219	377

Data Sources

Secondary data were analyzed. The information used for the variables in the study was all previously attained from the students at enrollment into the Kent School and during their time in the MSSW program. The majority of this information was collected via a review of the application materials in the students' files and via existing databases at the University of Louisville. In 2003, a database was created for the Kent School by the researcher, using Microsoft Access to track student data from application to graduation. This database allowed the Kent School Student Services and Academic Affairs departments to follow students more consistently than the paper file system in place at that time. Included in the database are all of the materials required for admission to the Kent School as well as a significant amount of real-time data on the students' enrollment status, grades and course registration. Real time data was obtained from Peoplesoft, a human resource management system, as maintained by the Registrar's office. The database in Microsoft Access was designed in such a way

to allow queries from Peoplesoft to be imported directly into the database. Queries were set up in the Registrar's office and Kent School obtained permission to run these queries when needed. This database started the Kent School on a path to recognize and record information related to the retention of its MSSW students.

Operationalization of Variables

Dependent Variables

Academic outcomes. Due to the hybrid nature of the proposed model, two outcome variables were identified, namely final GPA upon leaving the MSSW program (irrespective of graduation status) and final graduation status. The second nominal, dichotomous variable included the following categories: 0 = Did not graduate; 1 = Graduated with MSSW degree from Kent School.

Independent Variables

The different predictor variables are detailed below as they pertain to each of the factors of the proposed model (demographics, academic preparedness, culture shock, academic stability, and academic performance).

Preexisting characteristics: Demographics.

Age. Date of birth and date of first MSSW class were collected to determine students' age at enrollment in the MSSW program.

Race. Due to a small sample of other race groups, the race variable only distinguished between White, coded as 0 and Non White coded as 1.

Gender. Females were coded as 0 and males were coded as 1.

Preexisting characteristics: Academic preparedness.

Undergraduate major. Using the characteristics of academic areas set forth by Biglan (1973), students undergraduate majors were coded into four categories. Biglan (1973) categorized academic areas as either “hard” or “soft” with hard being the more science-oriented areas, and the social sciences and humanities at the soft end of the dimension. The hard dimension “fields are characterized by a paradigm or an agreed upon body of theory” (Roskens, 1983, pp. 286-287). Biglan’s (1973) other method for categorizing academic areas was to label them either “pure” or “applied.” Applied subject areas were the physical sciences like mathematics and biology and pure subject areas were, for example, accounting and vocational technology. Roskens describes the pure fields as “not concerned with applications to practical problems” (1983, p. 287). Social work undergraduate majors were considered in the “soft” and “pure” categories (Stoecker, 1993) as were other helping professions: sociology and psychology, for example.

Biglan’s (1973) soft and applied undergraduate majors included accounting, economics, education, finance, secondary and continuing education, special education, and vocational and technical education. Hard and applied undergraduate majors included agricultural economics, agronomy, ceramic engineering, civil engineering, computer science, dairy science, horticulture, and mechanical engineering.

Biglan’s (1973) hard and pure undergraduate majors included astronomy, botany, chemistry, entomology, geology, math, microbiology, physics, physiology

and zoology. Soft and pure undergraduate majors included anthropology, art, communications, English, German, history, music, philosophy, political science, psychology, Russian, social work, sociology and theatre.

This variable was coded 1 = Soft and Applied, 2 = Soft and Pure, 3 = Hard and Applied, 4 = Hard and Pure. It was recoded into dummy variables before being put into the analysis.

Prerequisite classes. When a student is accepted into the Kent School they must have completed an undergraduate course in Human Biology, Research and Statistics. This variable tells the number of prerequisite classes required at admission, with responses between 0 and 3 prerequisites due. This data was collected by reviewing the letter of acceptance in each students file.

Undergraduate GPA. The cumulative GPA from the Bachelor's degree granting university was used. If the student attended multiple undergraduate degree institutions before completing the Bachelor's degree, the cumulative GPA from the university where the degree was awarded was used.

Preexisting characteristics: Culture shock.

Rural or metropolitan nature of the student's hometown. Student home zip code at application was used to determine student's hometown. The U.S. Census Bureau (2004) defines a metropolitan (urban) area as

- All territory, population, and housing units in urban areas
- A cluster of one or more block groups or census blocks, each of which has a population density of at least 1,000 people per square mile at the time it was measured

- Surrounding block groups and census blocks, each of which has a population density of at least 500 people per square mile at the time it was measured
- Less densely settled blocks that form enclaves or indentations, or are used to connect discontinuous areas with qualifying densities

Their definition of rural areas is “all territory, population, and housing units not classified as urban” (U.S. Census Bureau, 2004, ¶ 1). The Rural Health Research Center of the University of Washington Rural-Urban Commuting Area Codes (RUCA) (2006) further breaks down rural areas into three groups: micropolitan (population 10,000 to 49,999), small town (population 2,500 to 9,999) and rural (population below 2,500). RUCA definitions were used to divide the student’s hometown into four categories: metropolitan, micropolitan, small town and rural where metropolitan = 3, Micropolitan = 2, small town =1 and rural = 0.

Difference between students’ undergraduate and graduate schools—Carnegie Classification. Using the Carnegie Classification system updated in 2000 (The Carnegie Foundation for the Advancement of Teaching, 2001), students’ undergraduate schools were coded into five categories: 1 = Doctoral/Research Universities, 2 = Master’s Colleges and Universities, 3 = Baccalaureate Colleges, 4 = Specialized Institutions, 5 = Tribal Colleges and Universities. The category Associate’s Colleges was not used in this study because only the bachelor’s degree-granting universities were used and Associate’s Colleges do not award bachelor’s degrees.

The University of Louisville is a Doctoral/Research University, meaning it offers a wide variety of Bachelor's degrees and graduate degrees up to the doctoral degree. The only other Doctoral/Research University in Kentucky is the University of Kentucky. Master's Colleges and Universities offer a wide range of bachelor's degrees and graduate degrees up to the master's degree. The Master's Universities in Kentucky are Bellarmine University, Campbellsville University, Cumberland College, Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, Spalding University and Western Kentucky University. Baccalaureate Colleges primarily emphasize bachelor's degree education. The Baccalaureate Colleges in Kentucky are Alice Lloyd College, Asbury College, Berea College, Brescia University, Centre College, Georgetown University, Kentucky Christian College, Kentucky Wesleyan College, Lindsey Wilson College, Mid-Continent College, Midway College, Pikeville College, Sullivan University, Thomas Moore College, and Transylvania University. Specialized Institutions typically award degrees in a specific field, and can offer programs from the Bachelor's to the Doctoral degree. Specialized Institutions in Kentucky are Asbury Theological Seminary, Clear Creek Baptist Bible College, Kentucky Mountain Bible College, Lexington Theological Seminary, Louisville Presbyterian Theological Seminary, The Southern Baptist Theological Seminary, and Union College. Tribal Colleges and Universities are rare. They are located on reservations. There are no Tribal Colleges and Universities in Kentucky, but an example is the Haskell Indian Nations University in Kansas.

Difference between students' undergraduate and graduate schools—size of undergraduate university. The number of enrollments at the students' undergraduate university was used to determine the size of the institution from which they earned their degree.

Subjective experience: Academic stability.

Continuity index. Hagedorn (2004) presented this measure for continuous enrollment defined as the number of semesters a student completes in relation to the number of semesters of attendance possible (Fall and Spring semesters only). For example, a student who first enrolled in Spring 2008 and subsequently signed up for courses only during Fall 2009 and Fall 2010 would have a Continuity Index of 0.75 (3 semesters completed, divided by 4 semesters possible), if the index were calculated in Fall 2010. This ratio variable was derived from the number of semesters completed successfully (with a semester GPA of 3.0) for the student in the MSSW degree program at the Kent School divided by the number of semesters possible. Because summer classes are optional for the most part, this variable only took into account the Fall and Spring semesters.

Course completion ratio. The second measure suggested by Hagedorn (2004) takes into account that students many times will drop out of a course, but continue their studies in other courses that semester. This is a measure of the proportion of courses in which students enrolled in a semester and successfully completed during the semester. This ratio variable was derived from a total count of the number of MSSW classes attempted by the student (as indicated on

their transcript) divided by the number of courses completed with a grade of C- or higher.

Subjective experiences: Academic performance.

Number of academic warnings or reviews. When an MSSW student is struggling in their studies, their grades usually suffer. All students must maintain a B (3.0) or better cumulative GPA to be considered in good academic standing and must not receive more than two C's. An ad hoc academic and professional review committee was formed if it was necessary to review the performance of a student. This committee was intended to serve in a problem-solving capacity and was not devised to be adversarial. The function of such a committee was to: (a) review identified academic problems, including those from the field practicum, that could not be resolved through informal channels with the parties involved; (b) review concerns with student conduct that was contrary to the guidelines for professional conduct for social workers as specified in the Code of Ethics of the National Association of Social Workers; and (c) recommend to the Dean's office a course of action that arrived from Committee deliberations with the student. The protocol for referring a student for an academic review was as follows: (a) any student who received a failing grade for a course; (b) any student whose cumulative grade point average fell below a 2.75; (c) advanced standing students (30 hour program) with a cumulative GPA below 3.0 in the semester before they graduated; (d) students who continued below a cumulative 3.0 GPA for 2 consecutive semesters; and (e) students who had more than 2 C's and a GPA below 3.0. In addition to these criteria, any faculty person could recommend a

review for any students who are perceived to be in academic difficulty or who appear to have engaged in inappropriate conduct in violation of the NASW Code of Ethics, or the Code of Students Rights and Responsibilities.

Students who received an academic warning were referred to the advisor for oversight. A formal review was not necessary in these cases. The advisor merely had to discuss the problems with the students and come up with an informal plan of action. The protocol for referring a student for an academic warning was as follows: (a) those whose cumulative GPA was between 2.75 and 3.00; (b) those who had 2 C's and a cumulative GPA above 3.0; (c) regular standing students (60 hour program) with a cumulative GPA below 3.0 in the semester before they graduated. This variable counted the number of academic warnings and reviews required of a student while they were a student at the Kent School.

Number of classes in which a grade of incomplete was assigned.

Students who do not complete the coursework for an MSSW class within the timeframe of the semester can request that the instructor give them an Incomplete grade for the class. The student then has an additional semester in which to complete the course work to have a grade assigned. If the student does not complete the course work within the following semester, their Incomplete grade is automatically changed to an F grade. This variable counted the number of incomplete grades assigned to a student while they were a student at the Kent School.

Number of classes that must be repeated due to a grade being too low to graduate. As stated above, students cannot graduate if they have more than two C grades. They are also not allowed to graduate if they have any F grades on their transcript. In the case of a C or F grade, an academic review committee can recommend that the student re-take the course for a better grade. This variable counted the number of classes repeated for a better grade.

Full- or part-time status in the first semester. In graduate school, full-time student status is considered to be nine or more credit hours. A review of the students' transcripts will reveal the number of credit hours the student registered for in their first semester in the MSSW program. In this dichotomous, nominal variable, if students registered for nine or more credit hours, they were considered full-time and coded 1. If they registered for fewer than nine credit hours, they were considered part-time and coded 0.

Confidentiality

Institutional Review Board (IRB) approval was achieved to review students' files, the existing Kent School database and Peoplesoft data for this study. Data were not gathered directly from students at any time during this study.

Data Analysis

Before the data analysis was performed, basic descriptive statistics provided a picture of the sample used in the study. After the sample was described, all the appropriate assumptions were tested before a hierarchical multiple regression analysis for the final GPA outcome was performed and a

hierarchical logistic regression analysis was conducted to identify the predictors of success in the MSSW program. The different assumptions for the two different analysis techniques are discussed in more detail below.

Hierarchical Multiple Regression Analysis

A hierarchical multiple regression analysis was conducted on the different independent variables identified in the model to identify predictors of final GPA. Multiple regression analysis is “a method for studying the effects and the magnitudes of the effects of more than one independent variable on one dependent variable using principles of correlation and regression” (Kerlinger, 1986, p. 527). The formula for a multiple regression analysis is as follows:

$$y_{pred} = \alpha + \beta x_1 + \dots + \beta x_n$$

Where

α and β are unknown parameters assumed to hold for a population

and

α = value of y (DV) when x_n (IV's) is 0 – a constant value called the intercept (where the line crosses the y axis), and

n = amount of IV's

Multiple regression analysis allows for independent variables at the nominal, ordinal, interval or ratio level and a dependent variable at the interval or ratio level; however, the nominal level variables should be recoded into dichotomous dummy variables. Cohen, Cohen, West and Aiken (2003) state that

when recoding into a dummy variable, one group should serve as a reference category and assigned a zero value. For example, race was originally presented in multiple categories (White, African American, Asian, Native American and Hispanic) and was recoded into 0=White, 1=NonWhite and undergraduate major was recoded into 0=Soft/Pure (Biglan) category and 1=non-Soft/Pure (Biglan) category.

There are multiple methods of regression: standard, sequential (hierarchical), and stepwise. The hierarchical method was used in this study because it allowed the researcher to determine the order in which the variables were entered into the analysis based on underlying theory. In the first stage of model testing, the three factors of preexisting characteristics were entered as three separate blocks to investigate which block contributed the most to the variability in final GPA. In the second stage of model testing, the two factors related to subjective experiences were entered as two separate blocks to again investigate which block contributes the most to the variability in the final GPA. In the final third stage, the three blocks related to preexisting characteristics were entered, after which the two blocks related to subjective experiences were entered. Each block was analyzed to determine its predictive power as a whole and then which variables held the strongest prediction.

There are a number of potential issues when conducting a multiple regression analysis: multicollinearity, outliers, normality, linearity, homoscedasticity and misspecification (Mertler and Vannatta, 2002). Multicollinearity is “a problem that arises when there exists moderate to high intercorrelations among predictor

variables (IVs) to be used in a regression analysis” (Merler and Vannatta, 2002, p. 169). Multicollinearity was analyzed via the SPSS output of correlation matrixes, collinearity statistics, and diagnostics. No multicollinearity was detected.

