

PREDICTING COLLEGE STUDENTS' FIRST YEAR SUCCESS:  
SHOULD SOFT SKILLS BE TAKEN INTO CONSIDERATION TO  
MORE ACCURATELY PREDICT THE ACADEMIC ACHIEVEMENT  
OF COLLEGE FRESHMEN?

By

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## ABSTRACT

This study presents a survey developed to measure the skills of entering college freshmen in the areas of responsibility, motivation, study habits, literacy, and stress management, and explores the predictive power of this survey as a measure of academic performance during the first semester of college. The survey was completed by 334 incoming freshmen at a large university in Tennessee. Analyses showed that the survey was a reliable measure ( $\alpha = .72$ ). Reliability indices for the individual constructs were mixed: Responsibility ( $\alpha = .54$ ), coping with stress ( $\alpha = .44$ ), study habits/skills ( $\alpha = .72$ ), motivation ( $\alpha = .38$ ), and literacy ( $\alpha = .71$ ). To determine the construct validity of the survey as an assessment measure predictive of college academic performance during the first semester of college, we conducted correlations with ACT score and high school GPA. The total score on the survey showed significant correlation with both HS GPA ( $r(248) = .28, p < .01$ ) and ACT ( $r(249) = .17, p < .01$ ) demonstrating that the survey is likely tapping into some of the same skills as other measures highly regarded as estimating college readiness. In addition, analyses were conducted to consider whether the skills measured by the survey contributed to the variance in first semester college GPA above and beyond high school GPA and highest ACT score. The total score on the survey predicted variance above and beyond high school GPA and ACT score (1.2%). Finally, analyses conducted to determine which soft skill was the strongest predictor of first semester college GPA revealed that responsibility was the construct most highly correlated with first term college GPA.

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## **CHAPTER I: Introduction**

Every May, thousands of high school students walk across a stage and receive a piece of paper that at one time was considered invaluable: a high school diploma. In this day and age, a high school diploma is no longer what employers are looking for when choosing their next hires (Lotkowski et al., 2004; Rosenbaum, 2000; Schulz, 2008). Success is now defined as not only completing high school with a diploma, but also continuing that education beyond high school to some type of post-secondary education or training. Because of this expectation being placed on graduating high school seniors, more people than ever are enrolling in some type of post-secondary schooling. Although this seems to be a step in the right direction towards President Obama's goal of having "the highest proportion of college graduates in the world" (Johnson & Rochkind, 2009), there is an apparent discrepancy between students entering college and those leaving with a degree or certificate. The statistics are bleak, to say the least. About 80% of students who enroll and enter a two-year college will leave without a degree, and just as alarming, 60% of students who enroll and enter a four-year college will leave without a degree (Kuh, G., Kinzie, J., Buckley, J., Brian, B., & Hayek, J., 2006).

In 1998, 14.5 million people enrolled in a degree-granting institution (Snyder & Hoffman, 2001), and this increased to 20.4 million in 2009 (Snyder & Dillow, 2011). So if the interest is there in continuing one's education, why is it so many college students fail to complete any type of degree/certificate program? Why do so many students leave high school eager to learn and ready to go to college and then drop out within the first two years? In a poll done in 1992, 97% of students reported a desire to continue their education after high school (Choy, 1999). The biggest question that educators, parents,

politicians, administrators, and students themselves seek the answer to is this: What happens between high school graduation and the end of the first year of college that causes more than half of incoming freshmen to drop out? (Adams, 2011; Pickhardt, 2009). The blame for this large ‘gap’ between high school success and college success has been contributed to a variety of factors. Some reasons students fail to succeed in college include financial concerns, lack of study skills/preparation, no student support at the collegiate level, family concerns/problems, no desire/responsibility, and failure to cope with stress (see Barrilleaux, 1972; Casillas, Robbins, & Langley, 2005; Johnson & Rochkind, 2009; Pickhardt, 2009; Troutman, 1977). Many researchers believe that most of these problems stem ultimately from a lack of preparation (Pickhardt, 2009). Most students are not prepared to achieve collegiate success, including mastering the skills necessary to succeed in and out of the classroom, the “college life,” per se.

### **College Admissions**

Some difficult questions to answer are what it means to be college ready and how to predict it. The traditional definition of “college readiness” has included two major parts: college aptitude tests (ACT/SAT) and high school grade point average (GPA). While historically the SAT was the most taken test by high school graduates seeking a post-secondary education, in the past five years, the ACT has become the most utilized admissions test for colleges and is accepted by every university in America (Marklein, 2007). Several studies have verified the validity of the ACT/SAT and GPA to predict college success (see ACT, 2011; “ACT Profile,” 2010; Allen & Sconing, 2005; Olson, 2006; Sawyer, 2010; Stehlick, 2010). The ACT defines college readiness as “the

acquisition of the knowledge and skills a student needs to enroll and succeed in credit-bearing first-year courses at a postsecondary institution (such as a two- or four-year college, trade school, or technical school) without the need of remediation” (ACT, 2011). Students are determined to be “ready” for college if they have earned a certain score on the ACT/SAT and have maintained a certain GPA. Most colleges, both two-year and four-year institutions, base their admittance qualifications on these two categories. The issue with defining college readiness is the fact that each college has its own admission requirements, so defining college readiness has been difficult for stakeholders. The United States has more than 4,200 postsecondary institutions, from two-year colleges with few admission requirements to elite research universities that take just a small fraction of their applicants; however, few researchers identify what types of schools they are talking about when they use the phrase ‘college ready’ (Olson, 2006). In addition, statistics have shown that ACT/SAT scores and GPA’s are not the only ways to determine if a student is prepared to succeed in college. Using these measurements often gives only a partial picture of a person’s skills. In addition, the current definition does not paint a clear picture of college readiness, mainly because many students who have high GPA’s and ACT/SAT scores are still failing out of college (Baber et al, 2009). This implies that while academic knowledge may be present, the ability to use that knowledge successfully may not always occur. Also, some people question whether or not a person’s GPA should even be considered when determining academic and/or personal skills. Grades are subject to the states, school systems, schools, and individual teachers involved. Current college readiness measurements include high school GPA and college entrance exam scores from either the ACT or the SAT. Students in certain areas still

favor a specific test, but colleges have recently created formulas to transform the scores from the SAT to ACT and vice versa (Marklein, 2007). Because recently the ACT has become the only test accepted by all colleges and universities in the United States that require such tests (Marklein, 2007), the current study will use ACT scores as part of the academic records of the participants.

Some studies have shown GPA to be more predictive than ACT scores for determining college readiness, and others have found the opposite to be true (ACT, 2007). Sawyer (2010), a researcher for the ACT, examined the use of ACT scores as well as GPA when determining college admission decisions. He claimed that high school GPA is more useful than standardized tests or admissions tests in some situations because GPA is often an indicator of consistent behavior, demonstrating high school GPA reflects college GPA. Some would argue that the reason a person's GPA is a more valuable predictor of collegiate success than the ACT has nothing to do with academic knowledge. In fact, a person's GPA may indicate his or her work ethic, responsibility, and motivation, and this is often a character trait that carries over from high school to college academics. A person's GPA is valuable in this regard because it often gives an accurate description of a person's non-academic skills, specifically, consistent academic behavior. Sawyer (2010) also stated that high school grades are composite measures of both cognitive ability and academically relevant behavior like attendance, punctuality in turning in assignments, motivation, and class participation. GPA is often an accurate predictor of collegiate success because it is a great predictor of collegiate GPA (Allen & Sconing, 2005). High school GPA has not necessarily been shown to be an accurate predictor of cognitive ability and knowledge. Courses taken in high school, teachers

involved, school graduation requirements, course requirements and descriptions, and administrative involvement all have large impacts on someone's GPA. ACT scores, on the other hand, "provide an *objective* measure of students' academic achievement and readiness for college and includes four curriculum-based tests of educational development: English, mathematics, reading, and science" (Allen & Sconing, 2005).

The ACT standards are guidelines set to help educators, students, and parents understand what skills are necessary when they enter the post-secondary setting. These standards are considered the "direct link between what students have learned and what they are ready to do next" (ACT Profile Report, 2010, p. 5). The ACT is the only college readiness test that is directly tied to national standards. The ACT sets benchmark scores in English, reading comprehension, science, math, and writing. "A benchmark score is the minimum score needed on an ACT subject-area test to indicate a 50% chance of obtaining a B or higher or about a 75% chance of obtaining a C or higher in credit-bearing college courses, including English, Algebra, Social Science and Biology" (ACT Profile Report, 2010, p. 5). The graduating class nationwide in 2010 only graduated 24% of students who met the benchmarks set in all four major areas (ACT Profile Report, 2010). When looking at final outcomes like final GPA in college, attainment of college degrees, persistence to finish year two of college, and expected first year college performance, ACT researchers suggests "...if an institution wants its admission criteria to reflect collegiate academic proficiency or ultimate level of degree attainment, ACT scores should carry *greater* weight than high school grades" (ACT, 2008, p. 1). However, even though this has been supported in many studies, there are still large numbers of students who graduate with high GPA's and moderate to high ACT scores

who continue to fail college entrance exams and are required to take remedial courses (Dzubak, 2006; Kuh et al., 2006; Olson, 2006).

### **Remedial Courses**

An alarming fact is the number of college students who must begin their careers in remedial reading and math courses. Half of all enrolling freshman have to take remedial courses in reading or math, and even more discouraging, 70% of those enrolled in remedial courses will never earn a college degree (Kuh et al., 2006). This is primarily due to incoming college freshmen not being prepared with post-secondary reading and math skills required to be successful at that level. “Lack of rigorous academic course work at the secondary level contributes to students’ inability to enter college ready to engage in college-level studies, sometimes referred to as ‘college readiness’” (Khan, Castro, Bragg, Barrientos, and Baber, 2009). This dilemma starts many debates of whether or not remedial courses should even be offered, mainly because college educators believe the blame should be placed on the lack of preparation by high schools, and “catching them up” to where they should be is not a college professor’s responsibility (Olson, 2006). Others believe remedial courses will increase the number of people earning college degrees because it provides assistance to those who are lacking in certain areas, therefore increasing their chances for success (“Strong American Schools,” 2008). Although this debate is a ‘hot topic’ in the field of education, the real problem that needs addressing is why so many students need those remedial courses in the first place. Nationally, only 17% of students who must take a remedial reading class receive a bachelor’s degree or higher; of those taking two remedial classes (other than reading),

only 20% receive a bachelor's or higher (Wirt et al., 2003). Some researchers have suggested this gap could be closed by requiring all high school seniors to pass exit exams before receiving a high school diploma. This was implemented in Massachusetts in 2002, and 4800 students were denied diplomas after they successfully completed all high school requirements but failed exit exams (Dzubak, 2006). This resulted in multiple law suits from students and parents calling the exit exam process "too stringent" and "unfair" (Dzubak, 2006). So if some students graduate high school with really high GPA's, how is it they cannot pass exit exams, proving these students are obviously not prepared for the demands of college level work? Many researchers suggest the recent trend of "grade inflation" at the high school level, where students are earning A's when the work may be C level, as the reason for this gap (ACT 2005; Simone, 2005; Ziomek & Zvec, 1995).