Outliers are “cases with extreme values on one variable or on a combination of variables so that they distort resulting statistics or unduly influence solutions or models” (Mertler and Vannatta, 2002, p. 342). For question 4 two multivariate outliers were detected and deleted. For question 6 three multivariate outliers were detected and deleted.

Normality is the assumption that each variable is normally distributed. Because the final GPA variable was a severely negatively skewed J-shaped variable the following formula was used to transform the variable into a normally shaped variable (Tabachnick & Fidell, 2007): $NEWX = 1/(K-X)$, where X= Final GPA and K = a constant from which each score is subtracted so that the smallest score is 1; usually equally to the largest score +1 (in this case 5). Linearity is the “assumption that there is a straight line relationship between two variables” (Mertler and Vannatta, 2002, p. 342). This assumption was checked by investigating the normal probability plots. These plots indicated how well the residuals lied along a straight line and provided an indication of linearity. No problem with linearity was detected. Homoscedasticity is the “assumption that the variability in scores for one continuous variable is roughly the same at all values of another continuous variable” (Mertler and Vannatta, 2002, p. 341). A scatterplot of the predicted standardized value against the standardized residual

value was used to investigate the homoscedasticity between predicted DV scores and errors of the prediction. Again, no problems with homoscedasticity were detected. Misspecification in a regression analysis can occur when variables that are not actually relevant to the model are included. Initial screening of the data can consist of bivariate analysis to investigate the relationship between each of the predictors and criterion variable. If the relationship is not significant in bivariate form, it is unlikely that the one will predict the other. Another way to investigate misspecification is to examine the significance of the t-statistic for each of the predictors. If the t-statistic is not significant at the 10% level, then the variable may be irrelevant. Because this study tested a hypothetical model that was strongly based on literature and previous work on retention, it was assumed that non relevant variables will not be present in the model. Therefore, for the first two stages, all variables were retained and kept as controls for each other, even though some were not significant. For the sake of parsimony and meeting power requirements, the final third model did take out variables that did not significantly contribute to the final solution.

Hierarchical Logistic Regression Analysis

Because the second dependent variable is categorical and dichotomous (Graduated with MSSW degree or Did Not Graduate), and there are multiple independent variables of varying levels of data, logistic regression analysis is appropriate to investigate this specific dependent variable. The formula of a logistic regression analysis "results in an equation that allows us to predict the likelihood of a given value category of the outcome variable" (Weinbach &

Grinnell, 2010, p. 250). Logistic regression has as its ultimate objective to predict a case's group membership on the dependent variable by calculating the probability that a case will belong to the category where the event is occurring. For coding purposes the predicted event should be coded as 1 and the non-occurrence of the event as 0 (Meyers, Gamst, & Guarino, 2006), thus the dependent variable was coded 1 = Graduated with MSSW degree and 0 = Did Not Graduate.

The math involved in logistic regression analysis utilizes the logistic function and not the least squares method mainly because the equality of variance assumption for the least squares method is violated with a dichotomous variable. The shape of the best fitted line in logistic regression is S-shaped with the relationship between X and Y that is flat at both the low and high levels of X. The real action in the prediction is in the midrange of X values, where different levels of X are associated with different probability of Y. X therefore does not have a constant effect on the probability of Y occurring. In order to calculate this function, a mathematical transformation is used called the natural log (ln) transformation to bend the data into an S shape so that the likelihood of an event occurring can be predicted based on the predictors used in the analysis (Meyers, Gamst & Guarino, 2006).

The regression equation that is used in logistic regression is the following:

$$\ln[odds] = \alpha - \beta_1 X_1 - \beta_2 X_2 - \beta_3 X_3 - \dots - \beta_n X_n$$

Where

β = the change in log odds of membership for any 1 unit change in X.

In logistic regression, the outcome variable is the logit of the outcome variable with the rest being very similar to a multiple regression equation. Based on the above equation, we can then predict group membership where

$$g_{pred} = \ln[odds]$$

Because the natural log of an odds ratio is difficult to interpret, the log odds are transformed into probabilities by taking the antilog of the above equation. This can be written in equation form as follows:

$$predicted\ probability = \frac{e^{g_{pred}}}{1 + e^{g_{pred}}}$$

Where

e = the exponential function that equals 2.718.

The value for the constant α and the β weights are calculated through the maximum likelihood estimation after the transformation of the dependent variable into a logit value.

In any logistic regression analysis there are certain assumptions that must be met. One important assumption is that there must be an absence of multicollinearity, similar to the assumption for multiple regression. When one or more predictor variables are very highly correlated with each other, it can cause severe distortion in the regression analysis. The actual importance of the individual variables will be difficult to assess, because they are confounded by collinearity. The variance of the individual regression weights increases when multicollinearity is present, which in turn increases the instability of the regression

solution. It is therefore important to always control for multicollinearity by examining the bivariate and partial correlations among continuous predictors. On a bivariate level, any Pearson r correlation between two predictors that are more than 0.80 can be seen as an indicator of multicollinearity. Furthermore, multicollinearity should be prevented by never including all the dummy variables representing a nominal variable in the analysis. The reference category coded as 0 should never be entered (Menard, 2010). In this study, bivariate analysis was conducted on all continuous level variables to investigate multicollinearity and the reference categories of the dummy coded variables were never included in the analysis. When final GPA was added as a predictor to analyze questions 4 and 6, multicollinearity was detected between the continuity index and the final GPA. After part-whole correlation analysis, it was determined that the continuity index is driving the relationship and therefore final GPA was excluded from the analysis.

Similar to multiple regression analysis, misspecification is also an important issue to consider. In the logistic analysis, misspecification was handled in the same manner as in the multiple regression analysis. The same was true for outliers of which none was detected in this part of the analysis. In the hierarchical logistic regression for the final model, the blocks were entered in a similar way as in the multiple regression analysis.

Power

According to Tabachnick and Fidell (2007), the recommended sample size formula for multiple regression analysis is $N > 50 + 8m$, where m equals the

number of predictor variables. This would lead to a sample size requirement of $50 + 8(16) = 178$. The final sample for this analysis is much higher (330) because of the larger sample size needed for the logistic regression analysis detailed below.

A logistic regression analysis requires rather large samples compared to standard regression analysis. Pedhazur (1997) in Meyers, Gamst & Guarino (2006) suggests a sample size of at least 30 times as many cases as the amount of parameters being estimated. In this study, 16 parameters were originally anticipated as potential contributing factors to the prediction model. Based on the above suggestion, a sample of 480 was required to obtain adequate power for a significant model. Different issues were taken into account when the final sample size was determined for this study. Since 2001 there were only 94 students who did not graduate, therefore it was not a good decision to have such a large sample in the study where only 20% of the sample would be in the non-graduated group. From all the graduates (596), a representative sample was drawn, accepting a 5% margin of error and a 95% confidence interval (Krejcie & Morgan, 1970). Based on these parameters a sample of 236 students was selected. For adequate power, only 10 parameters could be estimated reliably from this sample. For the sake of parsimony, the most important predictors were therefore selected during stage three of the analysis and those that did not contribute significantly to the model in each block were deleted from the model.

Conclusions

This research study produced a description of all students enrolled over a 5-year period in the MSSW program of the Kent School of Social Work at the University of Louisville. It also tested the theoretical model of retention targeted at determining predictors of success among MSSW students accepted to the Kent School between Fall 2001 and Fall 2005.

CHAPTER IV

RESULTS

This chapter presents the results of the study beginning with a description of the sample followed by findings related to each of the six research questions. Due to the fact that active databases within the university were used to collect information, there were no missing data.

Sample

The sample (N = 330) is detailed below in Table 7. As indicated in Chapter 3, the sample represents all students who did not graduate during the study period, matched with a stratified random sample of students who did graduate during the study period.

Table 7

Students Who Did and Did Not Graduate Included in Sample, Separated by Start Year and Program

Start Year	Not Graduated (N=94)		Graduated (N=236)	
	30-Hour Program	60-Hour Program	30-Hour Program	60-Hour Program
2001	1	12	4	26
2002	4	17	11	42
2003	2	21	6	50
2004	5	16	14	35
2005	1	15	4	44
	13	81	39	197

The final GPA for each group is shown below in Table 8.

Table 8

Final GPA

		Not Graduated		Graduated		Total
Final GPA	3.250 - above	51.1%	48	97.5%	230	278
	3.000 – 3.249	5.3%	5	2.5%	6	11
	2.750 – 2.999	2.1%	2	0%	0	2
	Below 2.750	41.5%	39	0%	0	39

Ninety-seven point five percent (n=230) of the graduated group earned a 3.25 or higher GPA during their MSSW degree program (mean GPA=3.74; SD=0.20), while 51.1% (n=48) of the nongraduated group earned a GPA in the highest category (mean GPA=2.54, SD=1.49). It is interesting to note that of the students who did not graduate, 56.4% (n=53) had a GPA that would have met the requirements for graduation (GPA above 3) if they would have continued with their studies. GPA alone is therefore not an indicator that can on its own be used to predict final success in graduate school.

Preexisting Characteristics: Demographics

The demographics of the sample are shown in Table 9 below.

Table 9

Students Who Did and Did Not Graduate, by Age at Enrollment, Gender and Race

		Not Graduated		Graduated		Total
Age	20-29 years old	43.6%	41	55.9%	132	173
	30-39 years old	25.5%	24	21.2%	50	74
	40-49 years old	17.0%	16	17.8%	42	58
	50-60 years old	13.8%	13	5.1%	12	25
Gender	Female	77.7%	73	82.2%	194	267
	Male	22.3%	21	17.8%	42	63
Race	White	77.7%	73	81.4%	192	265
	NonWhite	22.3%	21	18.6%	44	65

The mean age of the sample participants at enrollment to the Kent School for students who did not complete the program was 34.33 (SD=10.98) with a range between 20 and 57, for those who did complete the program, the mean age was 31.52 (SD=9.52), with a range between 21 and 60. Due to a non-linear relationship that was detected between age and completion of the program, age was squared in the multiple regression analysis, and in the logistic regression analysis age was recoded into four groups and used as such in the model. This non-linear relationship is supported in the literature (Berger, 1992).

A majority of both groups were female and White. In the non-graduated group, females made up 77.7% (n=73) of the sample and Whites made up 77.7% (n=73) of the sample. In the graduated group, 82.2% (n=194) of the sample was female and 81.4% (n=192) was White.

Preexisting Characteristics: Academic Preparedness

In Table 10, the descriptives related to academic preparedness of the sample is shown.

Table 10***Students Who Did and Did Not Graduate, by Undergraduate Major and GPA and Number of Prerequisites Due at Enrollment***

		Not Graduated		Graduated		Total
Undergraduate Major	Soft/Applied	10.6%	10	7.2%	17	27
	Soft/Pure	87.2%	82	89.0%	210	292
	Hard/Applied	1.1%	1	0.8%	2	3
	Hard/Pure	1.1%	1	3.0%	7	8
Undergraduate GPA	3.25 and above	40.4%	38	43.6%	103	141
	Between 3 and 3.249	30.9%	29	27.5%	65	94
	Between 2.75 and 2.999	18.1%	17	17.8%	42	59
	Below 2.75	10.6%	10	11.0%	26	36
Prerequisites due at enrollment	0	47.9%	45	62.7%	148	193
	1	35.1%	33	25.4%	60	93
	2	13.8%	13	9.7%	23	36
	3	3.2%	3	2.1%	5	8

A very large portion of the undergraduate major for both the graduated and non-graduated groups was Soft and Pure—which is the same as social work. For the non-graduated group, Soft and Pure made up 87.2% (n=82) of the sample. It constituted 89.0% (n=210) of the graduated sample. Because there were so many Soft and Pure undergraduate majors, this variable was collapsed into Soft/Pure and All Else.

Forty point four percent (n=38) of the non-graduated group earned an undergraduate GPA of 3.25 and above versus 43.6% (n=103) of the graduated group. For the multiple regression analysis, undergraduate GPA was kept as a ratio level variable. To help with better model fit, undergraduate GPA was converted into four groups, or GPA ranges for the logistic regression analysis: 3.250 or higher, 3.0 to 3.25, 2.75 to 2.999, and below 2.75, becoming an ordinal variable. These GPA ranges were chosen because they are the same

categories used for admissions criteria at the Kent School. Any student entering the program with a BSW must have earned 3.25 GPA or higher in their undergraduate social work classes. A student with a GPA between 3.0 and 3.25 is very likely to get accepted to the Kent School without any special conditions (for example, a student can be required to make at least a 3.0 GPA in their first semester at the Kent School as a stipulation to their admission if their undergraduate GPA is low). A student with an undergraduate GPA between 2.75 and 3.0 is likely to be accepted but must first write an addendum to their personal statement explaining the circumstances that led to their low GPA and what they will be doing differently to make sure they are able to maintain a 3.0 GPA in graduate school before they will be accepted into the MSSW program. Students who have an undergraduate GPA below 2.75 are infrequently accepted, must take either the Miller Analogies Test (MAT) or Graduate Record Exam (GRE) and make a minimum score, must write an addendum to their personal statement, and are admitted with special conditions as a stipulation of their admission.

The majority of students did not need to complete any prerequisites when they entered the master's program (47.9%, n=45, of the non-graduated group and 62.7%, n=148, of the graduated group). Of the non-graduated group who had to complete between one and three prerequisites, one prerequisite was the most frequently occurring (35.1%, n=33). Of the graduated group, 25.4% (n=60) had only one prerequisite to complete. In the multiple regression analysis, the actual number of prerequisites needed was used, due to only detecting minor skewness in the variable. For the logistic regression analysis, students were put

into two groups, namely prerequisites due (coded as 0) and no prerequisites due (coded as 1) to create better model fit.

Preexisting Characteristics: Culture Shock

The descriptives related to culture shock are detailed below in Table 11.

Table 11

Students Who Did and Did Not Graduate, by Rural/Metropolitan Nature of Hometown and Differences between Undergraduate and Graduate Institutions—Carnegie Classification and Size

		Not Graduated		Graduated		Total
Rural/	Micro-politan	10.6%	10	8.5%	20	30
Metropolitan	Small town	6.4%	6	2.5%	6	12
Nature of	Rural	4.3%	4	5.5%	13	17
Hometown	Metropolitan	76.6%	72	83.1%	196	268
Differences	Doctoral/Research	48.9%	46	46.6%	110	156
between	Master's	37.2%	35	37.3%	88	123
undergraduate	Baccalaureate	12.8%	12	15.3%	36	48
and graduate	Special	1.1%	1	0.8%	2	3
institution—						
Carnegie						
Classification						
Differences	25,001 and above	16.0%	15	19.1%	45	60
between	15,001 – 25,000	40.4%	38	40.3%	95	133
undergraduate	7,501 – 15,000	11.7%	11	7.2%	17	28
and graduate	7500 and below	31.9%	30	33.5%	79	109
institution—						
size						

A majority of students in both the non-graduated and graduated groups had hometowns in metropolitan areas (76.6% (n=72) and 83.1% (n=196), respectively). Because the number of students in the micropolitan, small town and rural areas were so small, they were grouped into one variable.

The difference between the students' undergraduate and graduate institutions was distributed over four of the five Carnegie categories. Because

there were no students from Tribal undergraduate schools, it was eliminated, leaving behind the other four categories for this variable. Because there were so few (n=3) Special schools, they were included in the Baccalaureate school category, which was the reference category for the logistic regression analysis. The most common category for students who did not graduate from Kent School came from schools with the same classification as the University of Louisville— Doctoral/Research—totaling 48.9% (n=46) of the sample. This is the same for students who did graduate at 46.6% (n=110).

The difference between students' undergraduate and graduate institution size was similar. The mean school size for the graduated group was 15,473 (SD=11,417), for the nongraduated group, the mean was 15,449 (SD=11,445)— both of which are near the approximate size of the University of Louisville. The actual school size was used in the multiple regression analysis. For the logistic regression analysis, the size of the institution was divided into four groups: 3 = 25,001 and above, 2 = between 15,001 and 25,000, 1 = between 7,501 and 15,000, 0 = 7,500 and below. Forty point four percent (n=38) of the students who did not graduate came from a school in the 15,001 – 25,000 range (the same size as the University of Louisville); this was the largest group of nongraduates. The group who graduated mimics the non-graduated group very closely (40.1%, n=95).

Subjective Experiences: Academic Stability

In Table 12, the descriptives related to academic stability are presented.

Table 12***Students Who Did and Did Not Graduate, by Continuity Index and Course Completion Ratio (in percentages)***

		Not Graduated	Graduated	Total
Continuity Index	Mean	52.81	98.27	85.32
		(SD=41.42)	(SD=7.69)	(SD=30.81)
	Min	0	50	0
	Max	100	100	100
Course Completion Ratio	Mean	57.77	98.25	86.72
		(SD=37.16)	(SD=5.07)	(SD=27.27)
	Min	0	56	0
	Max	100	100	100

The continuity index is a comparison of the number of semesters successfully completed with a GPA of 3 or above, versus the number of potential semesters possible, presented as a percentage value. It is clear from the table that there were big differences between the graduated and non-graduated group, with the non-graduated group having a much lower continuity index than the graduated group. Due to the extreme skewness of this variable with 77% of the total sample having a 100% continuity index, the variable was transformed into a dummy coded variable with 1=100% continuity index and 0=less than a 100% continuity index.

The course completion ratio is a comparison of the number of courses a student attempts versus the number successfully completed with a grade of C- or higher, presented as a percentage value. The non-graduated group had a much lower course completion ratio than the graduated group. This variable was also skewed with 65.8% of the total sample having a 100% course completion ratio. This variable was therefore transformed in a similar way than the continuity index

1=100% course completion ratio and 0=less than a 100% course completion ratio.

Subjective Experiences: Academic Performance

The academic performance variables of the subjective experience domain are detailed below in Table 13.

Table 13

Students Who Did and Did Not Graduate, by Number of Warnings and/or Reviews, Number of Incomplete Grades Assigned, Number of Classes Repeated for a Higher Grade and Full- or Part-Time Status in First Semester

		Not Graduated	Graduated	Total		
Number of Warnings and/or Reviews	0	76.6%	72	91.9%	217	289
	1	9.6%	9	5.5%	13	22
	2	8.5%	8	2.1%	5	13
	3	2.1%	2	0.4%	1	3
	4	2.1%	2	0%	0	2
	5	1.1%	1	0%	0	1
Number of Incomplete Grades Assigned	0	79.8%	75	87.3%	206	281
	1	16.0%	15	10.2%	24	39
	2	3.2%	3	0.8%	2	5
	3	0%	0	1.7%	4	4
	4	1.1%	1	0%	0	1
Number of Classes Repeated for a Higher Grade	0	91.5%	86	95.8%	226	312
	1	5.3%	5	3%	7	12
	2	2.1%	2	1.3%	3	5
	4	1.1%	1	0%	0	1
Full or Part-time status in first semester	Full-Time	68.1%	64	83.1%	196	260
	Part-Time	31.9%	30	16.9%	40	70

A great majority of students in both groups did not have any academic warnings and/or reviews (76.6%, n=72 for the non-graduated group and 91.9%, n=217 for the graduated group). The number of warnings or reviews ranged from 0 to 5 for the non-graduated group, while the graduated group ranged from 0 to

3. This is to be expected to a degree, as the more warnings and reviews a student receives, the more likely they are to not finish their MSSW degree. Due to the highly skewed nature of this variable, it was recoded for both the multiple regression and logistic regression analysis. Students were divided into those with academic warnings/reviews and those who had none.

The same reasoning is applicable to the number of incomplete classes, the thought being that students with higher numbers of incomplete classes are more likely to fail to finish their MSSW degree. For this variable, the number of incompletes for the graduated group ranged from 0 to 3 and 0 to 4 for those who did not graduate. Again, the majority of both groups had no incomplete grades (79.8%, n=75, of the non-graduated group and 87.3%, n=206, of the graduated group). Due to the highly skewed nature of this variable, students were divided into those who had incompletes due and those who did not for both analyses.

The number of classes repeated for a higher grade ranged from 0 to 2 for the graduated group and 0 to 4 for those who did not graduate. The majority of the students in both groups did not have to repeat any classes, 95.8% (n=226) for the graduated group and 91.5% (n=86) for the non-graduated group. Only one student in the non-graduated group was required to repeat 4 classes, the majority of this group only had to complete between 0 and 2 classes, which is the same as the number required by the graduated group. Due to the highly skewed nature of this variable, it was converted into two categories: those who had no repeated classes and those who had repeated classes.

Students who started their degree program as a full-time student made up 83.1% (n=196) of the graduated group. Those in the non-graduated group who started as a full-time student totaled only 68.1% (n=64).

Data Analysis

Stage 1

Question 1: To what extent can the academic outcome of final GPA be explained by preexisting characteristics (demographics, academic preparedness and culture shock)?

Hierarchical multiple regression analysis was used to explore which of the nine preexisting predictor variables were the best predictors of final GPA. Predictor variables were entered in three blocks. In the first step, only demographic variables (age squared, race and gender) were entered as predictors. As can be seen in Table 14, block one showed significant predictive ability, with the overall model predicting 4.0% of the variance in final GPA ($R^2=0.04$, $F(3,326)=4.555$, $p=.004$). Adding the academic preparedness variables in the second step improved the model significantly, with the overall model predicting 6.4% of the variance in final GPA ($R^2=0.064$, $F(6,323)=3.711$, $p=.001$). After the culture shock variables were added in the third step, the model improved significantly, with the overall model predicting 8.3% of the variance in final GPA ($R^2=0.083$, $F(10,319)=2.883$, $p=.002$). In this final model the significant predictor from block one was age squared ($\beta=0.141$, $p=0.012$), with race showing a trend ($\beta=-0.091$, $p=0.097$). The significant predictor from block two was

undergraduate GPA ($\beta=-0.170$, $p=0.002$) and from block three was undergraduate school size ($\beta=-0.170$, $p=0.043$).

Table 14

Question 1: Preexisting Characteristics Predicting Final GPA

Variables	B	SE B	β	
Step 1				
Demographics				
Age ²	0.000	0.000	0.168	***
White Race	-0.045	0.024	-0.102	*
Female Gender	-0.000	0.025	0.000	
Step 2				
Demographics				
Age ²	0.000	0.000	0.161	***
White Race	-0.039	0.024	-0.088	
Female Gender	0.004	0.025	0.008	
Academic Preparedness				
Soft/Pure Major	0.017	0.031	0.031	
Number of prerequisites due	-0.003	0.013	-0.013	
Undergraduate GPA	-0.071	0.025	-0.156	***
Step 3				
Demographics				
Age ²	0.000	0.000	0.141	**
White Race	-0.040	0.024	-0.091	*
Female Gender	0.003	0.025	0.006	
Academic Preparedness				
Soft/Pure Major	0.015	0.031	0.027	
Number of prerequisites due	0.000	0.013	-0.002	
Undergraduate GPA	-0.077	0.025	-0.170	***
Culture Shock				
Metropolitan area	-0.024	0.027	-0.053	
Doctoral/Research~	0.059	0.040	0.168	
Masters~	0.042	0.031	0.116	
Undergrad school size	-0.000	0.000	-0.170	**

Note: $R^2 = 0.040$ for Step 1; $\Delta R^2 = 0.024$ ($p=0.041$) for Step 2; $\Delta R^2 = 0.018$ ($p=0.174$) for Step 3.

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

~ Reference category = Baccalaureate

Based on these results it is clear that students of a younger age tend to have higher final GPA's, with undergraduate GPA predicting a higher final GPA as well, together with the size of the undergraduate school, showing that

students from bigger schools tend to do better on their final GPA. White students showed a trend towards having a better final GPA.

Question 2: To what extent can the academic outcome of earning an MSSW degree be explained by preexisting characteristics (demographics, academic preparedness and culture shock)?

Hierarchical logistic regression analysis was used to explore which of the nine preexisting predictor variables were the best predictors of earning an MSSW degree. Predictor variables were entered in three blocks.

Block 0

The classification table for the first block in the analysis, where no predictors were entered is shown in Table 15.

Table 15

Classification Table for Block 0 of Logistic Regression Analysis

Observed		Predicted		
		Graduated?	Percentage	
		No	Yes	Correct
Step 0 Graduated?	No	0	94	.0
	Yes	0	236	100.0
Overall Percentage				71.5

a. Constant is included in the model.

b. The cut value is .500

From this table, it is clear that the probability of students graduating in this sample is 0.715. This means that we had 71.5% accuracy in our prediction if we assume that all Kent students in this sample graduated.

Block 1

Age, race and gender were added in this block to the model. Age was broken down into categories, with students 50 and above being treated as the reference category. The results for Block 1 are shown in Tables 16 to 19.

Table 16

Omnibus Tests of Model Coefficients for Block 1 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	9.151	5	.103
	Block	9.151	5	.103
	Model	9.151	5	.103

Table 17

Nagelkerke R Square for Block 1 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	385.182 ^a	.027	.039

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 18

Classification Table for Block 1 of Logistic Regression Analysis

	Observed	Predicted			
		Graduated?		Percentage	
		No	Yes		
Step 1	Graduated?	No	7	87	7.4
		Yes	6	230	97.5
	Overall Percentage				71.8

a. The cut value is .500

Table 19***Variables Included in the Equation of Block 1 for Logistic Regression******Analysis***

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Age20s	1.202	.444	7.337	1	.007	3.327	1.394	7.942
	Age30s	.803	.472	2.890	1	.089	2.232	.884	5.633
	Age40s	1.020	.499	4.181	1	.041	2.773	1.043	7.374
	White	.136	.308	.195	1	.658	1.146	.627	2.095
	Female	.169	.311	.297	1	.586	1.185	.644	2.177
	Constant	-.293	.507	.335	1	.563	.746		

a. Variable(s) entered on step 1: Age20s, Age30s, Age40s, White, Female.

According to the omnibus tests of model coefficients, the variables in block 1 did not significantly improved the prediction and the model was not significant ($p=0.103$), with this block explaining 3.9% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 1, our prediction accuracy improved slightly to 71.8%. According to the Wald test, the students in their 20s were 3.33 times more likely to graduate than students in their 50s (reference category). Students in their 40s were 2.77 times more likely to graduate than students in their 50s. Students in their 30s showed a trend, indicating a 2.23 higher likelihood of graduating than students in their 50s. None of the other demographic variables were significant.

Block 2

In this block, the three academic preparedness variables were added, namely undergraduate major, prerequisites due and undergraduate GPA. The reference category for undergraduate major was any major different from a

soft/pure major. The reference for prerequisites was having prerequisites due. Undergraduate GPA was transformed into an ordinal variable with 4 groups.

Table 20

Omnibus Tests of Model Coefficients for Block 2 of Logistic Regression Analysis

		Chi-square	df	Sig.
Step 1	Step	6.442	3	.092
	Block	6.442	3	.092
	Model	15.593	8	.049

Table 21

Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	378.740 ^a	.046	.066

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 22

Classification Table for Block 2 of Logistic Regression Analysis

	Observed		Predicted		Percentage Correct
			Graduated? No	Graduated? Yes	
Step 1	Graduated?	No	4	90	4.3
		Yes	6	230	97.5
Overall Percentage					70.9

a. The cut value is .500

Table 23**Variables Included in the Equation for Block 2 of Logistic Regression****Analysis**

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Age20s	1.285	.453	8.050	1	.005	3.616	1.488	8.787
	Age30s	.842	.487	2.986	1	.084	2.321	.893	6.032
	Age40s	1.132	.512	4.891	1	.027	3.101	1.137	8.452
	White	.105	.313	.113	1	.736	1.111	.601	2.053
	Female	.075	.317	.056	1	.813	1.078	.579	2.005
	Soft/pure major	-.088	.402	.048	1	.827	.916	.417	2.013
	No prerequisites	.656	.263	6.230	1	.013	1.927	1.151	3.225
	Undergraduate GPA	-.036	.123	.088	1	.767	.964	.758	1.227
	Constant	-.476	.655	.528	1	.467	.621		

a. Variable(s) entered on step 1: soft/pure major, no prerequisites, Undergraduate GPA.