### **Grade Inflation**

Albert Simone, a researcher at the Rochester Institute of Technology, defined grade inflation as "a rise in grades awarded without a corresponding rise in student ability or performance" (2005). Various standards by teachers and schools in addition to the subjective nature of grades leads to an "A" at one school equaling a "C" at another school for the same work. The largest evidence of grade inflation occurs in the less affluent schools systems where poverty and minority students are the majority. "Students in schools where more than 75% received free or reduced lunches and who reported received mostly 'A's' in English had, on the average, the same reading test scores as did the 'C' and 'D' students in the more affluent schools" (Ziomek & Svec, 1995, p. 6). ACT researchers attempted to determine whether or not grade inflation existed by comparing

GPA's over time to a steady, consistent measure of academic achievement: the ACT.

“The ACT not only measures the knowledge and skills students have acquired during their high school years and their level of achievement as a result of their high school learning and instruction, but it also serves as a measure of their preparation to undertake rigorous coursework at the postsecondary level” (ACT, 2005). The study (2005) involved data from 1991-2003, a span of 13 years. The researchers found that the ACT score in 1991 corresponded with a certain GPA, and that over time, while the ACT score stayed the same, GPA has consistently risen (2005). “This means that, during the 13-year period under study, high school GPA for ACT-tested public high school graduates increased by about 6.25%—without an accompanying increase in ACT Composite score” (ACT, 2005). However, even this percentage can be doubled to 12.5% knowing that statistically, only 5% of high school grades issued are D's or F's, so this eliminates half of the GPA score range: anything below 2.00 (ACT, 2005). Because of this dilemma of grade inflation, it has become increasingly necessary to utilize a variety of facets to determine whether or not a high school graduate is ready for college. Even ACT researchers support the need for a multi-faceted approach to determining college readiness. “The ACT along with high school grades and *other supporting evidence* can therefore make important decisions about applicants and entering students with a greater degree of reliability and confidence” (ACT, 2005).

### **College Readiness**

Using the historical definition of college readiness, ACT plus GPA, it appears something may be missing when it comes to predicting whether or not a person will be



successful in the completion of a college degree. As many previous studies have supported, the possible cause of this gap between high school success and college success is a lack of ‘soft skills’ that primarily deal with coping with stress, motivation, study skills and habits, and responsibility. These areas encompass a wide range of skills needed in addition to academic skills that could more accurately predict college success. One example of this would be part of the “responsibility” spectrum; for example, understanding the dynamics of the teacher/student relationship and how it differs from high school to college level. Often in high school students are allowed to seek extra help, turn in work late, and complete extra credit to pass a class or raise a grade. College professors are often perplexed at their students expecting the same treatment. These students are not prepared for deadlines or failure, and many times they cannot recover (Dzubak, 2006). This is only one of several disconnects between high school and college competence.

### **Soft Skills**

The four major areas that seem to be lacking in many present-day high school graduates are skills in motivation, study habits, coping with stress, and responsibility (ACT, 2007; Hooker and Brand, 2010; Robbins et al., 2004; Schulz, 2008). Newer definitions have changed to claim that college readiness involves the development of a variety of skills, abilities, and characteristics beyond the academic domain (Hooker and Brand, 2010). The ACT (2007) labeled these soft skills as the psychosocial factors of academic performance. ACT researchers also endorse the importance of these soft skills and claim “Students (with high motivation), as well as those with clear academic goals,

strong academic skills, college social connections, a commitment to college, and an interest in their subject matter, are more likely to persist through the third year of college” (2007). According to a study done by Robbins, Lauver, Davis, Langley, and Carlstrom, (2004), academic measures like grade point average (GPA) and ACT scores account for 68% of the variance that contributes to academic performance, while non-academic factors (soft skills) contribute the other 32%. They utilized the Student Readiness Inventory to measure psychosocial factors. Using regression, the study found that academic discipline predicted academic performance (grade-point average) and retention. Social skills and coping with stress also helped predict academic performance and retention, while commitment to college and social connections offered substantial prediction of reenrollment (Robbins et al., 2004). While academic measurements in high school are clearly good predictors of academic performance in post-secondary schooling/training, it is clear that non-academic factors carry a lot of weight as well.

### **Purpose of the Study**

The purpose of this study was to determine if soft skills should be taken into consideration to more accurately predict the academic achievement of college freshmen. More specifically, to answer these questions: 1) Are the items on the measuring device (soft skills survey) reliable and valid? 2) Do soft skills add to high school GPA and ACT in terms of predicting college GPA at the end of a student’s first semester of college? 3) Which items (soft skills) were the strongest predictors of college GPA? A soft skills survey was administered to a pool of students from the incoming freshmen class at a large university in Tennessee. This survey asked specific questions concerning the four

areas of non-academic skills discussed earlier: motivation, coping with stress, study habits and skills, and responsibility. In addition to the four soft skills constructs, a subset of questions (pulling from all four constructs) was labeled as the “Literacy Component” of the survey, and asked questions concerning reading, writing, speaking, and comprehension. The researcher hoped to determine if literacy skills (either strong or weak) had a direct impact on academic achievement. The purpose of the survey was to determine if and which areas of soft skills account for any variance in college academic performance. Because 32% of the variance in collegiate academic performance is not due to prior academic measurements (ACT + GPA from high school), it is important to better understand the skills that comprise the remaining variance. The researcher hoped to support the much debated idea of adding another facet to the equation currently being used to determine college readiness. Several studies have been conducted to determine the effects of non-academic skills on academic performance, and in order to establish the importance and need of a device that can measure these soft skills, a thorough background of past studies was examined.

## **CHAPTER II: Review of Literature**

While traditionally college readiness has been determined by grade point average (GPA) and standardized test scores (ACT/SAT) (Allen and Sconing, 2005; Olson, 2006; Sawyer, 2010), clearly there is a missing component as half of all students who enter college drop out within the first year (U.S. Department of Education, 2006). In fact, “Out of every 100 ninth graders, 68 graduate from high school, 40 immediately enter college, 27 are still enrolled their sophomore year, and only 18 complete any type of postsecondary education within 6 years of graduating high school” (Kuh et al., 2006). In 2010, Hooker and Brand published a definition of college and career readiness that, although difficult to measure, describes the requirements for a student to be fully equipped for college success: “Students are prepared to successfully complete credit-bearing college coursework or industry certification without remediation, have the academic skills and self-motivation necessary to persist and progress in postsecondary education, and have identified career goals and the necessary steps to achieve them” (Hooker and Brand, 2010). Although the development and use of soft skills are obviously a vital part of the college readiness equation, measuring those skills is a much more difficult task. And while there are many studies that have measured soft skills through surveys and questionnaires, actually giving a numerical score to those survey results to utilize as part of the college readiness ‘score’ is a relatively new idea. This research attempts to accomplish that task by creating and implementing a measurement device that will quantify soft skills. This survey will allow us to consider skills not being tapped by high school GPA and common college entrance exams, so we can better identify skills or a pattern of skills that differentiate students who are likely to do well in

college from those who may struggle. Initially, a closer look at previous studies on the importance and effectiveness of soft skills in general terms needs to be taken; specifically, survey studies on the four areas previously stated: responsibility, motivation, study skills, and coping with stress.

Policy makers, administrators, and educators have more recently recognized and acknowledged that there are more than just academic components that contribute to a person's successful completion of post-secondary education (Hooker and Brand, 2010). This review of literature is divided into five sections: general soft skills, responsibility, motivation, study skills, and coping with stress. This review takes a cumulative look at studies done on soft skills dating back 40 years, with the first study examined being Barilleaux's 1972 study on freshmen study habits and attitudes, and the most recent study being Mahmoud's 2011 study on non-academic factors affecting young college students. Initially, the research was selected for background information about the ACT and GPA as predictors of college readiness, grade inflation, and college readiness formulas and resulted in the selection of literature including articles, dissertations, and published reports. The studies selected for this research on soft skills were limited to the following criteria: survey studies, college freshmen/sophomores, college readiness, and soft skills (including study skills, motivation, responsibility, coping with stress). A few studies involved randomized control trials, with interventions implemented that affect soft skills and academic outcomes recorded. Over 2,700 abstracts were reviewed through numerous electronic sources, using search terms/phrases including:

*Education + research + survey* (1074)

*Education + research + survey + college* (345)

*Education + research + survey + college + freshmen* (18)

*College freshmen + study skills + survey* (82)  
*Study habits + college + survey* (721)  
*Study habits + college freshman + survey* (81)  
*College life + freshmen + survey* (72)  
*Personal habits + study skills + college freshman* (0)  
*College freshmen + survey + habits* (25)  
*College freshman + survey + motivation* (10)  
*College freshman + survey + skills* (356)

After reviewing the abstracts and narrowing the construct, 70 articles were selected, including 45 survey studies fitting the criteria. The purpose of the literature review is to establish the background and usefulness of these soft skills as determiners of college success, and to lay the groundwork for the soft skills measurement device created and administered for the purpose of the current study.

## **Soft Skills**

Beyond academic knowledge, it is clear that graduating seniors need access to a large set of resources and supportive adults to help them succeed at the college level (Hooker & Brand, 2010). Hooker and Brand call these resources added to academic skills “college knowledge,” and claim that it is a critical component in ensuring young people are able to progress to college and into careers (2010). In 2004, Robbins et al. conducted a meta-analysis to try and combine over 100 studies to bring together academic and psychosocial constructs to predict college success. Their purpose was “to bring together the psychological and educational literatures to increase the understanding of the relative efficacy of psychological, social, and study skill constructs on college success.” This debate has become so prevalent because often school policies focus too narrowly on academic achievement, overlooking soft skills like motivation, dependability, attention to

quality, and social interaction, which many employers value above academic skills (Rosenbaum, 2001). In addition, behaviors like absenteeism, insubordination, and incomplete work are tolerated in high schools, while employers (and college professors) value the opposite behaviors in young employees (and students) (Rosenbaum, 2001).