According to the omnibus tests of model coefficients, the step of adding the three academic preparedness variables, showed a trend towards significance ($p=0.092$), with the overall model being significant ($p=0.049$). The model explained 6.6% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 2, our prediction accuracy decreased slightly to 70.9%. According to the Wald test, the two age groups 20's and 40's remained significant predictors, with the likelihood of students graduating being 3.62 times higher for students in their 20's and 3.10 times higher for students in their 40's. Students who had no prerequisites due were 1.93 times more likely to graduate.

Block 3

In the third block, the culture shock variables were added. These variables consisted of rural/metropolitan nature of students' hometown, undergraduate Carnegie classification and size, and undergraduate school size. The results for block 3 are shown in tables 22 to 25. Any hometown of a student that was not classified as metropolitan was treated as the reference category. The reference category for the Carnegie classification of undergraduate schools was baccalaureate. School size was transformed into an ordinal grouped variable.

Table 24

Omnibus Tests of Model Coefficients for Block 3 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	4.589	4	.332
	Block	4.589	4	.332
	Model	20.181	12	.064

Table 25

Nagelkerke R Square for Block 3 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	374.152 ^a	.059	.085

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 26**Classification Table for Block 3 of Logistic Regression Analysis**

	Observed	Predicted		Percentage Correct
		Graduated? No	Graduated? Yes	
Step 1 Graduated?	No	6	88	6.4
	Yes	7	229	97.0
Overall Percentage				71.2

a. The cut value is .500

Table 27**Variables Included in the Equation for Block 3 of Logistic Regression****Analysis**

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step	Age20s	1.257	.468	7.232	1	.007	3.516	1.406	8.789
1 ^a	Age30s	.826	.506	2.663	1	.103	2.284	.847	6.159
	Age40s	1.167	.522	5.003	1	.025	3.211	1.155	8.926
	White	.173	.318	.296	1	.587	1.189	.637	2.218
	Female	.102	.320	.102	1	.749	1.108	.592	2.074
	Soft/pure major	-.104	.412	.063	1	.801	.901	.402	2.021
	No prerequisites	.761	.273	7.790	1	.005	2.141	1.254	3.655
	Undergraduate GPA	-.040	.125	.101	1	.751	.961	.752	1.228
	Metropolitan	.705	.349	4.076	1	.043	2.025	1.021	4.015
	Doctoral/Research	-.614	.577	1.133	1	.287	.541	.175	1.676
	Masters	-.130	.421	.095	1	.759	.878	.385	2.007
	Undergraduate school size	.195	.187	1.079	1	.299	1.215	.842	1.753
	Constant	-1.086	.855	1.615	1	.204	.338		

a. Variable(s) entered on step 1: Metropolitan, Doc_Res, Masters, Schoolsizegroups.

According to the omnibus tests of model coefficients, the step of adding the three culture shock variables, was not significant ($p=0.332$), with the overall model showing a trend towards significance ($p=0.064$). The model explained

8.5% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 2, our prediction accuracy decreased slightly increased again to be close to what it was without any predictors (71.2%). According to the Wald test, the two age groups 20's and 40's remained significant predictors, with the likelihood of students graduating being 3.52 times higher for students in their 20's and 3.21 times higher for students in their 40's compared to the reference category. Students who had no prerequisites due were 2.14 times more likely to graduate. Students coming from metropolitan hometowns were 2.03 times more likely to graduate.

In the model where no predictors were present, it was possible to correctly predict all of the graduates, but none of the nongraduates. By adding these predictors, we were able to increase the potential prediction of the nongraduates with 6.4%, but we decreased our ability to predict the graduates by 3%.

Stage 2

Question 3: To what extent can the academic outcome of final GPA be explained by subjective experiences (academic stability and academic performance)?

Hierarchical multiple regression analysis was used to explore which of the seven subjective experience variables were the best predictors of final GPA. Two multivariate outliers were removed for this analysis. Predictor variables were entered in two blocks. In the first step, the academic stability variables (continuity, course completion) were entered as predictors. As can be seen in Table 28, the academic stability variables showed significant predictive ability,

with the overall model predicting 54.5% of the variance in final GPA ($R^2=0.545$, $F(2,325)=195.01$, $p=.0001$). Adding the academic preparedness variables (no warnings or reviews, no incompletes, no repeated classes and full- or part-time status in the first semester) in the second step improved the model significantly, with the overall model predicting 55.5% of the variance in final GPA ($R^2=0.555$, $F(6,321)=66.81$, $p=.0001$). In this final model the only significant predictor from block two was the continuity indicator ($\beta=-0.563$, $p=0.0001$), the course completion indicator ($\beta=-0.220$, $p=0.0001$) and full time status that was acting as a suppressor variable in this analysis. A suppressor variable correlates with the source of error in another independent variable to help purify it and enhances its predictive power. In this case, full time status had a near-zero correlation with the dependent variable (0.019) but was a significant predictor in this model, an indication that it is a suppressor variable (Meyers, Gamst & Guarino, 2006).

Table 28

Question 3: Subjective Experiences Predicting Final GPA

Variables	B	SE B	β	
Step 1				
Academic Stability				
100% Courses completed	-0.084	0.018	-0.227	***
100% Continuity	-0.241	0.210	-0.572	***
Step 2				
Academic Stability				
100% Courses completed	-0.082	0.019	-0.220	***
100% Continuity	-0.237	0.021	-0.563	***
Academic Performance				
No warnings/reviews	-0.013	0.024	-0.025	
No incompletes	-0.011	0.020	-0.021	
No repeated courses	-0.016	0.034	-0.020	
Full time in first semester	-0.038	0.016	0.089	**

Note: $R^2 = 0.545$ for Step 1; $\Delta R^2 = 0.010$ ($p=0.133$) for Step 2.

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Based on these results it is clear those students with a 100% course completion ratio (courses successfully completed divided by courses taken) and a 100% continuity index (number of semesters successfully completed with a 3.0 GPA or higher divided by number of semesters possible while at the Kent School) have higher final GPA's.

Question 4: To what extent can the academic outcome of earning an MSSW degree be explained by subjective experiences (academic stability and academic performance)?

Hierarchical logistic regression analysis was used to explore which of the seven subjective experience predictor variables were the best predictors of earning an MSSW degree. Predictor variables were entered in two blocks.

Block 0

The classification table for the first block in the analysis, where no predictors were entered is shown in Table 29.

Table 29

Classification Table for Block 0 of Logistic Regression Analysis

Observed		Predicted		
		Graduated? No	Yes	Percentage Correct
Step 0 Graduated?	No	0	94	.0
	Yes	0	236	100.0
Overall Percentage				71.5

a. Constant is included in the model.

b. The cut value is .500

From this table, it is clear that the probability of students graduating in this sample is 0.715. This means that we had 71.5% accuracy in our prediction if we assume that all Kent students in this sample graduated.

Block 1

In this block the academic stability factor variables were added to the model. The results for Block 1 are shown in Tables 30-33.

Table 30

Omnibus Tests of Model Coefficients for Block 1 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	128.546	2	.000
	Block	128.546	2	.000
	Model	128.546	2	.000

Table 31

Nagelkerke R Square for Block 1 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	265.787 ^a	.323	.463

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 32**Classification Table for Block 1 of Logistic Regression Analysis**

Observed	Graduated?	Predicted		Percentage Correct
		No	Yes	
Step 1	No	61	33	64.9
	Yes	15	221	93.6
Overall Percentage				85.5

a. The cut value is .500

Table 33**Variables Included in the Equation of Block 1 for Logistic Regression****Analysis**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a 100% Course completion	.952	.375	6.446	1	.011	2.582
100% Continuity	2.679	.409	42.866	1	.000	14.564
Constant	-1.513	.295	26.248	1	.000	.220

a. Variable(s) entered on step 1: 100% Course Completion, 100% Continuity.

According to the omnibus tests of model coefficients, the variable in block 1 significantly improved the prediction and the model was significant ($p=0.0001$), with this block explaining 46.3% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 1 our prediction accuracy improved to 85.5%. According to the Wald test, students with a 100% completion ratio were 2.58 times more likely to graduate, holding the other variable in the model constant. Also, students with a 100% continuity index were 14.56 times more likely to graduate, holding the other variable in the model constant.

Block 2

In this block, four academic performance variables were added, namely no academic warnings and reviews, no incomplete classes, no repeated classes, and full time status in the first semester. Because the final GPA and the continuity index exhibited multicollinearity, final GPA was not included.

Table 34

Omnibus Tests of Model Coefficients for Block 2 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	11.367	4	.023
	Block	11.367	4	.023
	Model	139.914	6	.000

Table 35

Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	254.420 ^a	.346	.496

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 36

Classification Table for Block 2 of Logistic Regression Analysis

Observed	Graduated?	Predicted		Percentage Correct
		No	Yes	
Step 1	Graduated?	No	Yes	64.9
		Yes	14	222
Overall Percentage				85.8

a. The cut value is .500

Table 37***Variables Included in the Equation for Block 2 of Logistic Regression******Analysis***

		B	S.E.	Wald	df	Sig.	Exp(B)
Step	100% Course	1.087	.398	7.472	1	.006	2.965
1 ^a	Completion						
	100% Continuity	2.972	.456	42.400		.000	19.530
	No warnings/reviews	-.157	.532	.087	1	.768	.855
	No incompletes	-.427	.485	.775	1	.379	.653
	No repeats	-.900	.686	1.721	1	.190	.407
	Full time status	.993	.374	7.044	1	.008	2.699
	Constant	-1.244	.643	24.671	1	.053	.288

a. Variable(s) entered on step 1: No warnings/reviews, no incompletes, no repeats, full time status.

According to the omnibus tests of model coefficients, the step of adding the four academic performance variables significantly improved the model ($p=0.023$), with the overall model being significant ($p=0.0001$). The model explained 49.6% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 2, our prediction accuracy slightly increased to 85.8%. According to the Wald test, students with a 100% completion ratio were 2.97 times more likely to graduate, controlling for the other variables in the model. Also students with a 100% continuity index were 19.53 times more likely to graduate, controlling for the other variables in the model. Students who attended full-time in their first semester were 2.7 times more likely to graduate, controlling for the other variables in the model.

In the model where no predictors were present, it was possible to correctly predict all of the graduates, but none of the nongraduates. By adding these

predictors, we were able to increase the potential prediction of the nongraduates by 64.9%, but we decreased our ability to predict the graduates by 5.9%.

Stage 3

Question 5: To what extent can the academic outcome of final GPA be explained by the most significant variables in the preexisting characteristics block and the subjective experiences block?

Hierarchical multiple regression analysis was used to explore which of the eight preexisting predictor variables and the five subjective experiences variables were the best predictors of final GPA. Three multivariate outliers were deleted with this analysis. Predictor variables were entered in five blocks. In the first step, all preexisting variables were deleted except undergraduate GPA. As can be seen in Table 38, undergraduate GPA showed significant predictability, with the overall model predicting 3.0% of the variance in the final GPA ($R^2=0.030$, $F(1,325)=9.879$, $p=.002$). Adding the culture shock variable of undergraduate school size in the second step improved the model significantly, with the overall model predicting 4.8% of the variance in final GPA ($R^2=0.048$, $F(1,324)=8.095$, $p=.0001$). Adding the academic stability variables of course completion and continuity index in the third step improved the model significantly, with the overall model predicting 53.7% of the variance in final GPA ($R^2=0.537$, $F(4,322)=93.400$, $p=.0001$). After the academic performance variable of full time status was added in the final step, the model improved significantly again, with the overall model predicting 55% of the variance in final GPA ($R^2=0.550$, $F(3,321)=78.622$, $p=.0001$). In this final model the significant predictor from block one was

undergraduate GPA ($\beta=-0.102$, $p=0.0001$), from block two was undergraduate school size ($\beta=-0.089$, $p=0.020$) and from block three were the course completion indicator ($\beta=-0.233$, $p=0.0001$) and the continuity index indicator ($\beta=-0.542$, $p=0.0001$). The full time status variable acted again as a suppressor variable in the analysis.

Table 38

Question 5: Preexisting Characteristics and Subjective Experiences

Predicting Final GPA

Variables	B	SE B	β	
Step 1				
Academic Preparedness				
Undergraduate GPA	-0.077	0.024	-0.172	**
Step 2				
Academic Preparedness				
Undergraduate GPA	-0.084	0.024	-0.191	***
Culture Shock				
Undergraduate school size	0.000	0.000	-0.136	**
Step 3				
Academic Preparedness				
Undergraduate GPA	-0.039	0.017	-0.089	**
Culture Shock				
Undergraduate school size	0.000	0.000	-0.090	**
Academic Stability				
100% Course Completion	-0.081	0.018	-0.222	***
100% Continuity	-0.224	0.021	-0.544	***
Step 4				
Academic Preparedness				
Undergraduate GPA	-0.045	0.017	-0.102	**
Culture Shock				
Undergraduate school size	0.000	0.000	-0.089	**
Academic Stability				
100% Course Completion	-0.085	0.018	-0.233	***
100% Continuity	-0.223	0.020	-0.542	***
Academic Performance				
Full time status	0.050	0.016	0.117	**

Note: $R^2 = 0.030$ for Step 1; $\Delta R^2 = 0.018$ ($p=0.014$) for Step 2; $\Delta R^2 = 0.489$ ($p=0.0001$) for Step 3; $\Delta R^2 = 0.013$ ($p=0.002$) for Step 4.

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Based on these results it is clear those students with a higher undergraduate GPA have higher final GPAs. Also, students coming from larger undergraduate schools have higher final GPAs. The strongest variables were the academic stability variables with students with 100% course completion ratios and 100% continuity indexes having higher final GPAs.

Question 6: To what extent can the academic outcome of earning an MSSW degree be explained by the most significant variables in the preexisting characteristics block and the subjective experiences block?

Hierarchical logistic regression analysis was used to explore which of the nine preexisting characteristic variables and five subjective experiences predictor variables were the best predictors of earning an MSSW degree. Predictor variables were entered in four blocks.

Block 0

The classification table for the first block in the analysis, where no predictors were entered is shown in Table 39.

Table 39

Classification Table for Block 0 of Logistic Regression Analysis

Observed		Predicted		
		Graduated?	Percentage	
		No	Yes	Correct
Step 0 Graduated?	No	0	94	.0
	Yes	0	236	100.0
Overall Percentage				71.5

a. Constant is included in the model.

b. The cut value is .500

From this table, it is clear that the probability of students graduating in this sample is 0.715. This means that we had 71.5% accuracy in our prediction if we assume that all Kent students in this sample graduated.

Block 1

The age, race and gender variables were entered in this block to the model. Age in groups was the only variable retained in this block, with Age 50's as the reference category. The results for Block 1 are shown in Tables 40-43.

Table 40

Omnibus Tests of Model Coefficients for Block 1 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	8.672	3	.034
	Block	8.672	3	.034
	Model	8.672	3	.034

Table 41

Nagelkerke R Square for Block 1 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	385.661 ^a	.026	.037

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 42**Classification Table for Block 1 of Logistic Regression Analysis**

	Observed	Predicted		
		Graduated? No	Graduated? Yes	Percentage Correct
Step 1	Graduated? No	13	81	13.8
	Yes	12	224	94.9
	Overall Percentage			71.8

a. The cut value is .500

Table 43**Variables Included in the Equation of Block 1 for Logistic Regression****Analysis**

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Age20s	1.249	.438	8.119	1	.004	3.488	1.477	8.237
	Age30s	.814	.471	2.986	1	.084	2.257	.896	5.682
	Age40s	1.045	.497	4.430	1	.035	2.844	1.075	7.526
	Constant	-.080	.400	.040	1	.842	.923		

a. Variable(s) entered on step 1: Age20s, Age30s, Age40s.

According to the omnibus tests of model coefficients, the variables in block 1 significantly improved the prediction and the model was significant ($p=0.034$), with this block explaining 3.7% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 1 our prediction accuracy improved to 71.8%. According to the Wald test, students in their 20's increased the odds of graduating by 3.49 times over students in their 50's. Similarly, students in their 40's were 2.84 times more likely to graduate than students in their 50's. Students in their 30's showed a trend toward being 2.26 times more likely to graduate than students in their 50's.

Block 2

In this block, the three academic performance variables were added, namely undergraduate major, prerequisite classes and undergraduate GPA. The only variable that contributed to the overall model was no prerequisites; the other two were eliminated from this final model.

Table 44

Omnibus Tests of Model Coefficients for Block 2 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	6.646	1	.010
	Block	6.646	1	.010
	Model	15.319	4	.004

Table 45

Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	379.014 ^a	.045	.065

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 46

Classification Table for Block 2 of Logistic Regression Analysis

	Observed	Predicted		
		Graduated?	Percentage	
		No	Yes	Correct
Step 1	Graduated? No	4	90	4.3
	Yes	5	231	97.9
	Overall Percentage			71.2

a. The cut value is .500

Table 47***Variables Included in the Equation for Block 2 of Logistic Regression******Analysis***

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step	Age20s	1.308	.445	8.644	1	.003	3.698	1.546	8.844
1 ^a	Age30s	.864	.477	3.274	1	.070	2.372	.931	6.048
	Age40s	1.151	.505	5.199	1	.023	3.162	1.175	8.507
	No prerequisites	.647	.252	6.601	1	.010	1.909	1.166	3.127
	Constant	-.497	.437	1.294	1	.255	.608		

a. Variable(s) entered on step 1: No prerequisites.

According to the omnibus tests of model coefficients, the step of adding no prerequisite classes added significantly to the model ($p=0.010$), with the overall model being significant ($p=0.004$). The model explained 6.5% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 2, our prediction accuracy decreased to 71.2%. According to the Wald test, students in their 20's are 3.70 times more likely to graduate than students in their 50's. Also, students in their 40's are 3.16 times more likely to graduate than students in their 50's, with students in their 30's showing a trend at 2.37 times more likely to graduate than students in their 50's. Having no prerequisite classes due increased the likelihood of graduating by 1.91 times over a student who has prerequisites due, controlling for the other variables in the model.

Block 3

In the third block, the three culture shock variables (rural/metropolitan nature of hometown and differences between undergraduate and graduate

institution—Carnegie classification and size) were entered. Because none of these variables contributed significantly to the overall model, this block was eliminated. Instead, the fourth block, academic stability, was added to the model that consisted of the course completion indicator as well as the continuity index indicator.

Table 48

Omnibus Tests of Model Coefficients for Block 2 of Logistic Regression

Analysis

		Chi-square	Df	Sig.
Step 1	Step	125.684	1	.000
	Block	125.684	1	.000
	Model	141.002	5	.000

Table 49

Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	253.331 ^a	.348	.499

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 50

Classification Table for Block 2 of Logistic Regression Analysis

	Observed		Predicted		Percentage Correct
			Graduated? No	Graduated? Yes	
Step 1	Graduated?	No	61	33	64.9
		Yes	15	221	93.6
Overall Percentage					85.5

a. The cut value is .500

Table 51***Variables Included in the Equation for Block 2 of Logistic Regression******Analysis***

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step	Age20s	.828	.603	1.883	1	.170	2.288	.702	7.461
1 ^a	Age30s	.374	.641	.341	1	.560	1.453	.414	5.100
	Age40s	1.229	.693	3.144	1	.076	3.417	.879	13.290
	No prerequisites	.971	.340	8.182	1	.004	2.642	1.358	5.140
	100% Course Completion	.796	.387	4.224		.040	2.216	1.038	4.734
	100% Continuity	2.956	.445	44.157	1	.000	19.214	8.036	45.944
	Constant	-2.854	.668	18.282	1	.000	.000		

a. Variable(s) entered on step 1: 100% Course Completion, 100% Continuity.

According to the omnibus tests of model coefficients, the step of adding the continuity index added significantly to the model ($p=0.0001$), with the overall model being significant ($p=0.0001$). The model explained 49.9% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 2, our prediction accuracy increased to 85.5%. According to the Wald test, none of the age categories were significant any longer, and students who had no prerequisites due were 2.64 times more likely to graduate than those who had prerequisites due. Students with a 100% course completion ratio were 2.22 times more likely to graduate and students with a 100% continuity index were 19.21 times more likely to graduate, controlling for the other variables in the analysis.

Block 4

In this block, the four academic performance variables were added, namely no academic warnings and reviews, no incomplete classes, no repeated classes, and full time status in the first semester. The only two variables that were significant and therefore kept in this block were no repeated classes and full-time status in the first semester.

Table 52

Omnibus Tests of Model Coefficients for Block 2 of Logistic Regression

Analysis

		Chi-square	df	Sig.
Step 1	Step	10.041	2	.007
	Block	10.041	2	.007
	Model	151.043	8	.000

Table 53

Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	243.290 ^a	.367	.527

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 54**Classification Table for Block 2 of Logistic Regression Analysis**

	Observed		Predicted		Percentage Correct
			Graduated? No	Graduated? Yes	
Step 1	Graduated?	No	59	35	62.8
		Yes	14	222	94.1
Overall Percentage					85.2

a. The cut value is .500

Table 55**Variables Included in the Equation for Block 2 of Logistic Regression****Analysis**

	B	S.E.	Wald	d	f	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a									
Age20s	.795	.636	1.564	1	.211	2.214	.637	7.694	
Age30s	.418	.668	.393	1	.531	1.520	.411	5.625	
Age40s	1.462	.754	3.758	1	.053	4.314	.984	18.911	
No prerequisites	.945	.346	7.442	1	.006	2.573	1.305	5.073	
100% Course completion	.901	.400	5.071		.024	2.461	1.124	5.388	
100% Continuity	3.247	.484	45.045	1	.000	25.720	9.964	66.392	
No repeated classes	-1.461	.650	5.049	1	.025	.232	.065	.830	
Full time	.871	.383	5.160	1	.023	2.389	1.127	5.063	
Constant	-2.449	.872	7.894	1	.005	.086			

a. Variable(s) entered on step 1: No repeated classes, Full time.

According to the omnibus tests of model coefficients, the step of adding the four academic performance variables added significantly to the model ($p=0.0001$), with the overall model being significant ($p=0.0001$). The model explained 2.7% of the variance in the dependent variable (Nagelkerke R Square). As can be seen from the classification table for block 2, our prediction accuracy increased to 85.2%. According to the Wald test, students with no prerequisite

classes were 2.57 times more likely to graduate than those with prerequisites due at admission, controlling for the other variables in the analysis. Students with a 100% course completion ratio were 2.46 times more likely to graduate and students with a 100% continuity index were 25.72 times more likely to graduate, controlling for the other variables in the analysis. Also, students who attended full-time in their first semester were 2.39 times more likely to graduate. Students in their 40's showed a trend toward being more likely to graduate, being 4.31 times more likely than those in their 50's to graduate.

No repeated classes acted as a suppressor variable in this analysis. The suppressor status was indicated by the positive Pearson correlation with the dependent variable (0.094), but a negative beta weight (-1.461), as well its near-zero correlation with the dependent variable (0.094), but a significant predictor in the model. The no repeated classes variable was kept in the final model so it could enhance the predictive power of the other variables in the model (Meyers, Gamst & Guarino, 2006).

In the model where no predictors were present, it was possible to correctly predict all of the graduates, but none of the nongraduates. By adding these predictors, we were able to increase the potential prediction of the nongraduates by 62.8%, but we decreased our ability to predict the graduates by 5.9%.

Conclusions

This chapter provided descriptive statistics for each of the sixteen predictive variables in this study. In addition, the analysis for each of the six research questions was presented along with the meaning of the results.

The following chapter will build upon these results by connecting them to the relevant literature and detail implications for social work education. It will also tell the strengths and weaknesses of the study and potential areas for future research.

CHAPTER V
DISCUSSION, CONCLUSIONS,
AND SOCIAL WORK IMPLICATIONS

This research effort attempted to create a model to predict two academic outcome variables, namely final GPA as well as the successful completion of the MSSW degree. The predictor variables were based on students' Preexisting Characteristics (Demographics, Academic Preparedness and Culture Shock) and Subjective Experiences (Academic Stability and Academic Performance). This chapter will expand upon the meaning of the results from the previous chapter, using linkages to the previously cited research and theories. In addition, the strengths and limitations of the study, implications for social work education and suggestions for future research will be delineated. The discussion will follow the previous outline in that each research question will be discussed as ordered in the previous chapters.

Summary of Findings

Stage 1

Research Question 1: To what extent can the academic outcome of final GPA be explained by preexisting characteristics (demographics, academic preparedness and culture shock)?

From looking at the results of the first model that was built, focusing on what preexisting characteristics predict final GPA, it is clear that the model was weak, and was only able to predict 8.3% of the variance in final GPA. Significant predictors included age, undergraduate GPA and undergraduate school size. Younger students were more successful, which is in line with Cross's (1981) linear life plan where "education is for the young" (p. 9). Students coming into graduate school with higher undergraduate GPA's have higher graduate GPA's as was previously found by Dunlap, Henley, & Fraser (1998). Being White showed a trend towards having a better final GPA. Finally, students from bigger undergraduate schools tended to do better at the University of Louisville, speaking towards the ability of students from bigger undergraduate schools to adapt better to U of L as a metropolitan larger size university. Niche, as part of Ecological Systems Theory, helps explain this phenomenon (Hepworth & Larsen, 1993). The more familiar the university setting, the less adjustment required of students when starting their studies. Students who are already familiar with a larger university (like U of L) are more likely to have a smaller amount of adjustment than a student who comes from a small undergraduate university (like Center College).

Research Question 2: To what extent can the academic outcome of earning an MSSW degree be explained by preexisting characteristics (demographics, academic preparedness and culture shock)?

The second model that was built, this time focusing on what preexisting characteristics predict successful completion of an MSSW degree, was also weak, and was only able to increase the potential prediction of the nongraduates from 0% to 6.4%. The ability to correctly predict the graduates was reduced from 100% to 97% with the overall prediction ability of the model reduced from 71.5% to 71.2%. The main predictors in this model that only enhanced the ability to predict nongraduates were students in the age groups of 20 and 40 being more likely to graduate compared to students in their 50's (reference category). This finding is more consistent with Berger's (1992) results—where the students in the middle age group (30's) were less likely to graduate because of multiple outside commitments. Not having prerequisites enhanced the ability of students to graduate. Students coming from metropolitan hometowns were less at risk of not graduating than students coming from smaller areas. This is again related to niche (Hepworth & Larsen, 1993). Students coming from a similar background as the area they are going (the metropolitan area of Louisville, KY) are more likely to do well than students coming from an unfamiliar background (a smaller town than Louisville, KY).

Stage 2

Research Question 3: To what extent can the academic outcome of final GPA be explained by subjective experiences (academic stability and academic performance)?

The third model that was built focused on what subjective experiences predict final GPA. This model was very strong and was able to predict 54.5% of the variance in final GPA. The only significant predictors in this model were the course completion ratio and the continuity index. Students with a higher course completion ratio and continuity index had higher final GPA's. As a part of Ecological Systems Theory, habitat can refer to the resources available to a student when they struggle academically (Hepworth & Larsen, 1993). Those with abundant resources tend to flourish when faced with challenges; those with a lack of resources may decide to stopout or drop out of classes when their challenges tax their resources. The continuity index (Hagedorn, 2004) helps measure those students who decide that the best course of action is to stopout of all of their classes temporarily before returning to finish their degrees (or drop out entirely), thereby identifying that their resources were not abundant enough to support the stress of graduate school together with the stressors of their life. The course completion ratio (Hagedorn, 2004) helps measure those students who either felt underprepared for a class or overwhelmed by their schedules and dropped out of only a selection of their classes while continuing in other classes during the semester. Either way, the student is showing a lack of abundant resources sufficient to support them in their studies.

Research Question 4: To what extent can the academic outcome of earning an MSSW degree be explained by subjective experiences (academic stability and academic performance)?