When researchers say “soft skills,” to what are they exactly referring? Schulz (2008) lists several soft skills including communication skills, critical and structured thinking, problem solving, creativity, teamwork capability, negotiating skills, time management, self-management, conflict management, cultural awareness, common knowledge, responsibility, good manners, etiquette, courtesy, self-esteem, sociability, integrity/honesty, empathy, work ethic, project management, and business management. Soft skills directly relate to a person’s traits and habits, both of which are highly impressionable when children are young, and they are difficult to change in adults (Schulz, 2008). Adolescents fall in between these two categories, which makes the high school years so important, mainly because that time is arguably the “last chance” to modify or improve habits and skills. “Parents and school teachers have superior influence on a young person’s aptitude in soft skills. This puts a lot of responsibility in this regard onto the shoulders of a child’s family and school” (Schulz, 2008). Most importantly, according to Schulz, upon graduation, whether from high school or graduate school, employers seldom look at a person’s academic grades during an interview. If a graduate from a university has to be trained how to speak professionally, prepare a presentation, and problem solve efficiently, having a high GPA and a degree seem irrelevant. Employers are looking for those soft skills, specifically in speaking, problem solving, critical thinking, motivation, and responsibility, as noted by Schulz:

Soft skills are shaping human beings' personalities. Any educator's dream is that graduates, especially from tertiary education institutions, should not only be experts in a certain field, but matured personalities with a well-balanced, rounded off education. However, this characteristic is reflected in soft skills, not in hard skills. (2008, p. 146)

These soft skills are vital to the success of high school graduates, as the ACT reported students with higher academic motivation, self-discipline, and self-confidence are more likely to earn higher college GPA's (ACT, 2007). ACT researchers asserted that students with these traits, as well as those with clear academic goals, strong academic skills, social connections, motivation to work, and an interest in their subject matter are more likely to persist through the third year of college (2007).

When speaking of attrition in terms of who is to blame for a lack of non-academic skills, Paschke (1981), a researcher at the University of Kansas, placed the blame on the students themselves, their high school experiences, and the university they chose to attend. Often students fail to choose the right institution or major, they fail to adjust, study sufficiently, budget time properly, or behave responsibly. Paschke also listed the most common reasons people drop out of college during their first two years, and claims it is an "endless list" of cognitive or non-cognitive, academic or administrative, voluntary or involuntary, and personal or institutional reasons. Paschke attempted to predict *who* would drop out of college. Her study combined variables by weighing them and resulted in two distinct types of people: dropouts and persisters (those who continued to year two). Like the present study, it restricted the participants to the incoming freshmen class and gave them a survey. The survey included Likert-scaled questions about the student's



academic and family background, educational aspirations, study habits during the past year, expectations about college, financial sources, and work status. The results showed that immediately upon beginning college, 1 in 5 students already felt he or she would drop out before the end of the first semester. The results of the survey responses predicted 94% of the dropouts; however, it was not as accurate when predicting persisters. The outcomes of the study added support to the idea that soft skills, in addition to academic skills, determine whether or not a college student is a ‘persister’ or a ‘dropout.’

In 1974, Willner conducted a study on how freshmen survived in their first year of college after an “open admission” process allowed any high school graduate to enroll in courses at Kingsborough Community College. His study found some of the following problems among the freshmen class: deficiencies in English and communication skills, deficiencies in math skills, deficiencies in study skills, lack of understanding of college procedures and requirements, ambiguity concerning goal orientation, and uncertainty with regard to academic expectations. The purpose of the study was to show an orientation course for freshmen in college is not only useful, but in many ways necessary to prepare a large proportion of students for the college experience, specifically in the areas of non-academic skills (Willner, 1974).

Robbins et al. (2004) recently conducted a complex study covering the importance of soft skills. They examined the validities of various psychosocial and study skills constructs in predicting two important college success criteria: academic performance (GPA) and persistence (i.e. reenrollment). On the basis of 109 studies, the authors identified and studied nine broad constructs derived from educational persistence

and motivational models of college success: achievement motivation, academic goals, institutional commitment, perceived social support, social involvement, academic self-efficacy, general self-concept, academic-related skills, and contextual influences. After controlling for the effects of traditional predictors (i.e. ACT, SAT, high school GPA), the study identified three constructs that have demonstrated validity in predicting the academic performance criterion: academic self-efficacy, achievement motivation, and academic goals (Robbins et al., 2004).

Gerken and Volkwein conducted a longitudinal study in 2000 concerning freshmen who began college at the University of Albany in the fall of 1990. Those students were administered a survey in 1990 during their first year of college, and then in 1998, those same students were examined using their academic and personal records. The study looked at student outcomes in 1998, including their educations, careers, and socioeconomic status, and then compared those outcomes to their freshmen survey results to determine if those results predicted their 8-year outcomes. The 8-year outcomes included college experiences (i.e. academic integration, social integration, and institutional integration), educational outcomes (i.e. academic and personal), and alumni outcomes (i.e. degrees earned, occupation status, income level, and alumni giving). The survey administered to these students in their freshmen year asked questions about high school preparation, personal and academic interest, social concerns, academic skills, study habits, and future plans. Additional information was looked at, including high school GPA, ACT or SAT scores, age, race, and gender. The authors concluded based on the results of the study that “it is what happens to students while they are in class and their relations with faculty that most influences their intellectual growth, goal clarity,

responsibility, and self-control.” Also, they found that test scores (ACT/SAT) and high school GPA were not useful predictors of students’ 8-year outcomes. Social experiences, ambition, and interaction between peers and instructors were better predictors of the 8-year outcomes (Gerken & Volkwein, 2000), providing support for the importance of soft skills development.

One clear message being deciphered in much of the research is the fact that “students are entering postsecondary programs underprepared for the work, rigor, and expectations of higher education” (Laskey & Hetzel, 2010). Another problem is that many students are not motivated to succeed (Blai, 1976; Le et al., 2005). Some research points to advances in technology as a reason for a lack of study skills, focus, and motivation (Laskey & Hetzel, 2010). With smart phones, computers, and iPads (along with other electronic devices), it has become increasingly easier to seek and locate answers to any type of question. This instant gratification replaces the former days of looking things up, doing book research, reading for answers, and staying focused for long periods of time (Laskey & Hetzel, 2010). This results in fewer graduates (from high school or college) who are prepared with both academic and psychosocial skills.

The focus of Laskey and Hetzel’s study (2010) was to examine metacognition, which they define as “the ability to know what we know, know what we don’t know, and know how to remediate what we don’t know,” and its relationship to the success or failure of students at mid-western university. The students surveyed were those who tested into remedial courses in one of the following areas: math, English, reading, or study skills. The Motivated Strategies for Learning Questionnaire (developed by Pintrich, Smith, Garcia, & McKeachie, 1991) was administered to measure

metacognition. This survey asks questions in a Likert-scaled format concerning topics like motivational goals, beliefs, study skills, and learning strategies. At the end of the year, 79 of the 105 students surveyed (75%) remained enrolled in the university. In this study, metacognition had a significant effect on their fall semester GPA but showed no effect on their spring GPA. The authors hypothesized that the significant effect of metacognition on fall GPA may be attributed to the fact that the majority of students possessed the basic metacognitive skills necessary to perform adequately in remedial courses and the easier course work that they experienced the first semester, but they lacked the more extensive metacognitive skills necessary for success in college level courses and more complex material that they experienced the second semester, again providing support for the need for an increased level of higher-order thinking, motivation, and goals to increase success at the college level.

Crede and Kuncel conducted a study in 2008 titled “Study Habits, Skills, and Attitudes: The Third Pillar Supporting Collegiate Academic Performance,” where they discuss the need for “non-intellective” factors to be included in the college admissions process. The main reason for this push to include non-academic factors is the fact that only 57% of students who enter college as freshmen eventually earn a degree (Horn, 2006). Crede and Kuncel (2008) claimed that soft skills are a vital link in the college and career readiness chain, however, they also recognize that even though they utilized quantitative data in their correlations, the measurement of non-numerical data (survey responses) is difficult: “Assessment and training are not free, and study habits, skills, and attitudes would need more than strong correlations with subsequent performance to be powerful predictors—they would also need to add considerable unique information to the

existing measures to warrant their use.” This is why the relationship between grade point averages/standardized test scores and non-academic skills is hard to determine and even more difficult to measure. This study claims that soft skills are direct measures of study-specific behaviors that cause academic success (Crede & Kuncel, 2008), but clearly points out the difficulty in actually measuring them.

Finally, when it comes to soft skills, generally speaking, they influence academic success (ACT, 2007; ACT, 2004). Lotkowski et al. (2004) conducted a study to determine the academic and non-academic factors that contribute to college retention. The purpose of the study was to identify which academic and non-academic factors had the greatest effect on college retention and performance (GPA). They used a meta-analysis to identify which non-academic factors had the most salient relationship to postsecondary retention. Their findings indicated self-confidence, motivation, and responsibility have the most influence on academic achievement (Lotkowski et al., 2004). ACT findings indicated that the non-academic factors of academic-related skills, academic self-confidence, academic goals, institutional commitment, social support, certain contextual influences (institutional selectivity and financial support), and social involvement all have a positive relationship to retention (Lotowski et al., 2004). ACT researchers also report that even while a student may master the material in any given content area, without self-confidence, motivation, study skills, and goals, the student is still at a great risk of dropping out (2004). And while it is clear academic achievement in high school (ACT and GPA) is the greatest predictor of college outcomes, many studies have proven soft skills also affect college outcomes (see ACT, 2004; ACT 2007; Dyson & Renk, 2006).

Although there have been numerous studies that corroborate the idea that soft skills have a significant impact on academic performance, there have been few studies conducted on the importance of adding a soft skills measure to the traditional college readiness formulas. This study will attempt to give a numerical score to a person's soft skills index. The soft skills measurement will question students concerning the most research-supported areas needed by high school and college students to successfully complete college courses and programs. After examining numerous studies and synthesizing those psychosocial skills, Schulz's list (2008) appears to be the most comprehensive. After considering skills and categories across the reviewed studies, the current study developed four constructs under which all of the skills and categories can be classified. Most of the non-academic skills can be narrowed to four major constructs: **responsibility**, which includes independent work, time management, dependability, attention to quality, self-discipline, self-regulated learning, teacher/student dynamics, and attendance; **motivation**, which includes incentives, determination, work ethic, commitment, academic goals, career goals, and social influences/support; **study habits/skills** which include strong academic background, critical thinking, problem solving, inquisitiveness, self-advocacy, standards/expectations, and communication skills; and **coping with stress** which includes adjusting to college life, sleep deprivation, procrastination, financial concerns, loneliness, independence/living alone, nutrition or health, and emotional control. The next four sections will review the literature in each of these four areas and examine how each contributes to the overall definition of soft skills as a variable in college readiness.