The fourth model that was built, this time focusing on what subjective experiences predict successful completion of an MSSW degree, it is clear that this model was also strong, and was able to increase the potential prediction of the nongraduates from 0% to 64.9%. The ability to correctly predict the graduates was reduced from 100% to 94.1% with the overall prediction ability of the model increased from 71.5% to 85.8%. The main predictors in this model that increased the likelihood of graduation were the course completion ratio and the continuity index, together with full time status of students in the first semester. Berkovitz and O'Quin (2006-2007) also found that stopping out of college is not necessarily an indicator that students will not graduate. Hagedorn's (2004) creation of these two variables helped create a distinctive picture of how students attend college—by leaving temporarily or by dropping only some of their classes in a semester—while not permanently leaving school and risking not graduating. As mentioned previously, Ott, Markewich and Ochsner (1984) also found that students who started graduate school full-time were predicted to have higher retention.

Stage 3

Research Question 5: To what extent can the academic outcome of final GPA be explained by the most significant variables in the preexisting characteristics block and the subjective experiences block?

From looking at the results of this model, focusing on what preexisting

characteristics and subjective experiences predict final GPA, it is clear that the model was strong, and was able to predict 55% of the variance in final GPA. Significant predictors included undergraduate GPA, undergraduate school size, the course completion ratio and the continuity index.

Students with higher undergraduate GPA's had higher graduate GPA's consistent with Dunlap, Henley and Fraser's (1998) findings that students with higher undergraduate GPA's are more likely to do well in MSW programs. Students coming from larger undergraduate schools had a higher graduate GPA. Students with a 100% course completion ratio and a 100% continuity index had higher graduate GPA's.

Research Question 6: To what extent can the academic outcome of earning an MSSW degree be explained by the most significant variables in the preexisting characteristics block and the subjective experiences block?

From the sixth and final model that was built, this time focusing on what preexisting characteristics and subjective experiences predict successful completion of an MSSW degree, it is clear that this model was also strong, and was able to increase the potential prediction of the nongraduates from 0% to 62.8%. The ability to correctly predict the graduates was reduced from 100% to 94.1% with the overall prediction ability of the model increased from 71.5% to 85.2%. The significant predictors in this model were students with no prerequisites due, a 100% course completion ratio, a 100% continuity index, and attending full-time in their first semester. The no repeated classes variable acted as a suppressor variable in this analysis. Age showed a trend toward

significance, with students in their 40's more likely to graduate than students over the age of 50.

Although not all of the variables in the original model resulted in significance, those variables that were significant contribute to our knowledge base about what preexisting characteristics and subjective experiences can affect both final GPA and graduation. Ultimately, two models are necessary to explain the predictive factors related to the two different outcomes: final GPA and graduation.

Final GPA (See Figure 4)

Questions 1, 3 and 5 had Final GPA as the outcome variable. Undergraduate GPA, undergraduate school size, course completion ratio and the continuity index appeared twice, along with age that appeared once. The following can be extrapolated from these findings:

1. Students with a higher undergraduate GPA are likely to have a higher graduate GPA (Q 1 & 5),
2. Related to the continuity index, students who stop out of classes, even for just one semester, are likely to have lower final GPA's, regardless of the reason for the stop out (Q 3 & 5),
3. Students who are younger (in their 20s) tend to have higher final GPA's (Q 1),
4. Students who come from larger undergraduate universities tend to have higher final GPAs (Q 1 & 5),
5. Students who successfully complete all courses they attempt, are likely

to have higher final GPA's (Q 3 & 5).

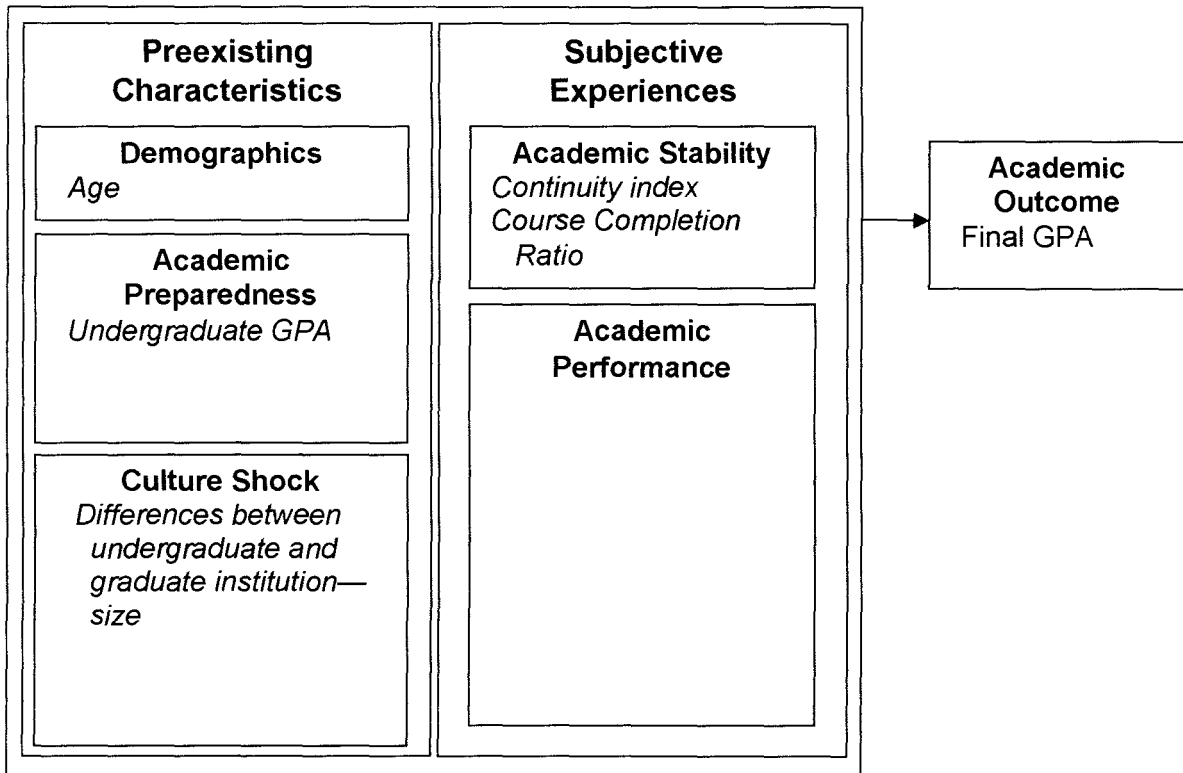


Figure 4. A Hypothetical Model of Preexisting Characteristics and Subjective Experiences Predicting Final GPA Graduation (See Figure 5)

Questions 2, 4 and 6 had graduation as the outcome variable. Age, no prerequisites, the course completion ratio, the continuity index and full- or part-time status in the first semester appeared in two iterations of the model; an additional significant variable that appeared once was the metropolitan/rural nature of hometown. These results indicate:

1. Students in their 20's and 40's are more likely to graduate than students in their 50's (Q 2 & Q4 (trend)),
2. Students with no prerequisites are more likely to graduate than

students with any prerequisites due when they are admitted to the Kent School (Q 2 & 6),

3. Students with a 100% continuity index are more likely to graduate—meaning stopping out for one or more semesters can lead to not graduating (Q 4 & 6),
4. Students with a 100% course completion ratio are more likely to graduate (Q 4 & 6).
5. Students who are full-time in their first semester are more likely to graduate than those who start the MSSW program part-time (Q 4 & 6),
6. Students who come from a metropolitan area are more likely to graduate than those who come from a more rural setting (Q 2).

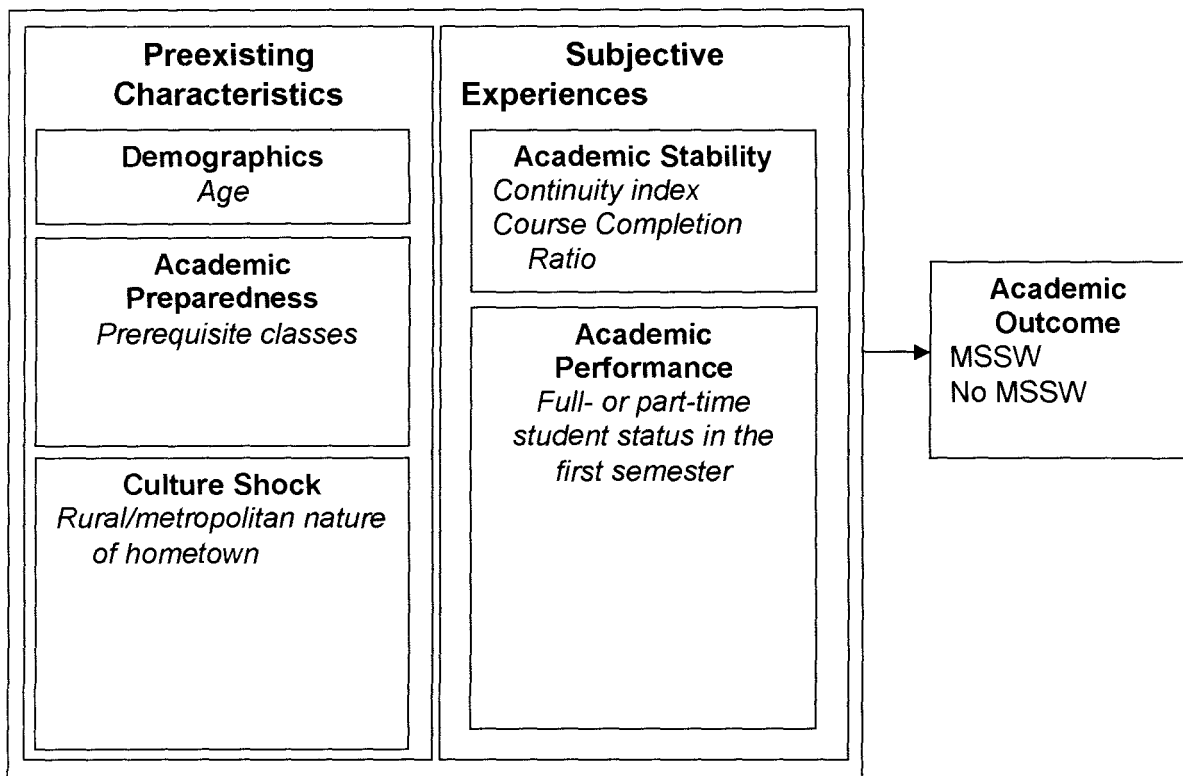


Figure 5. A Hypothetical Model of Preexisting Characteristics and Subjective Experiences Predicting Graduation

**Implications of Models of Student Success
for Social Work Education**

The purpose of performing these statistical analyses from the outset was to determine what areas of the students' experiences were likely to cause them to have a lower final GPA and/or not graduate. Once determined, support systems could be put in place to help students maintain their enrollment at the Kent School and ultimately successfully complete their MSSW degree. The following implications of the model developed in this dissertation will help schools of social work identify ways they can offer support to students likely to struggle so they can be successful.

Admission to MSSW Degree Program

Because having prerequisites due at admission to the Kent School resulted in students not graduating, a change in policy could be put in place at the beginning of the students' studies to support those with prerequisites due. Because it is not possible to determine if having one or more than one due is more likely to cause students not to graduate, it must be assumed that any student starting their graduate MSSW program with anywhere from one to three prerequisites due is at risk of not completing their degree. This policy change could require students to complete their prerequisites before starting their studies (via online prerequisite classes offered by the Kent School), or that they may only take a limited number of credit hours in their first semester to allow them extra study time to devote to the completion of the prerequisite.

Because students in their 20's and 40's are more likely to graduate than student in their 50's and beyond, it is possible to put support in place for the older students at admission. If the reason for the older students to be less likely to succeed is because they have not been to school for an especially long period, it is possible to have some supportive seminars to reacclimate the student to school. The same is true for students who need a refresher on how to write at the graduate level or how to use technology to enhance learning (how to use Blackboard and do database searches of library materials, for example).

It is important to point out that undergraduate GPA did not predict whether a student would graduate. Although it did predict graduate GPA, it did not determine if students would complete their MSSW degrees. Because the Kent

School of Social Work uses a minimum undergraduate GPA to determine eligibility for students to enter the program, some applicants who could succeed are excluded from admission. It is possible that applicants with other strong indicators for success in the MSSW program could be successful without a high undergraduate GPA. For example, because students from metropolitan areas are more likely to graduate than those from smaller hometowns, one attribute of an applicant can be consideration of their hometown when selecting students to admit who have lower undergraduate GPA's. The same is true of students in their 20's or 40's; these students are more likely to graduate than students who are in their 50's (students in their 30's showed a trend toward being more likely to graduate than students in their 50's as well). Finally, students who attended large undergraduate universities are more likely to succeed at the University of Louisville than those from smaller schools, perhaps this could be part of the consideration when determining whether to admit a student to the Kent School.

The results for questions 4 and 6 are in accordance with Girves and Wemmerus' (1988) findings that full-time status in the first semester led to graduation. It is unrealistic to expect all students to attend full-time in their first semester, but it may be helpful to educate incoming students about these findings so they can make informed decisions when starting their MSSW program. In addition, informing all faculty advisors of these results can lead to more informed advising on their part when a new student is asking them for a recommendation. Ott (1988) speculated that the full-time first semester student might be more dedicated to college-level work—perhaps meaning that they are

more committed to changing their everyday activities to incorporate their new education program as part of their life. In addition, it is possible that some students are not aware of the commitment required of graduate work. Perhaps those students who add part-time studies to their already busy lives have an unrealistically small idea of the amount of change a graduate program can bring into their lives. But there is another possible explanation from Ecological Systems Theory. It is possible that students who start their graduate studies part-time are not given the opportunity to fully integrate with the graduate level environment. If adding two classes (a minimum of six credit hours are required of most part-time students) to their already busy lives, students who start part-time may not have the opportunity for some of the cultural adjustments to graduate school allowed by those who are full-time. For example, part-time graduate students may not be involved in the out-of-class student activities like the student association, and the extracurricular meetings for socializing among fellow MSSW students offered throughout the school year, etc. This would refer to the habitat of the MSSW student—the physical and social environment within a cultural context (Hepworth & Larsen, 1993). Perhaps these part-time students do not feel the camaraderie that is created among fellow students who have the same classes together throughout their studies. Also, because they are at school part-time, the machinations of graduate study may not become familiar and must be struggled with throughout their studies. The typical part-time student has a full-time job while in school, leading them to split their focus between their employer and their school work. Further studies would be required

to determine which of these possibilities are the reasons behind these findings.

During MSSW Degree Program

Students who stop out of their studies for one or more semesters are at higher risk of having a lower GPA and not graduating. The first intervention that could be helpful for this group of students is to prevent them from stopping out, if at all possible. Rather than allow students to take a Leave of Absence for any reason, it may be helpful to require them to meet with someone before they leave to see if there is any way to avoid their leaving the program by reducing their schedule or rearranging their curriculum plan. If students have to leave but intend to return, they are required to take a Leave of Absence. These students need additional support when they return to the program. If a student stops out of the program for any length of time, it will remove them from the curriculum plan they chose at admission to the Kent School. Many times, students will stop out because they have to take care of family or work issues. If they are out for one year, they may return to their curriculum plan as originally listed without further interruption if they have a 3.0 GPA and no more than 2 C grades when they left. If they choose to stay out of the program for more or less than one year, they will no longer be able to follow their original curriculum plan and a specialized plan will have to be put into place. Typically, this has meant that students who have stopped out of school must return and attend classes out of sequence from those who did not stop out. A possible repercussion of this stop out is that they are no longer part of the cohort of students who were potential sources of support and they have to get to know a new group of students when they return to classes.

There are currently no interventions related to the course completion ratio at the Kent School. Students who drop out of classes in the middle of a semester are only contacted if it means that they will no longer be able to follow their chosen curriculum plan and must create a specialized plan. However, because the course completion ratio was a significant predictor in this research, an intervention should be considered. If students drop out of classes during a semester (receiving grades of “W”), this is a predictor that they will risk getting a lower cumulative GPA and not graduating. Perhaps there could be an additional category in the reasons for requiring an academic review or warning that incorporates this new knowledge about those who withdraw from classes mid-semester. If students have a W grade, they could be recommended for an academic warning and be required to discuss their situation with their advisor. For students with W grades in more than one semester, an academic review could be required where they will have to determine if they are in the curriculum plan that best suits their needs or if they must reduce their semester load so they no longer feel overwhelmed mid-semester. If it is a matter of not feeling prepared for classes, students can be encouraged to take remedial classes (the introductory research class for those who are struggling with advanced research, for example) before they tackle the harder class(es). A specialized curriculum plan may be in order as well. Many times students select the curriculum plan that will allow them to graduate the fastest. Meetings to discuss students’ plans for their degree may help them realize the magnitude of graduate work and allow for extra time to complete their degrees successfully. Grades of W can serve as

a warning that students are potentially in academic trouble and an intervention is needed.

Strengths

One strength of this research is the inclusion of variables that were based on the practice experience of the researcher. Although not all of these variables could be substantiated by the literature, four years of experience as the academic coordinator for the Kent School of Social Work allowed the researcher insight into the various challenges facing students, these variables were number of prerequisites due, number of academic warnings and reviews, number of incomplete grades and number of repeated classes. Ultimately, having no prerequisites due at admission to the Kent School increased the probability of students graduating. Additionally, including social work students over a period of five years, increased the ability of the findings to be generalized to all social work students at the University of Louisville.

Limitations

This research was specifically designed to determine the predictors of student success for social work students at entry into the MSSW program and while they were a student in the program. Generalizability to other schools of social work is a limitation of this study in that researchers took a random sample of only students from the Kent School of Social Work. These students may vary significantly from students attending other social work programs in other settings—from non-research intensive universities and different geographical locations.

In addition, collecting data related to retention was challenging. The three main sources of information came from the registrar's office, the student paper file and a Microsoft Access database developed specifically for the student services and academic affairs department of the Kent School of Social Work between 2003 and 2005, meaning that data for this study ranging from 2001 to 2005 was incomplete in the database. Considerable effort was required to compile the information into one record for study. One report from the university to identify key variables required three weeks for development and provided insufficient information on all of the targeted students. There was also a case of data having been written over so that it was no longer retrievable; namely, the identification of incomplete grades was likely a critically underreported variable. A future indication for this would be to put a more consistent measure in place to identify key variable information at all times so future research into retention is more accessible to researchers. The Access database is now updated routinely and will help with further research into later cohorts.

Future Research

The curriculum at the Kent School was restructured after the 2004-2005 school year, after the dates of this research. It would be interesting to determine if the variables that were significant predictors of final GPA and graduation remained the same after this curriculum change. Further research into the next five year period (start year 2006-2010) could illuminate if there are any differences based on the curriculum updates.

Because this research was focused on MSSW students at the Kent

School of Social Work, it is not possible to generalize it to other schools of graduate social work. Further research could duplicate this research study to see if the same variables were significant predictors of final GPA and graduation at different schools. Ultimately, a model for predicting the two outcome variables could be developed and tested nationwide at a number of graduate schools of social work.

Conclusions

This dissertation focused on the preexisting characteristics and subjective experiences of MSSW students at the Kent School of Social Work at the University of Louisville in Louisville, KY. The findings indicate that there are preexisting characteristics (age, undergraduate GPA, prerequisites, rural/metropolitan nature of hometown) and subjective experiences (course completion ratio, continuity index, full-time status in the first semester) that can help predict both graduate cumulative GPA and the likelihood of graduating with an MSSW degree. Strengths and weaknesses of the study, future research recommendations and the meaning of the statistical output were delineated in this chapter.

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- annual meeting: Measuring doctoral attrition and completion in Santa Fe, New Mexico.
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CURRICULUM VITA

Angela M. Napier, Ph.D, MSSW, CSW

CONTACT INFORMATION

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EDUCATION

8/00-4/11 Doctor of Philosophy in Social Work
University of Louisville, Kent School of Social Work, Louisville, KY
University of Kentucky, College of Social Work, Lexington, KY
Dissertation: *A Predictive Model for MSSW Student Success*
Dr. Annatjie Faul, Chair

8/96-8/99 Master of Science in Social Work
University of Louisville, Kent School of Social Work, Louisville, KY
Focus Area: Direct Practice in Mental Health

8/89-5/93 Bachelor of Arts in Theatre
Murray State University, Murray, KY
Graduated with Honors, Cum Laude Diploma
Minor: Psychology

AWARDS

October 2009 – Faculty Favorite
Delphi Center for Teaching and Learning, University of Louisville
Student nominated recognition of the faculty member who made a difference for them in their growth and learning.

May 2008 and May 2009 – Best Student Advisor

Kent School of Social Work Student Association, University of Louisville

May 2008 – Wakonse Fellow

Delphi Center for Teaching and Learning, University of Louisville.

One of three faculty at the University of Louisville chosen for a full scholarship to the Wakonse Conference for Post-Secondary Teaching.

May 2007 – Best Acting Coordinator of Academic Affairs

Kent School of Social Work Student Association, University of Louisville

EMPLOYMENT

March 2007 – Present

Coordinator of Academic Affairs, Kent School of Social Work, University of Louisville, Louisville, Kentucky.

My current responsibilities include:

- Coordinate and counsel Kent School MSSW students on curriculum selection, program selection, degree requirements and registration. Monitor course enrollments and coordinate class cancellation procedures.
- Coordinate the assignment of faculty advisors to Kent School MSSW students. Maintain Kent Advising site in Blackboard.
- Act as a liaison between faculty/staff and students. Collaborate with the curriculum committee in developing academic experiences that promote retention. Identify and initiate contact with students in academic jeopardy and consult with faculty in relation to student performance. Conduct exit interviews with random samples of Kent School MSSW students and report findings to faculty and administration.
- Coordinate applications for graduation. Complete degree checks for graduation and for employment. Communicate with other units about graduation related issues (i.e. Registrar's, Kent alumni, Kent newsletter and honorary societies). Develop communication tools in relation to good standing and degree confirmation. Coordinate the distribution of class and grade rosters and coordinate change of grade procedures. Coordinate requests from Kent alumni for licensure requirements.
- Coordinate data queries and develop reports related to student profiles, demographics and retention. Coordinate queries from faculty related to policies and procedures.
- Develop and maintain the Kent School MSSW student database.

- Coordinate commencement ceremonies in May and December. Verify student information in commencement bulletins and programs. Coordinate the Kent School convocation as well as the graduation party.
- Interview and counsel prospective applicants to the Kent School and advise students on Kent School's procedures and policies related to admission requirements and procedures in the absence of the Coordinator of Admissions.

January 2006 – March 2007

Acting Coordinator of Academic Affairs, Kent School of Social Work, University of Louisville, Louisville, Kentucky.

Same duties and responsibilities as Coordinator of Academic Affairs listed previously.

August 2003 – December 2005

Graduate Student Assistant, Kent School of Social Work, University of Louisville, Louisville, Kentucky

- Created Microsoft Access database to track MSSW students from application to graduation.
- Continuous improvement of database included filling in student information back to the 1997-1998 school year, providing a multi-user interface for data entry, cleaning and entering student data.

June 2003 – September 2003

Youth Counselor, Maryhurst, Inc., Louisville, Kentucky

Maryhurst, Inc. is a residential treatment facility for adolescents who have been removed from their home due to behavior problems. Many of the residents at Maryhurst, Inc. have had permanent termination of parental rights and remain there until they turn 18-years-old and are released from state custody.

- Supervised and counseled adolescent residents, monitored behavior, provided appropriate interventions as needed.

September 2003 – December 2003

Hospital Social Worker, University of Louisville Hospital, Louisville, Kentucky

- Provided family and individual counseling.
- Provided resources for patients being discharged from the hospital.

June 2002 – June 2003

Founding Director, Arcadia Community Center, Louisville, KY

The Arcadia Community Center was created to serve the residents of the Arcadia Park Apartment Homes Complex. Residents are predominately immigrants and

refugees.

- Co-Director of Arcadia Community Center June 2002 – July 2002; Director July 2002 – June 2003
- Created community center for residents of the Arcadia Park Apartment Homes Complex, including all start-up operations.
- For youth: Created after-school program with homework assistance and computer access; created summer camp program with free breakfast and lunch, recreation and structured learning activities.
- For adults: Provided English as a Second Language classes for Spanish-speaking residents; collaborated with the Center for Women and Families to create a domestic violence support group for women of Arcadia.
- Received grant from 3rd District Alderman, George Unseld, to sponsor Blue Apple Players theatre group for summer children's program. Conducted a pre-test/post-test design for evaluating participant theatre knowledge and self-confidence. Reported results to the Blue Apple Players and the Arcadia Community Center Board of Directors.
- Collaborated with Dare to Care, The Center for Women and Families, Kent School of Social Work, Catholic Charities, Louisville Community Ministries and Americorps.
- Hired and supervised Americorps volunteer.
- Supervised three Kent School of Social Work MSSW practicum students; one in advanced macro practice and two in foundation generalist practice. During this time the students operated the after-school program, created and recruited volunteers for the English as a Second Language program, helped organize the Arcadia Community Neighborhood Celebration, and developed a policy and procedures manual for the center.

February 2000 – May 2002

Systems Trainer and Program Evaluator, In Touch Information Services

In Touch Information Services provided technical support, database management and training for the Louisville, KY Workforce Investment Board (aka KentuckianaWorks)

- Trained case managers to use a comprehensive computer-based case management program.
- Wrote proposal and received funding from US Department of Labor to evaluate Louisville, KY Workforce Investment Board program *Project Advance*.

- Developed program-specific measurement tools, analyzed data and wrote summary reports.

December 1997 – February 2001

Senior Case Manager, Louisville Community Initiative, Louisville, KY

The Louisville Community Initiative was a non-profit organization aimed at increasing self-sufficiency for young people aged 16-25.

- Co-created an assessment tool for longitudinal measurement of the seven areas of self-sufficiency based on the Asian Neighborhood Design model.
- Liaison between businesses, schools, parents and high school students involved in school-to-career initiative to encourage self-sufficiency.
- Supervised teenage mothers involved in pilot program to encourage self-sufficiency.
- Created program policy and procedures; developed training materials for future case managers on the seven areas of self-sufficiency model, the basics of case management and protocol for conducting a home visit.
- Created Microsoft Access database to collect home visit interview material; repeated measures on the seven areas of self-sufficiency. Collected, analyzed and reported data on client outcomes.

June 1995 – May 1998

Program Counselor, Level Two, Bellewood Children’s Home

Bellewood Children’s Home is a residential treatment facility serving teenagers who have been removed from their homes for problematic behavior. I worked in the Family Reunification Program where short-term residential behavior modification and family therapy provided a safe and structured environment so residents could return to their original homes permanently.

- Supervised and counseled adolescent residents, monitored behavior, provided appropriate interventions as needed.

RESEARCH EXPERIENCE

FUNDED GRANTS

Dissertation Completion Grant, Spring Semester 2011

Research Sponsor: University of Louisville School of Interdisciplinary and Graduate Studies

The School of Interdisciplinary and Graduate Studies awarded a one semester grant to allow for research related to completion of the doctoral dissertation.

Principal Investigator, Outcomes Assessment of Summer Workshop with

Blue Apple Players, June 2001

Research Sponsor: Louisville, KY 3rd District Alderman: George Unsel

Employer: Arcadia Community Center, Louisville, KY

The Blue Apple Players were invited to lead a two-week theatre workshop for youth from the Arcadia Park Apartment Homes Complex. I created a pre-test, post-test assessment to measure the impact of the workshop on youth knowledge of theatre and self-confidence. Results reported to Blue Apple Players organization and Arcadia Community Center Board of Directors.