## **Responsibility**

Being “responsible” is defined as being answerable or accountable for something within one’s power, control, or management. In terms of collegiate success, the research includes the following constructs as part of being responsible: independent work, time management, dependability, attention to quality, self-discipline, self-regulated learning, teacher/student dynamics, and attendance (Celio & Sedlacek, 1976; Dey, 2008; Gambill et al., 2008; Pickhardt, 2009; Gerken & Volkwein, 2000; Le et al., 2005; Noel-Levitz, 2007; Paschke, 1981; Romano, 1982; Schwalb & Sedlacek, 1988; Willner, 1974; Wolfe, 2009). Although the idea of college is similar to high school (complete four years of academic work to receive a degree), the amount of work for which a student is responsible increases greatly. Appleby (2006), a psychology professor at Indiana University, defines the first stage in this strategy (preparing students for collegiate success) as bringing their attention to the ways in which their college classes and professors are going to be different from their high school classes and teachers. For example, the work in college is harder, there is more of it, it must be completed in a shorter period of time, and most of it must be done outside of the college classroom. Appleby (2006) also stressed the importance of college professors expecting their students to be more responsible partners in the teaching-learning process. In high school students are often allowed to redo less-than-acceptable work, turn in assignments late, not turn in assignments at all without penalty, and complete extra credit to pass a course (Conley, 2007). Appleby surveyed the students in his college course and wanted to know the differences between high school and college professors, and a recurring answer he received from students was, “(a) responsibility-related difference that students reported

between high school teachers and college professors was adherence to rules. One student noted that, *‘College teachers expect much more from you. There are no late assignments or make-up tests. They do not hold your hand anymore.’*”

Most would agree that asking a teenager to be completely responsible is an impossible demand. Being responsible is difficult when the adolescent is living at home with parents or guardians there to monitor him or her, so expecting him or her to be responsible and make the right choices with the same mentality and no parental guidance seems unreasonable. “The problem in higher education is assuming last stage adolescent students are ready to act grown up, while students are assuming high school study habits are adequate for college. Both are wrong, and they need to get on the same page” (Pickhardt, 2009, p. 2). Pickhardt also explains the three areas where college freshmen have the most problems with responsibility: completion, commitment, and consistency. When it comes to completion, they will begin assignments/projects, but they may not complete them. When it comes to commitment, they can make all kinds of promises and resolves to themselves and others, but they often do not follow through. And when it comes to consistency, they can work in short spurts of time, but they often cannot maintain continuity over time. His theory is that the problems causing so many freshmen to fail in terms of completing their first year of college are rooted in a lack of work ethic and responsibility.

Another problem many freshmen have when they find themselves independent for the first time is managing their time wisely. In 1988, Schwab and Sedlacek profiled the incoming freshmen at Maryland by surveying them about their concerns in terms of adjusting to college life, and one of the students’ greatest concerns was managing time



wisely. These freshmen did not fear a lack of academic preparation; they acknowledged their problems would stem from not applying enough effort to academics or other responsibilities. Many college professors are not sensitive to this adjustment to independence and assume students ‘just don’t care’ about their educations. College professors and college officials claim that students should simply do their homework. The most commonly advised amount is at least three hours of class preparation for every hour spent in the classroom. This equates to 25 to 30 hours a week for a typical full-time student. The idea is that students should consider college a full-time job, and that class time and preparation should take about 40 hours each week (Young, 2002). This is a challenging expectation as teachers often find themselves asking, “Why don’t students stay enrolled, speak up to teachers, turn work in on time, and show up regularly to class?” The answer is because of conflicts these young people have with taking responsibilities that support true independence (Pickhardt, 2009).

Wolfe conducted a survey in 2009 seeking answers from students about their attitudes toward college level coursework and study skills. She explains how today’s colleges and universities are placing the emphasis of learning on what students are doing (or expected to be doing) *outside* of the classroom. Over 78% of the students surveyed attested to not being responsible with time management in terms of studying, homework, and outside reading (Wolfe, 2009). Almost 25% admitted to not being organized and wasting time, and almost 20% did not take notes or pay attention in class. Many researchers blame this lack of responsibility on a lack of preparedness (Gambill et al., 2008). Gambill (2008) also asserted that disorganization leads to lower grades and achievement because students are not prepared for the academic side of college life.

Teachers also found that while some students knew the subject material, their grades did not reflect their knowledge. Lacking education, skills to display their abilities, and fundamental skills, students are not prepared for college, and ultimately “life.” Gambill surveyed students at all levels: elementary, middle school, and graduating seniors to determine their organization and responsibility skills. The results of the survey found that patterns (in high school and college) of not being organized, not learning skills in responsibility, and ultimately, not achieving academic success can be traced back to elementary school. Even more startling, those same characteristics often follow someone throughout school and into his or her professional life as well. Once a student fails in school, they are at a greater risk not to graduate. Then they enter the workforce as ill-prepared adults and know little about succeeding at a career, or even positively contributing to a business. Businesses in turn spend funds attempting to teach practical skill to employees. Lacking the organization and responsibility impacts students, which in turn hurts businesses and later, society (Gambill et al., 2008). The study also found that a lack of responsibility and organization can also be linked to a low socioeconomic status as an adult.

Another construct of responsibility is attendance. While in primary and secondary grades it is required for children to attend school, once students are enrolled in post-secondary education, attending classes is a choice. In addition to the rules of school and state laws mandating attendance in primary and secondary schools, there are also parents and guardians who often ensure their children are attending school on a daily basis. Malcolm, Thorpe, and Lowden (1996) conducted a study on the effects of truancy on academic and professional achievement from the primary grades all the way to a

person's professional life. One of the most consistent findings among the fourteen schools involved in the study was the effect being absent has a person's academic achievement. "Statistical analysis of school attendance records...showed that as the level of absence increased, the level of standard grade award decreased. This was true for both math and English language, and almost equally for boys and girls" (Malcolm et al., 1996). LeBlanc compared students' test scores to their attendance records at the collegiate level to determine if and how much of an effect attending classes has on college grade point averages (2005). He found that attendance was greatly related to grades earned in a course, regardless of whether or not there was an attendance policy enforced, proving that attending classes is a responsible choice for a student who is motivated to complete the course, and ultimately, a college degree (LeBlanc, 2005).

Dey, along with the Association of American Colleges and Universities (AAC&U), surveyed 23,000 undergraduate students and 9,000 instructors in the fall of 2007 using the Personal and Social Responsibility Institutional Inventory to assess how students and instructors perceived several constructs of college life including striving for excellence, cultivating personal and academic integrity, contributing to a larger community, taking seriously the perspectives of others, and developing competence in ethical and moral reasoning (Dey, 2008). The purpose was to support an initiative designed to "help campuses create learning environments in which all students reach for excellence in the use of their talents, take responsibility for the integrity and quality of their work, and engage in meaningful practices that prepare them to fulfill their obligations as students in an academic community and as responsible global and local citizens" (Dey, 2008). The survey was designed to determine students' definitions of

responsibility academically and socially while enrolled in college. The survey found that both the students and instructors felt personal and social responsibility should be a major focus in a college curriculum, and both groups also felt there was not enough focus placed on these facets of responsibility in *their* college curriculums. Both the majority of the students (over 75%) and the instructors (80% or more) agreed that fostering a greater responsibility in college students would have a large impact on academic achievement (Dey, 2008). This supports the overall findings about responsibility and its effect on academic achievement. Students who attend classes, manage time wisely, complete work independently and efficiently, understand course and instructor requirements, and seek assistance when needed (from peers, tutors, or instructors) have a greater chance of academic success and degree completion.

## **Motivation**

Motivation is the most important factor for educators when it comes to student learning (Williams & Williams, 2010). What motivates any person to do any act depends on the reason as well as the outcome or reward. The construct of motivation, in terms of this study, refers to incentives, determination, work ethic, commitment, academic goals, career goals, and social influences/support (Cashin, 1979; DeVito, 1982; Lai, 2011; Landry, 2003; Le et al., 2005; Young, 2002). Lai (2011) published a literature review on motivation, and she defined motivation as “reasons that underlie behavior that is characterized by willingness and volition.” The purpose of her study was to (a) to explore the ways in which motivation has been defined by researchers, (b) to investigate how motivation develops, (c) to learn how teachers can encourage development of motivation

in their students, and (d) to review best practices in assessing motivation. She also identified two types of motivation: intrinsic and extrinsic. Intrinsic motivation is animated by personal enjoyment, interest, and pleasure. Extrinsic motivation is governed by reinforcement contingencies (i.e. rewards/achievements) (Lai, 2011). She found that educators believe intrinsic motivation results in better educational outcomes (GPA, degree completion) than extrinsic. Under extrinsically based motivation, the teacher's job is clear: reward good behavior (class participation, attendance, quality of work) with good grades and a passing of the course. In contrast, reward bad behavior (truancy, poor quality of work) with bad grades and a failure of the course (Lai, 2011). She claimed that extrinsic motivation is temporary and "awards fade over time," and being internally motivated is a lasting trait that creates higher academic scores, better career direction, and a higher socio-economic status (Lai, 2011).

To predict academic performance and retention, Le (2005) and other researchers administered the Student Readiness inventory to about 6,000 first-year college students at 50 different institutions. This study combined motivation with skills (defined as the ability to perform well academically) because they were so highly correlated. The study found that motivation and skills were directly correlated with academic performance and ultimately, degree completion (Le et al., 2005). Another study conducted by Barrilleaux (1972) attempted to make the same prediction with student attitudes and how they affect academic performance. The Brown and Holtzman Survey of Study Habits and Attitudes (SSHA, 1969) was administered because it has been proven to predict a student's study methods, his *motivation* for studying, and his attitude towards scholastic activities (1969). A total of 210 students in their first year of college at Montgomery College-Rockville

were surveyed to study the associations between academic performance (first semester GPA) and High Study Orientation Scores (a part of the SSHA survey) as well as persistence into the second semester of college (Barrilleaux, 1972). Independent variables were high school rank, ACT composite score, gender, and High Study Orientation score. An expected result of the survey was that high school rank and GPA were significant predictors of persistence to the second semester of college. They also found that motivation and goals were the greatest predictors of college GPA and persistence to the second semester of college. The results for that particular pool of students showed many of these students “did not know efficient study methods, may not have sufficient motivation for studying, and may not have attitudes found to be important in the classroom” (Barrilleaux, 1972).

Blai conducted a study in 1976 surveying 73% of the freshmen class at Harcum Junior College at the end of their first semester designed to identify areas where they felt their high schools failed to prepare them to cope with college study and living, and to understand their own motivations and aspirations. At the completion of the survey, the nineteen items in question on the survey were ranked in order of percentage of students who felt that skill or area was a weakness. The number one area was reading skills, followed by study skills. The next most prevalent area where students feel they were not prepared was motivation with 64% of students agreeing. Because most students rank motivation so high on their lists of skills both needed and in which they lack skills, for many there appears to be a disconnect between arriving to college highly motivated to finish college, but not so motivated to read and study hard (Noel-Levitz, 2007).

In 2006, nearly 100,000 first year college students were surveyed using the College Student Inventory examining a broad range of motivational characteristics the students brought with them to their collegiate learning experiences (Noel-Levitz, 2007). This study also proved the while almost all of the students surveyed fully planned on completing their degrees (over 90%), the percentages dropped below 50% when it came to personal satisfaction with reading, taking careful notes in class, and studying consistently. The findings of this study provided student-given support verifying how important motivation is and how it affects academic achievement. The researchers implied all colleges and universities should better motivate students to persist in completing their college degrees. In this 2007 report, the researchers behind the “National Freshmen Attitudes Report,” claimed:

The majority of students who leave college do so before their second year. It is thus imperative that colleges understand the motivations and attitudes of these students early in the term, so they can develop programs and interventions that address needs and expectations of the incoming class, thereby strengthening the staying power of the institution, while encouraging student persistence. (Noel-LeVitz, 2007, p. 7)

James Troutman conducted a study in 1977 to determine the effects of a study/college skills course on freshmen college students. His goal was to determine if this course would affect the motivation, study habits, and overall grades of college students. The purpose of the motivation part of the survey was to see if the orientation course significantly affected students’ attitudes towards courses, coursework, professors, and ultimately, degree completion (Troutman, 1977). A pool of 44 students was chosen

for the study, and 22 were a part of an orientation course and then surveyed at its completion. At the completion of the school year, the students were surveyed and the results showed that students who took the orientation course not only had better grades at the end of the semester, but they also had better overall attitudes towards school (Brown and Holtzman, 1969). The purpose was to gain support for the orientation course to be required for all freshmen to take during their first semester of college, and while many colleges do, in fact, require incoming students to take an orientation/study skills course, this does not ensure academic success or retention. This is only a part of the college readiness puzzle, as psychosocial skills are an additive to grade point average and ACT/SAT scores.

Landry's dissertational study in 2003 on self-efficacy, motivation, outcome expectations, and intention certainty attempted to better understand the college retention issue by exploring psychologically rich variables. One of the theories accessed during this study claims that students enter college with their intentions to either remain at their current institution and persist until graduation or drop out at some point before graduation, and that those intentions more than likely will not change. These intentions, or motivation, are "concerned with selection, activation, and direction of behavior toward a goal. Individuals who are motivated to attain some goal are more likely to believe in their capabilities to attain that goal" (Landry, 2003, p. 31). She discusses several theories about motivation, basically summing up the belief that people form beliefs about what they can do, anticipate likely positive and negative outcomes, set goals for themselves, and plan future courses of action to achieve those goals. The study also found that students' motivations are generally influenced by their beliefs about their abilities, which



translates into a student only measuring up to the benchmark he or she has always achieved. This may or may not be reaching academic standards (Landry, 2003).

Williams and Williams (2010) identified five key components to student motivation: student, teacher, content, method/process, and environment. The teacher must be well trained, must focus and monitor the educational process, be dedicated and responsive to his or her students, and be inspirational. The content must be accurate, timely, stimulating, and pertinent to the student's current and future needs. The method or process must be inventive, encouraging, interesting, beneficial, and provide tools that can be applied to the student's real life. The environment needs to be accessible, safe, positive, personalized as much as possible, and empowering. Ultimately, what it takes to motivate students is different for every instructor and different in every classroom (Williams & Williams, 2010).

Research has been done in other countries to determine the effects of attitudes and motivation on student achievement during the first year of college (Aquino, 2011). Even though the research shows that study habits and student attitudes greatly affect learning and outcomes, little research has been done on how to improve these factors (Aquino, 2011). Aquino's study in 2011 attempted to survey the study habits and attitudes of both high achieving and low achieving freshmen at the end of their first year of college at the University of Saint Louis in the Philippines. The researcher used Brown and Holtzman's SSHA (1969) to ask questions about what factors contributed most to their successes or failures. This was a new type of study because while many studies have determined what attitudes and habits contribute to academic success in college, very few have compared low achieving students to high achieving students at the completion of their first year of

college. The researcher hoped to directly point to areas causing students to either pass or fail college coursework. Finding these predictors of success or failure will help in the areas of prediction, identification, and remediation. Specific to the ‘attitudes’ portion of the survey and results, ‘confluent education’ is the theory the researchers support as a way of improving poor attitudes and a lack of motivation. Confluent education involves educating students on the material for the course, but also teaching how it is relevant to their lives, and how students can contribute to society in terms of the information learned (Hackbarth, 1997).

Crede and Kuncel (2008) explained how study attitudes are the most important factor when it comes to good study habits. Study habits and study attitudes are multidimensional in nature, meaning effective studying requires not only that the students possess knowledge of appropriate studying techniques and practices, but also sustained and deliberate effort (i.e. motivation), self-regulation, ability to concentrate, self-monitoring (i.e. study habits), and a sense of responsibility for and value in one’s own learning. After surveying and analyzing the data from 313 students, 18 were determined high achievers and 295 were determined low achievers. In terms of attitudes, most students were not apt in completing their requirements, did not have sufficient time management, and did not favor teacher classroom behavior and methods (Aquino, 2011). The attitudes of the low achievers also showed “sometimes quitting or studying only the easier parts of the lesson; sometimes distracted about daydreaming and future plans, wasting too much time talking, reading magazines, listening to the radio, watching TV, going to the movies, etc. for the good of their studies.” This study confirmed effective

studying requires not only that the students possess knowledge of appropriate studying techniques and practices, but also sustained and deliberate effort (Crede & Kuncel, 2008).

In 1990, 128 freshmen were surveyed six weeks into their freshmen year of college at Slippery Rock University in Pennsylvania (Stoughton & Wanchick, 1990). The study began with the researchers identifying the domains of being a well-adjusted and developed adult in college at the completion of four years: social, cultural, athletic, spiritual, physical, and academic. Although students develop and mature at their own paces, the first six weeks of independent college life are the most crucial to retention and academic success. This study was also used to evaluate the usefulness of an orientation, study habits, and attitudes course required by freshmen to take. Students who took the course and who did not take the course were evaluated to determine their adjustment success. More than 70% of the students who took the course confirmed it prepared them in terms of knowledge of the campus (i.e. where to seek help in an area), interacting with a diverse student population, and understanding penalties for breaking rules (i.e. alcohol, drugs, academic dishonesty, failing courses). When the results were compared to the faculty responses, 70% or more of students who claimed they attended class, turned in work on time, and were motivated to earn good grades and pass the course were identified by the faculty as *not* attending class, *not* turning in work on time, and *not* being academically motivated. The purpose of this study within the first six weeks of a student's college experience was to identify at-risk students as quickly as possible to improve chances for retention and degree completion. This study also supported the idea that while students feel motivated to learn and eventually complete a degree program, professors feel differently (Stoughton & Wanchick, 1990). This study, in addition to

several others, confirms the need for positive student motivation, both internal (to improve one's self and gain important knowledge to make you a better person) and external (to earn good grades, pass a course, earn a degree, and attain a higher paying job).

### **Study Habits and Skills**

One of the most influential soft skills that affects academic achievement is a student's ability to study well (Aquino, 2011; Barrilleaux, 1972; Blumner & Richards, 1997; Crede & Kuncel, 2008; Gambill et al., 2008; Mussano, 1977; Pierog, 1976; Troutman, 1977; Young, 2002). Study behaviors include but are not limited to, time management, preparing for and taking exams, using information resources, taking class notes, and communicating with teachers and counselors (Conley, 2011). These same studies also supported the idea that many times the academic knowledge exists, but the accessibility and tools for that knowledge does not. Freshmen college students are spending less time studying than ever before, according to a survey study done by UCLA in 2002 (Engle, 2003). The same study also reported that grades have greatly increased in the past decades. In 1968, only 17% of college freshmen reported earning A's in high school, while in 2002, almost 48% of college freshmen reported earning A's in high school (Engle, 2003). This survey is an accurate measure of the nation's freshmen class as it surveys nearly 300,000 students from 437 different colleges and universities nationwide. The results of this study support the idea that high school grades may be inflated due to pressure from stakeholders, yet graduates still may not possess the knowledge and tools needed to be college and career ready (Engle, 2003). After nearly

100,000 incoming college freshmen nationwide were surveyed, most students in high school appear to be motivated and determined to enroll in some type of post-secondary education (over 90%); however, the percentage seems to really drop off when it comes to the needed study skills (e.g. reading comprehension, note taking, studying) to less than 65% (Noel-Levitz, 2007). The findings report that students are most concerned with study habits, reading enjoyment, and writing skills.

Historically, one of the most predictive survey devices in terms of study habits and attitudes and their effects on academic achievement is the Brown and Holtzman Survey of Study Habits and Attitudes (1969). This study measures a student's study habits, study methods, motivation for studying, attitudes towards scholastic activities, and attitudes towards academics. Using a similar survey, Barrilleaux's study (described earlier) also resulted in determinations about students' study skills. The findings indicated the vast majority of the entering freshmen at Montgomery College did not know efficient study methods and did not have attitudes found to be important in the classroom, meaning their study habits and attitudes are characteristic of students who receive low grades in school. Blai's (1976) study (described earlier) that ranked nineteen areas found that students ranked reading skills and studying as their weakest areas. Of the top five on the list, four of them are concerned with educational skills and knowledge: reading skills, studying for an exam, preparing a bibliography, and math skills and concepts (Blai, 1976). Because these students' greatest concerns (58%) involved academic and study skills, the researchers posed a question as to who was to blame: "These Harcum freshmen express strong levels of concern about various dimensions of

their academic preparation for Harcum programs of study. Do these preparation gaps result from student 'failures' to learn or teacher 'failures' to teach?" (Blai, 1976).

Many accusations are made as to who is to 'blame' for the poor academic performance of recent college freshmen, and many college professors believe the cause is a lack of preparation in high school, specifically, not being taught necessary study skills and habits (Young, 2002). Pierog also conducted a study using Brown and Holtzman's survey to determine whether or not the results of the study were correlated with students' GPA's (1976). Pierog hoped to develop a study skills course required for incoming freshmen upon enrollment at York College of Pennsylvania. Ten percent (a random selection) of the student body was surveyed, and the results showed that study skills and attitudes had a positive correlation with GPA. So essentially, Pierog set out to prove the positive impacts a study skills course would have on grades, meaning the stronger someone's study skills and habits are, the higher his or her GPA would be. The results of his study showed an orientation course in study habits and skills had a positive effect on that semester's GPA.