Principal Investigator, Program Evaluation of Project Advance, February 2000-February 2001

Research Sponsor: Department of Labor, Washington, DC

Employer: In Touch Information Services, Inc., Louisville, KY

Awarded a \$50,000 one-year grant from the Department of Labor to evaluate the local Workforce Investment Board program: Project Advance. The project was created to take entry-level employees from 3 local hospitals, give them advanced training so they would be eligible for higher-level employment and increased salary. My role was to evaluate the effectiveness of the program in year one. Program evaluation report and data sent to Department of Labor, Washington, DC

OTHER RESEARCH**Co-Principal Investigator, Program Evaluation of Pregnant and Parenting Teen Program (PPTP), Year Six through Ten, Fall 2003**

Home of the Innocents, Louisville, KY

Co-Principle Investigator: Ruth Huber, Ph.D.

Case file review of participants of PPTP 1997-2002, studying factors related to eventual self-sufficiency and independent living. Presentation of results to Board of Directors as part of a research practicum.

TECHNICAL REPORTS/OTHER WRITINGS

Napier, A. M. (2004). *Home of the Innocents: Program Evaluation for Pregnant and Parenting Teen Program, Years Six through Ten, Louisville, KY.*

Napier, A. M. (2002). *Program Evaluation for Project Advance. A Workforce Investment Board Program for Entry-Level Employees at Three Local Hospitals for Department of Labor, Washington, DC*

Fleming, J., Spalding, J., & **Napier, A. M.** (2001). *Louisville Community Initiative Annual Report (2000-2001)*, for Community Foundation of Louisville, Louisville, KY

Fleming, J., Spalding, J., & **Napier, A. M.** (2000). *Louisville Community Initiative Annual Report (1999-2000)*, for Community Foundation of Louisville,

Louisville, KY

Fleming, J., Spalding, J., & **Napier, A. M.** (1999). *Louisville Community Initiative Annual Report (1998-1999)*, for Community Foundation of Louisville, Louisville, KY

Fleming, J., Spalding, J., & **Napier, A. M.** (1998). *Louisville Community Initiative Annual Report (1997-1998)*, for Community Foundation of Louisville, Louisville, KY

PRESENTATIONS

National: Peer Reviewed

February 28, 2005

Data Management: Sophisticated Tools to Meet Accountability Demands of a Changing Profession. Council on Social Work Education Annual Program Meeting, New York, NY.

Local Invited Presentations

May 2010

Introduction to Death & Grief, MSSW Death & Grief class, Kent School of Social Work, University of Louisville, Louisville, KY.

June 2009

Introduction to Death & Grief, MSSW Death & Grief class, Kent School of Social Work, University of Louisville, Louisville, KY.

May 2009

Top 10 Things I Learned as a Cabbage Patch Kid, Louisville Optimist Club, Louisville, KY.

April 2009

Using SPSS to Analyze Data for Evidence-Based Research, MSSW Advanced Research II class, Kent School of Social Work, University of Louisville, Louisville, KY.

January 2009

Presenting Findings for Evidence-Based Research Projects, MSSW Advanced Research II class, Kent School of Social Work, University of Louisville, Louisville, KY.

October 2008

The Academic Job Search. Ph.D. student seminar, Kent School of Social Work,

University of Louisville, Louisville, KY.

August 2007

Sensitivity Training for New Social Workers. MSSW Foundation Practice I Class, Kent School of Social Work, University of Louisville, Louisville, KY.

October 2002

Reliability and Validity Exposed: Descriptions of Various Measures for Research. MSW Research Class, School of Social Work, Spalding University, Louisville, KY.

February 2002

Gender Pay Equity Jeopardy! Gender Caucus, Kent School Student Association, Kent School of Social Work, University of Louisville, Louisville, KY.

TRAININGS CONDUCTED

Case Management Trainings

January 2002 – December 2003

Workforce Investment Board

Employer: Louisville Community Initiative

Trained all case managers who were part of a new program sponsored by the Louisville, KY Workforce Investment Board (aka KentuckianaWorks). Training included case management responsibilities, roles, ethics, with an emphasis on celebrating diversity.

METSYS Computerized Case Management Trainings

February 2000 – April 2001

Workforce Investment Board

Employer: In Touch Information Services, Inc.

Taught Computerized Case Management system: METSYS to case managers of KentuckianaWorks. Collaborated with KentuckianaWorks program managers to create trainings relevant to case managers to increase computer skills in the mandatory reporting tool: METSYS.

HONORS

GRADUATE HONORS

- Graduate Dean's Citation, for significant accomplishments (e.g., publications, teaching excellence, and professional service) beyond the achievement of a high grade point average, University of Louisville, 2011
- Dissertation Completion Fellowship, School for Interdisciplinary and Graduate Studies, University of Louisville, 2011
- Scholarship, Kent School of Social Work, University of Louisville, 1999
- Robert B. Diehl Scholarship, Community Foundation of Louisville, 1998
- Outstanding Undergraduate Student Scholarship, University of Louisville, 1996

UNDERGRADUATE HONORS

- Who's Who Among Students in American Universities and Colleges, 1993
- Dean's List, High Scholarship, Murray State University, 7 out of 8 semesters, 1989 – 1993
- Outstanding Technical Theatre Award, Murray State University, 1992
- Outstanding Leadership Abilities, Academic Achievement and Theatre Accomplishment, Murray State University (5 scholarships awarded separately, 1989 – 1993)
- Panel Member, Task Force Combating Discrimination on Campus, Murray State University, 1990 – 1992
- President, Foreign Language Club, Murray State University, 2000-2001
- Member, Honorary Societies: Alpha Lambda Delta (Outstanding Freshmen), Alpha Mu Gamma (Outstanding Foreign Language Students), Psi Chi (Outstanding Psychology Students), Alpha Chi (Outstanding Upperclass Students)

TEACHING EXPERIENCE

Kent School of Social Work, University of Louisville, Louisville, KY

- Fall 2010 SW 604 Foundation Social Work Practice I (MSSW)
- Spring 2008 SW 605 Foundation Social Work Practice II (MSSW)
- Fall 2007 SW 604 Foundation Social Work Practice I (MSSW)
- Spring 2007 SW 626 Introduction to Research Methodology (MSSW)
- Spring 2006 SW 640 Advanced Social Work Practice I (MSSW)
(teaching practicum with Andy Frey, Ph.D.)

College of Social Work, Spalding University, Louisville, KY

- Spring 2004 SW 633 Advanced Research Seminar (MSW)
- Fall 2003 SW 614 Research for Social Work I (MSW)

ACADEMIC AND COMMUNITY BASED SERVICE

Academic Service

University of Louisville Kent School Committees

2008-Present

Kent School Diversity Committee

2006-Present

Kent School Outcomes Committee

Community-Based Service

November 2009

Student Volunteer, Council on Social Work Education, San Antonio, TX
Served as a volunteer during the Annual Program Meeting.

May 2009

Fundraising Presentation, Optimist Club of Louisville, Louisville, KY
Made a presentation of the "Top 10 Things I Learned as a Cabbage Patch Kid" to raise funds for The Cabbage Patch Settlement House. The Cabbage Patch Settlement House is a non-profit organization that exists to empower families and

children to be self-sufficient by helping them maximize their spiritual, social, emotional, physical, moral, economic and educational potential.

October – November 2008

Student Volunteer, Council on Social Work Education, Philadelphia, PA
Served as a volunteer during the Annual Program Meeting.

October – November 2007

Student Volunteer, Council on Social Work Education, San Francisco, CA
Served as a volunteer during the Annual Program Meeting.

August 2007 – Present

Academic Consultant, Cabbage Patch Settlement House, Louisville, KY
Created an educational exchange program with The Cabbage Patch so MSSW students could plan and implement an intervention as well as practice creating and implementing an assessment tool during three Foundation Practice classes in the Fall 2007 and Spring 2008 semesters.

February – March 2003

Student Volunteer, Council on Social Work Education, New York, NY
Served as a volunteer during the Annual Program Meeting.

FACULTY DEVELOPMENT

December 2, 2010

Attended Part-Time Faculty Institute workshop, *Coaching Your Students to be Lifelong Learners and Critical Thinkers: The Intellectual Traits*. University of Louisville Delphi Center for Teaching and Learning. Louisville, KY. Training to revise my teaching assignments and in-class assessments to enhance and encourage my students to use the intellectual traits of the Paul-Elder critical thinking model.

September 17, 2010

Attended Dine and Discover training *Why Wiki?: Using Wikis as a Collaborative Learning Tool*. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Training on using Wiki's as a tool in the Blackboard in the classroom.

June 10, 2010

Attended *Preventing Plagiarism* training. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Training on how to use the SafeAssign plagiarism prevention tool available in Blackboard Academic Suite as a tool for educating students about what constitutes plagiarism and how to prevent it. Also learned how to read the SafeAssign analysis of students' papers for plagiarism.

May 24-27, 2010

Attended Critical Thinking Conference *i2A Institute: Developing Critical Thinkers*. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY.

Engaged in intensive, collaborative work to develop students' critical thinking abilities and examine and enhance our own thinking, teaching, and learning skills.

July 7, 2009

Completed *Introduction to HIV/AIDS Clinical Training* to maintain KY Certified Social Worker licensure. Kent School of Social Work, Louisville, KY. Learned the physiological development process from HIV to AIDS in the human body, special needs of this population and resources for assisting the HIV/AIDS client.

May 27-29, 2009

Attended Critical Thinking Conference, *Inaugural i2a Institute: Developing Critical Thinkers*. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Engaged in intensive, collaborative work to develop students' critical thinking abilities and examine and enhance our own thinking, teaching, and learning skills.

October 29-November 2, 2008

Attended Council on Social Work Education Annual Program Meeting, Philadelphia, PA.

October 28, 2008

Attended Part-Time Faculty Institute workshop, *Reaching the 10 percent: Creating Safe Classroom Environments for LGBT*. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed ways to make classrooms a safe environment for everyone we teach, including the Lesbian, Gay, Bisexual, and Transgender students. Learned the stages through which LGBT students progress concerning their sexuality and ways to help students at each stage of self-discovery.

October 17, 2008

Attended Celebration of Teaching and Learning Workshops *Seven Habits of Highly Effective Undergraduate Teachers*. and *How to Support Quick Preparation for College and Graduate-Level Teaching Based on Residents As Teachers (RAT) Case-Based, Interactive Instruction*. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY.

October 1 – 4, 2008

Attended National Association of Academic Advisors (NACADA) national conference, Chicago, IL. Worked with other academic advisors of graduate level students. Our goal was to develop a strategy for increasing awareness of the unique needs of graduate level students in an association primarily focused on undergraduate advising. The group developed an addendum to the NACADA mission statement that was inclusive of graduate students.

September 10, 2008

Completed *Ethics for Social Workers* training to maintain KY Certified Social

Worker licensure. Kent School of Social Work, Louisville, KY. Discussed ethical issues faced by social workers and the Code of Ethics of the National Association of Social Workers.

May 16, 2008

Attended workshop *Integrating Spirituality and Social Work Practice: A Source of Strength* by Wanda Collins, Ph.D. Kent School of Social Work, Louisville, KY. Learned effective ways a social worker can integrate a clients' faith into the plan of action created to resolve their issues.

April 22, 2008

Attended Part-Time Faculty Institute workshop, *Negative Stereotyping: A Life or Death Synopsis* by Edna Ross, Ph.D. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed the cognitive basis of negative prejudices and stereotyping and how these processes can adversely impact academic performance.

March 20, 2008

Attended Part-Time Faculty Institute workshop, *Creating an Inclusive Classroom Environment* by Edna Ross, Ph.D. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed specific methods for creating an inclusive classroom environment that is open and welcoming to all students. Suggestions to use in-class examples that include diverse populations; and co-creating class rules with the students that encourage inclusiveness for all students.

February 4, 2008

Attended Part-Time Faculty Institute workshop, *Personal Knowledge Management System for Students and Instructors* by Bill Brantley, University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed tools available online for students and instructors to manage work flow, capture knowledge, reflect on knowledge and utilize knowledge.

November 28, 2007

Attended *Blackboard Basics* by Linda Leake, University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Trained on using the Blackboard system for posting grades, tracking attendance, communicating outside of class and distributing materials.

November 5, 2007

Attended Part-Time Faculty Institute Workshop, *Managing Difficult Classroom Behavior: Taking Control of the Classroom* by Dr. Edna Ross, University of Louisville Delphi Center of Teaching and Learning, Louisville, KY. Small group discussions of personal experiences with difficult classroom behavior followed by a large group problem-solving session.

October 27-30, 2007

Attended Council on Social Work Education Annual Program Meeting, San Francisco, CA.

September 11, 2007

Attended Part-Time Faculty Institute workshop, *Creating an Environment for Critical Thinking in the Classroom* by Tomara Yohannes, University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed 12 concrete steps to creating a critical thinking environment in the classroom.

September 7, 2007

Attended Part-Time Faculty Institute Workshop, *Negative Stereotyping: A Life or Death Synopsis* by Dr. Edna Ross. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed effect of stereotyping students on academic achievement. When members of a particular group fear that their performance will be evaluated by a negative stereotype, their performance will be below their actual ability level. Reviewed *Project Implicit* online tests for biases at <http://implicit.harvard.edu/implicit/demo>.

August 14, 2007

Attended Lunch and Learn Workshop, *Preparing for the First Day of Class* by Dr. Marianne Hutti. University of Louisville Delphi Center for Teaching and Learning, Louisville, KY. Discussed ways to create an interactive learning environment from the first day of class, ice breakers, and common problems in classrooms.

May 24, 2006

Attended training, *Evidence Based Practice Techniques* by Eileen Gambrill, Ph.D. Kent School of Social Work, Louisville, KY. Learned the techniques required for using evidence-based research in the practice setting.

November 22, 2004

Attending training, *To Ascend into the Shining World Again* by Rudolph Alexander, Jr., Ph.D. Kent School of Social Work, Louisville, KY. Discussed Dr. Alexander's book.

MEMBERSHIPS

Council on Social Work Education
National Association of Social Workers

CERTIFICATION

July 2000

Certified Social Worker, State of Kentucky
In good standing, renewed 2003, 2006 and 2009.