A major factor impacting a person's study skills is the educational levels attained by his or her parents or guardians (Tulsa Junior College, 1995). Tulsa Junior College surveyed new students in the fall of 1994 to determine if the educational backgrounds of parents had an impact on students' educational performance, perceptions and expectations. About 1,600 students were surveyed and then divided into four groups based on the educational levels of their parents: high school or less (29.5%), some college (34.5%), Bachelor's degree (20.5%), and post Bachelor's degree (15.5%) (Tulsa Junior College, 1995). The survey asked numerous questions about college life, including study

skills and habits. The results suggested numerous influences of parental education status on student educational expectations and abilities, primarily the evidence that students who fall in one group (parents with a high school education or less) have a lower expectation for success and a lower skill level. Students whose parents are in the other groups (Bachelor's degree or higher) enroll in college equipped with better study habits, skills, and attitudes towards academics (Tulsa Junior College, 1995). A significantly higher amount of students in the third and fourth group expect to make A's (more than 50%) than do students in the first and second groups (less than 40%). Taking their actual abilities out of the equation, students in the first and second groups *believe* their academic abilities as well as study habits and attitudes are far below those of students in groups three and four. The study showed no significant relationship between the education of the parent and the academic achievement of the child; however, it did show a relationship between high or low level study skills and academic expectations (Tulsa Junior College, 1995).

Conley (2011) reviewed the literature to create a new definition of college readiness and what skills and characteristics college professors expect incoming freshmen to have when they step into college classrooms. Many professors identify critical thinking and problem solving as two study skills many college freshmen are lacking. Conley's comprehensive summary of the literature identified several key cognitive strategies many modern-day college students appear to be missing: intellectual openness (curiosity for knowledge), inquisitiveness, analysis (evaluation of material), reasoning and proof (reasonable arguments to prove phenomena), interpretation, precision and accuracy, and problem solving. As far as behaviors are concerned, Conley's list from the

literature included self-awareness (i.e. knowing what you do and do not know), self-monitoring (i.e. seeking assistance from various sources), and self-control (i.e. responsibility with time and commitments) which are all necessary for academic success. The purpose of Conley's (2011) discussion of the literature was to create a definition of college readiness that includes factors in addition to academic knowledge, specifically study habits and attitudes.

In Wolfe's (2009) study (described earlier), she claimed that good study skills are critical to academic success and that education, both primary and secondary, is not paying enough attention to ensuring students are equipped with these skills. Post-secondary education is now placing a large emphasis on student-independent learning, and Wolfe asserts that it is extremely important educators equip students with the skills necessary to achieve independent learning. There is a clear connection (as shown in the literature) between poor study skills and increased academic failure (Wolfe, 2009). Approximately 80% or more of the students surveyed claimed they took notes during lectures, listened carefully to the professors, and took time to study in a quiet place. Most of the students (over 80%) agreed there were increased demands for which they were not prepared in college as compared to high school. Wolfe claimed students should be armed with the necessary study skills and habits in addition to academic knowledge and skills to best prepare them for academic and professional success (Wolfe, 2009).

Another study conducted to determine the effects good study habits have on academic success was completed by Blumner and Richards in 1997. The purpose of their study was to test the hypothesis that students who earn the highest grades have the best study skills, do not become easily distracted, and are inquisitive when faced with



obstacles. An initial 81 students were surveyed at the University of Virginia in the engineering program, using a study skills and habits inventory. Of the 81 students surveyed, 69 were analyzed for information. The results of the analysis supported the hypothesis, that students with higher grades had better study habits and skills. They were rated based on their scores on the study skills inventory and their grades, taking out their scores on aptitude tests (ACT or SAT) (Blumner & Richards, 1997). Crede and Kuncel's study (described earlier) (2008) attempted to substantiate the same hypothesis: good study habits and attitudes are conducive to higher academic achievement. Scores on the study skills and habits inventory were compared to overall GPA, grades earned in individual courses, and standardized aptitude tests (ACT). In terms of the study skills portion of the survey and results, study habit measures improve prediction of academic performance more than any other non-cognitive individual difference variable examined to date and should be regarded as an additional pillar of academic success (Crede & Kuncel, 2008). They determined that study habits are the best predictors (non-cognitive) of academic performance.

Few arguments can be made about the impact good study skills have on academic achievement, however, research showing those skills are formed as early as elementary school is not as common. Gambill et al. (2008) (described earlier) analyzed student performance based on organizational and study skills. Students in elementary, middle school, and high school/college were surveyed to determine the relationship between organizational methods, study skills, and academic achievement. Student checklists, parent surveys, and school records were used to evaluate organizational methods and study skills. School records gave information on demographics (e.g. parent information,

socioeconomic status, additional services received), student checklists gave information concerning their perceived habits (personal and academic), and parent surveys gave information concerning the observed habits (personal and academic) of their child/children. Students at all levels implemented different organizational strategies along with advised study skills and then academic outcomes were measured at the end of one semester to gauge the impact of those strategies and skills. The outcomes of the project showed similar results at all age levels. Students with high grades showed little change after the implementation of organizational strategies and study skills, and students with lower grades only showed minimal improvement. The students who showed the most benefits from the project were students with average grades and achievement. Another interesting fact discovered by the researchers was that parents give most of the responsibility to teachers, and teachers expect large contributions from parents, so what remains are students (at all levels) with little guidance on how to be organized and how to implement good study skills (Gambill et al., 2008). This study is just one more piece of research providing evidence as to the importance of good study habits and skills and their impact on academic achievement, not just for high school graduates entering post-secondary education, but at all levels of learning.

### **Coping with Stress**

The largest amount of college attrition occurs between the first and second years of college, so much research has been done to discover the stressors (physical and emotional) which may be the causes, and those stressors include adjusting to college life, sleep deprivation, procrastination, financial concerns, loneliness, independence or living

alone, nutrition/health, and emotional control (Araas, 2008; Brougham, Zail, Mendoza, & Miller, 2009; Earnest & Dwyer, 2010; Forbus, Newbold, & Mehta, 2011; Mahmoud, 2011). College students in the United States perceive stress as their greatest health concern during their first years of college (Araas, 2008). The sources of stress for college students have been defined as academic, financial, family, social, and daily situations (e.g. parking, being late) (Brougham et al., 2009). The ways in which college students cope with stress often involve self-help, approach, accommodation, avoidance, and self-punishment (Brougham et al., 2009). Brougham (2009) attempted to determine the causes of stress among college students as well as the ways in which they coped. A stress inventory survey was administered to 166 college students (90% were freshmen and sophomores) and the results analyzed. The results showed that 75-80% of students are moderately stressed and 15-20% are severely stressed concerning aspects of their college lives. Transitioning from adolescence to young adulthood brings much stress to any person, and the addition of college stresses to this equation increases a student's chance of attrition. The results of this survey surmised that stress for these college students came from cognitive deficits, illness, increased rates of depression and anxiety, poor health behaviors, and decreased life satisfaction (Brougham et al., 2009). 50% of the students worked 20 or more hours a week, and this was the cause of much stress. In four of the five categories (i.e. academic, financial, family, social, and daily situations), females were more stressed out than males, and the only category with equal stress levels for males and females was academics. The results also showed that men cope with stress by avoidance and self-punishment, while women were more likely to cope by self-help and approach. The study produced evidence that while most college freshmen and

sophomores experience some form of stress, differences in types of stress as well as coping strategies depended on gender (Brougham, 2009).

Araas conducted a dissertational study in the fall of 2007 to determine what factors created the most stress in college freshmen. The study included information from over 2,000 college freshmen. Araas defined stress as “both a cognitive and physiological non-specific response that the body makes to challenges and changes in life; stress occurs when an individual determines that specific circumstances have exceeded available, existent coping resources or skills” (p. 15). Students who lack stress management skills and do not have strong support systems to help them cope may find that stress will dominate their daily lives (Araas, 2008). College students are inundated with several challenging demands, including balancing school and work, preparing for and taking exams, dealing with relationships, living up to parental expectations, learning to live independently, and confronting financial obligations. The purpose of her study was to examine the association of mindfulness, defined by Araas as “the general tendency in individuals to be aware of and attentive to present-moment experiences in daily life,” in order to perceived stress levels and health behaviors in college freshmen. Surveys were administered (through the web) to determine students’ stress levels as well as their mindfulness. Results showed that students with high measures of mindfulness generally had lower levels of stress. Higher levels of mindfulness included leading a healthy lifestyle, getting enough sleep at night, coping with academic demands, and being financially responsible. Araas interpreted the results to mean that “the ability to accept and encounter experience with non-judgment and the ability to act with mindful awareness may be critical to mindfulness components that play a role in the perception of

or coping with stress” (p. 55). The study also reported a higher level of stress in females than in males, and the general response of both male and female freshmen having difficulty in taking in their surroundings, weighing the options and outcomes, and dealing with situations in calm, responsible ways (Araas, 2007).

Earnest and Dwyer (2010) conducted a study at the University of Memphis to determine if peer coping strategies could assist freshmen college students in dealing with the stress that comes with college life. Thirty-six students who had completed at least 30 hours of coursework were asked to provide audio anecdotes regarding their personal experiences with stress and how they successfully coped with stressful situations. These personal stories were accessed on a website by 182 students and they provided feedback as to the usefulness of peer experiences and suggestions for their own stressful situations. Earnest and Dwyer’s study was constructed on the premise that there was not one stress coping mechanism effective in every situation, and individuals may use a variety of different coping mechanisms to combat different stressors in a variety of settings. The feedback survey was a Likert-scaled format to determine which strategies students found useful in coping with their own stressful situations. The personal anecdotes were divided into 12 categories based on the different challenges discussed, and students chose anecdotes based on areas where they felt stress or anxiety. The website received positive feedback, with 83% of students giving positive feedback for all the anecdotes/suggestions. The ratings were 85% for usability and 84% for usefulness. The findings bear evidence to the value of a peer counseling and advising website, especially in coping with stress. Having students who successfully completed 30 hours of course work (their first year) give advice as to how they coped with academic, financial,

personal, health, and family related stresses not only motivated new students to succeed, but it also gave the new students methods to use when faced with the same stresses (Earnest & Dwyer, 2010). The purpose was to suggest coping methods for students dealing with all the stresses of college life, so that in turn, students would remain in school and successfully complete college courses towards completing degree.

The most stressful year of college is a student's first year (Dyson & Renk, 2006). Dyson and Renk piloted a study at the University of Central Florida to determine the transitional methods first-year college students use to cope with stress. The researchers' hypothesis was that a positive first transition to university life is important in relation to college students' mental health and academic performance. The purpose of their study was to examine the relationships among college freshmen's gender, their gender roles, the levels of stress they experience during their first year at a university, the types of coping strategies they use, and the level of depressive symptomatology they experience. Seventy-four students were questioned using several different measurement surveys concerning gender identity, coping with stress, depression, life events, and strains. Coping strategies freshmen choose to use may have an impact on the adjustments they make to university life. So, these variables should be examined thoroughly when a freshmen who is having difficulty contacts university resource services for assistance. By doing a thorough examination of these variables, those who work to help freshmen with their transition to university life may be better informed about the needs of these individuals. This could help counselors come to a better understanding as to how to assist these students with decreasing their levels of depressive symptomatology and

providing a means of fostering a positive adjustment to college life (Dyson & Renk, 2006).

The focus of this research is to create a new definition of college readiness based on the addition of soft skills, and coping with the stresses of college life is a large part of the soft skills definition because it has a direct effect on academic performance (Womble, 2011). Womble surveyed 25 college students to determine if there was a correlation between a student's amount of perceived stress in a given semester and that same semester's GPA. Twenty-four of the students were fulltime students, taking a course load of 12 hours or more. They answered questions on a perceived stress scale, reported grades they had earned in the previous semester, and listed the top three reasons they received those grades. Womble's study did not show a significant correlation between two factors: perceived stress and GPA. Scores ranged across the board, from a high score on the perceived stress scale with a high GPA, and a low score on the perceived stress scale and a high GPA. The most interesting parts of the study results were what the students ranked as the factors that cause the most stress. Most students ranked not getting enough sleep as their number one factor in their level of stress, followed by problems with roommates and social activities. The next ranking stress factor was working a part-time job, because each hour a student spends at work that he or she could be studying, can take away from obtaining the students' full academic potential (Womble, 2011). Surveying only 25 students limits the results of the study, however, the literature Womble reviewed and the students' perceptions following the study give support to the hypothesis that levels of stress have a direct impact on academic achievement.

## **Literacy**

One of the most important skills needed to be successful in college is a high level of literacy. Literacy skills include reading, comprehension, speaking, writing, vocabulary, spelling, an awareness of print, and the relationship between letters and sounds. Student success in college is often linked to outcomes including writing, speaking, comprehension, and reading (Kuh, et al., 2006). According to the Agenda for Advancing Adolescent Literacy for College and Success, “The pace of literacy improvement in our schools has not kept up with the accelerating demands of the global knowledge economy” (2010). The relationship between literacy and success in college coursework is dramatic, and students who ask more questions in class and understand what they are reading and writing tend to be more successful (Kuh et al., 2006). It has become increasingly difficult for students to read, comprehend, and utilize the textbooks required for their college courses. In a study done by Willner (1974), colleges who tried an “open admission” policy (where anyone could enroll in college courses) found that the largest problems were serious deficiencies in English and expression skills, deficiencies in basic study skills, and a lack of acquaintance with college level vocabulary.

Fitzgerald (2004) did a study where she surveyed college professors who taught freshmen, and she found that “Many high school graduates, accustomed to easy success in high school, struggle in college. In their first semester they must read reams of difficult text, take comprehensive exams that require analysis not covered in class, and write papers that synthesize ideas from multiple resources.” Students are not prepared to handle the adjustment and increase in literacy skills required for college success. Fitzgerald’s results showed that college professors expect their students to be able to be



experienced with computer technology, basic internet literacy skills, sophisticated reading skills that include criticism and analysis, evaluation skills (for complicated texts), and communication and argumentative skills to be able to express their opinions. These are all important literacy skills needed for a high school graduate to make the transition successfully to college academics. Fitzgerald also reported that “Professors estimate that two-thirds of entering students cannot adequately analyze information or arguments and cannot synthesize information from multiple sources.”

### **Limitations of the Literature**

Based on the literature discussed, there is an apparent discrepancy between current measures of college readiness/enrollment and the percentage of those students who remain in college and complete a degree. The purpose of this review of literature was to examine the current views of college readiness, primarily examining the value of soft skills (responsibility, motivations, study habits and skills, and coping with stress) as a proposed valid part of the college and career readiness equation. Studies conducted showing the effects of each of these soft skills on academic, social, financial, and professional success were discussed to provide support for the current study. One of the limitations of these studies is that while the majority of these studies support the *value* of soft skills when it comes to academic achievement, the studies reviewed did not propose the use of a soft skills measure in current college readiness equations that ultimately lead to admissions. The studies reviewed show a positive effect of soft skills on academic achievement; however, colleges do not use the evaluation of these skills when choosing incoming students. Because more students drop out of college without a degree than stay

and earn one, few arguments can be made that something is missing or lacking in current college readiness equations. The soft skills measurement in the current study questioned students concerning the most research-supported soft skills needed by high school and college students to successfully complete college courses and programs based on students themselves, college professors, and employers. The following study's purpose was to give a numerical score to a student's soft skills by using a device created by the researcher, and to add that score to the current college readiness components: ACT and GPA, creating a new college readiness calculation. This study was implemented in the fall of 2012 at a large university in Tennessee. The researcher's hypothesis was that soft skills were significant predictors of college GPA during the first semester.

### **CHAPTER III: Methodology**

This study was a cross-sectional study which involved a group of people with different interests and backgrounds, but who shared other characteristics including educational level, age, and date of high school graduation. The purpose of the following study was to attempt to answer these questions: 1) Are the items on the measuring device (soft skills survey) reliable and valid? 2) Do soft skills add to high school GPA and ACT in terms of predicting first semester college GPA? 3) Which items (soft skills) are the strongest predictors of college GPA? The researcher hoped to determine if soft skills should be taken into consideration to more accurately predict the academic achievement of college freshmen. The researcher hoped to support the much debated idea of adding another facet to the equation currently being used to determine college readiness. This chapter will break down the methods of the research process. The methods chapter is divided into five sections: the participants (including who participated and how they were recruited), the soft skills survey (measurement device) (how it was created and validated), the procedure (how the survey was administered and collected), the data analysis (how the data was examined and interpreted), and the study's limitations (confines of the results).

#### **Participants**

The researcher sought a response of approximately 400 incoming freshmen at a large university in Tennessee in the fall of 2012. The university used has an average yearly enrollment of approximately 26,000 students. The pool of students who participated was surveyed through the university's 1010 courses (orientation courses for

students who are enrolling first time as “non-declared” majors). The 1010 courses at this university have five sections of focus including university resources, career planning, math, reading, and writing. Using this pool of students, the study utilized a true representation of the incoming freshman class. For the past ten years, 3,000 or more students have enrolled at this university each year as first-time freshmen (Sells, 2011). Using a confidence level of 95%, based on a population of 3,000, a sample size that accurately represented the population of the incoming freshman class was 341 (Creative Research Systems, 2012). For a student’s survey results to be included in the analysis, he or she had to meet the following criteria: participants had to be 18-20 years old, be a high school graduate (not GED recipient), be a first time freshman beginning his or her first semester of college, be enrolled as a fulltime student at (12 hours or more), and have graduated from high school within 12 months of enrolling in college. We excluded students who were older than 20 and who took more than a year off because we wanted students who clearly remembered and were still influenced by their high school experiences, both academically and socially. We excluded students who earned GEDs because they may not have answers for questions concerning their high school teachers, classes, and extracurricular activities. We excluded freshmen in their second semester of college because the survey device sought answers from students who were still adjusting to the initial experiences in college, which we determined (based on research) to be within the first semester of their college experience (Bangser, 2008; Stehlik, 2010).

Approval was obtained from the Institutional Review Board (IRB) on September 3, 2012, and the packets were delivered to the University Studies department on Friday, September 7, 2012 to be administered. In order to obtain 341 useable survey responses,

we administered 500 to reach our desired number which was an accurate representation of the population of incoming freshmen at this university. Exactly 400 surveys were originally administered through the dean of the University Studies department. The researcher prepared 16 packets with 25 surveys and 25 consent forms to be administered through the University 1010 professors during class. Through the initial 400 surveys, 287 surveys fit the approved criteria. Of the remaining surveys, 78 were returned blank, 30 did not fit the criteria because the participant was 17 (and could not participate with parental consent), older than 20, or had graduated more than a year prior to the survey, and 5 were not useable because they were missing consent forms. To obtain the additional 54 surveys needed to reach 341, another 4 packets (100 surveys and consent forms) were given to the dean of the University Studies department and given to four additional sections. These surveys were administered approximately six weeks after the initial 400. Of the 100 surveyed the second time, 49 were returned blank, 3 were not of the required age, and 1 had answers and consent information that was not legible. Through the second administration of the surveys 47 surveys were obtained, making the total sample size of participants who fit the criteria and were included in the study 334.

All of the participants were current freshmen between the ages of 18-20 at one of the largest universities in Tennessee. Of the respondents to the survey, 47.6% were female ( $N = 159$ ) and 52.1% were male ( $N = 174$ ). 61.7% of the participants were Caucasian ( $N = 206$ ), 27.8% were African American ( $N = 93$ ), 4.2% were Asian/Pacific Islander ( $N = 14$ ), 1.8% were Hispanic ( $N = 6$ ), 0.6% were Native American ( $N = 2$ ), and 3.9% chose "Other" ( $N = 13$ ). This compares in many ways with the national average (taken from a pool of over 200,000 students entering 270 colleges in the U.S.) of 70.1%

of incoming freshmen being Caucasian, 12.1% African American, 9.8 Asian/Pacific Islander, 7% Hispanic, and 2.7% American Indian (Pryor, 2011).

### **Instrument**

The soft skills survey utilized in the current study was developed by the researcher during spring and summer of 2012. Designing and implementing a survey is a systematic process of gathering information on a specific topic by asking questions of individuals and then generalizing the results to the groups represented by the respondents (Thayer-Hart, 2010). The original survey consisted of 50 multiple choice items, with 23 of them resulting in categorical responses (i.e. “What level of education did your mother reach?”) and 27 of them resulting in a quantitative answer (i.e. “How many hours did you spend studying during the week of your final exams?”), with Likert-scaled responses. Likert-scaled responses involve identifying the concept the researcher is trying to measure, generating the possible responses, and then rating them from strongly related to the concept to strongly unrelated to the concept (Trochim, 2006). The survey pulled ideas from numerous soft skills surveys and questionnaires to create a comprehensive measuring device focusing on specific areas of a student’s academic and non-academic life including background information, high school social experiences, high school academic experiences, high school coursework taken, academic and personal relationships, study skills and habits, literacy skills, responsibility, academic motivation, career motivation, coping with academic stress, and coping with personal stress. The questions were categorized into the four constructs based on prior research supporting specific areas correlating with specific constructs, as well as a subset of questions pulled

from all the constructs concerning overall literacy skills (see Aquino, 2011; Barrilleaux, 1972; Blumner & Richards, 1997; Cashin, 1979; Celio & Sedlacek, 1976; Crede & Kuncel, 2008; DeVito, 1982; Dey, 2008; Gambill et al., 2008; Gerken & Volkwein, 2000; Lai, 2011; Landry, 2003; Le et al., 2005; Mussano, 1977; Noel-Levitz, 2007; Paschke, 1981; Pickhardt, 2009; Pierog, 1976; Romano, 1982; Schwalb & Sedlacek, 1988; Troutman, 1977; Willner, 1974; Wolfe, 2009; Young, 2002).

Demographic information has been shown to be a great predictor of life direction and choices (Forbus et al., 2011; Hooker & Brand, 2010; Romano, 1982; Tulsa Junior College, 1995), so the survey includes 23 categorical questions about background information including (but not limited to) age, ethnicity, gender, education of parents, high school academics, high school grade point average (GPA), highest cumulative ACT score, and extracurricular activities. This information gave us categorical descriptions of the participants which we were able to use as a possible additional variable (to soft skills) affecting college outcomes at the end of the first semester (GPA). As described in the literature review, the other half of the survey (27 Likert-scaled questions) was designed based on the four determined major constructs of soft skills: responsibility, motivation, study skills and habits, and coping with stress, as well as a literacy skills subset.

Additionally, the survey requested identifying information (by obtaining the participant's permission via signature) including each participant's full name, birthday, and his or her "M number" (i.e. an identification number assigned to all students enrolled at this university). This information was needed to access each participant's school records, specifically high school GPA and ACT scores (upon admission), as well as permission to access their final grades at the end of the Fall 2012 semester. Additional

information requested was their enrolled hours (at the beginning of the semester), earned hours/GPA hours (the hours the student finished with and counted towards his or her first semester GPA). The participants were informed that their information would be kept strictly confidential, and their identifying information (names, ACT scores, GPA, M numbers, and first semester college GPA) would be used by the researchers only to link survey responses to fall 2012 final grades. Once the information was linked, all identifying information was removed and securely stored, and numbers *only* were assigned to link information. The participants were informed that their personal information was used to paint an accurate picture of the general population of freshmen who are entering college, and that once the study was completed, their information would remain locked up for three years and then destroyed.

## **Procedures**

To validate the survey's utilization as well as readability, the researcher conducted cognitive interviews. According to Tourangeau (1984), cognitive interviews consist of the following areas:

### **1.) COMPREHENSION OF THE QUESTION:**

- a.) *Question intent*: What does the respondent believe the question to be asking?
- b.) *Meaning of terms*: What do specific words and phrases in the question mean to the respondent?

### **2.) RETRIEVAL FROM MEMORY OF RELEVANT INFORMATION:**

- a.) *Recallability of information*: What types of information does the respondent need to recall in order to answer the question?
- b.) *Recall strategy*: what types of strategies are used to retrieve information? For example, does the respondent tend to count events by recalling each one individually, or does he/she use an estimation strategy?



### 3.) DECISION PROCESSES:

- a.) *Motivation*: Does the respondent devote sufficient mental effort to answer the question accurately and thoughtfully?
- b.) *Sensitivity/Social Desirability*: Does the respondent want to tell the truth? Does he/she say something that makes him/her look "better"?

### 4.) RESPONSE PROCESSES:

- a.) *Mapping the response*: Can the respondent match his or her internally generated answer to the response categories given by the survey question?

The survey was administered to five seniors who graduated from a high school in Tennessee in May of 2012. The volunteers took approximately 15 minutes to complete the paper version of the survey. Once the surveys were completed, the researcher conducted a brief interview with each volunteer to gain more insight. The results of the interviews involved making changes to several questions. For example, one question asked students how often they read for pleasure. The response ranged from "I hate reading and I never read for pleasure," to "I'm an avid reader, reading 4 or more books a year." Three of the five seniors interviewed did not understand the word "avid," so the response was changed to "I love reading, and I read 4 or more books a year." Another question about studying asked students how they spent their time during the week of exams in high school, and the responses included studying with friends, studying alone, getting help from a tutor, and not studying at all. Four of the five volunteers claimed they used more than one of these strategies to study for exams, so the researcher adjusted the responses to include another choice: "I used more than one of these strategies to prepare for final exams." Still another question asked questions about the attitudes their high school teachers had towards assignments. Out of the five possible responses to the question, two of the five seniors considered these two responses to be the same:

- a.) A few of my teachers accepted late work, let students redo work, and helped students pass their classes
- b.) Most of my teachers were strict, late work wasn't accepted, and less than great work was not allowed to be redone

The resulted in the researcher adjusting the available responses to:

- a.) 3-4 of the teachers I had during high school accepted late work, let students redo work, and helped students to pass their classes
- b.) 1-2 of the teachers I had in high school accepted late work, let students redo work, and helped students to pass their classes

After researching information on proper question format for a survey, it was determined that “ensuring response categories are both exhaustive and mutually exclusive and may require re-evaluating the intent of the question or separating it into two or more questions, or both” (Thayer-Hart, 2010). There were several words the five volunteers suggested that the researcher adjust in addition to “avid.” In a question that asked about the quality of their work, the students did not completely understand the word “stellar,” although they were able to assume it meant “the best” or “perfect” based on the other available choices going from “worst to best” (in their words). The researcher based the adjustment of vocabulary on Nancy Thayer-Hart’s guide on survey fundamentals and her claim to “avoid using complex words, technical terms, jargon, and phrases that are difficult to understand. Instead, use language that is commonly used by the respondents” (2010). The survey results of the five seniors who took the survey were not analyzed, primarily because their volunteering to take the survey was only to evaluate the readability and comprehension of the questions included.

For the students who were surveyed through the University 1010 courses, paper copies of the survey were distributed by the professors of those courses during class during the first month of the semester. Those surveys were returned to the researcher and individually uploaded to an Excel spreadsheet. The survey included additional information like the purpose of the survey and study, the confidentiality information, and the consent forms. The initial questions on the survey requested agreement to obtain access to each student's academic records as well as GPA at the end of the first semester of school. The results of the surveys were analyzed to access academic information (participants' GPAs and ACT scores). At the conclusion of the fall semester (2012), the researcher obtained final report card grades issued by the university for their first semester of college coursework, and then used that data to compare to survey results and prior academic records.

## CHAPTER IV: Results

### Data Cleaning

Once the surveys were administered, returned, and recorded, and entered into a database, some answers were recoded before data analysis. **Questions 1, 2, 4, 7, 8, 28, 29, 33, 34, 35, 38, and 49** needed no recoding because the responses were clean. **Questions 10, 11, 15, 18, 21, 24, 30, 31, 32, 37, 40, 42, 43, 44, and 46** were recoded because a small number of participants (8%) chose multiple answers so they were recoded as “Two or more of these.” **Questions 3, 5, 6, 9, 13, 19, 20, 25, and 36** were recoded because a few participants (2.7%) chose multiple answers when there was already a choice such as “two or more of these,” so their responses were recoded as “two or more of these.” **Questions 12, 14, 16, 17, 22, 23, 26, 27, 39, 41, 45, 47, 48 and 50** were recoded because a few participants (2.4%) chose multiple responses when multiple responses were not possible answers. For example, if a question asked how involved his or her parents were in the student’s academic career, a student marked two choices, claiming his or her parents were really involved and then marked another response claiming his or her parents were partially involved. These answers were recoded as “NO RESPONSE.” **Question 42** (the original #42) and the responses were removed from the survey because it was the same as question #47 (now #46). After the descriptions of the demographic information of the participants, the results of the data analysis will be reported in order the data analyses were performed.

### **Demographics of the Participants (see Table 1)**

Initially, descriptive statistics were calculated from the categorical items. These data began with demographic information. As stated earlier, demographic information has been shown to be a great predictor of life direction and choices (Forbus et al., 2011; Hooker & Brand, 2010; Romano, 1982; Tulsa Junior College, 1995), so the survey included questions about background information including age, ethnicity, gender, education of parents, high school academics, and extracurricular activities. This information gave us categorical descriptions of the participants which we were able to use as a possible additional variable (to soft skills) affecting college outcomes at the end of the first semester (GPA). Of the 500 original surveys that were administered, 334 surveys were completed that matched the criteria (as described on page 50). This rate was a response rate of 66.8%. This is close to the average response rate for face-to-face survey administration (70%) (Weisberg, Krosnick, & Bowen, 1996), so non-response rate in this survey was not alarming. According to Weisberg et al. (1996), researchers hope that people who refuse to respond do not differ much from those who do respond, other than being less cooperative. The higher the refusal rate, the more important it is to discover if the refusals belong to a specific group or occur for a specific reason. Most of the respondents (97%) had graduated (2.4%) had graduated from high school within the last 12 months ( $N = 8$ ). In their first semester of college courses, 55.7% reported not being enrolled in any remedial coursework ( $N = 186$ ), 20.4% reported being enrolled in remedial math ( $N = 68$ ), 4.8% reported being enrolled in remedial math and reading/English ( $N = 16$ ), 4.5% reported being enrolled in remedial reading or English ( $N = 15$ ), 2.1% reported being enrolled in “other” remedial courses ( $N = 7$ ), and 12%

reported they did not know if they were enrolled in remedial courses or not ( $N = 40$ ). Out of this population, 33% were enrolled in remedial coursework. This percentage is somewhat lower than the overall national report of an average of 50% of students beginning college enrolled in some type of remedial coursework (Kuh et al. 2006).

Each student reported his or her highest single-date ACT score as well as final high school GPA, and there was a slight discrepancy between student-reported scores and actual scores. For example, only 7.2% of students reported having an ACT score lower than 17 ( $n = 24$ ), when in actuality, 10.5% of the students who participated had an ACT score lower than 17 ( $n = 35$ ), as reported by university records. Likewise, only 0.9% of students reported have a final high school GPA below 2.5 ( $n = 3$ ), when in actuality, 3.6% of students had a high school GPA lower than 2.5 ( $n = 12$ ), as reported by university records. The average ACT score for the population was 21.6 ( $SD = 3.84$ ), with a minimum score of 12 and a maximum score of 34. The average high school GPA was 3.3 ( $SD = 0.44$ ), with a minimum score of 2.00 and a maximum score of 4.54. The average first term college GPA was 2.76 ( $SD = 0.97$ ), with a minimum score of .000 and a maximum score of 4.00. An interesting note here is that no students entered this university with a GPA below 2.00. At the completion of their first semester of college, 7 students had a GPA of 0.00, 13 students had a GPA below 1.00, and 43 finished with a GPA below 2.00, making it a total of 20% ( $n = 63$ ) students with a first term college GPA below 2.00. The exact results of the students' demographic information as well as ACT scores, high school GPAs, and first term college GPAs can be seen in Table 1.

Table 1

*Demographic Characteristics of Participants (N = 334)*

Characteristic	<i>N</i>	%
Gender		
Male	174	52.1
Female	159	47.6
Ethnicity		
Asian/Pacific Islander	14	4.3
Hispanic	6	1.8
African America	93	27.8
Caucasian	206	61.7
Native America	2	0.6
Other	13	3.9
High School Graduation		
Within the last 6 months	324	97
Within the last 12 months	8	2.4
More than a year ago	0	0
Remedial Coursework		
Remedial math and English/reading	16	4.8
Remedial English/reading	15	4.5
Remedial math	68	20.4
Remedial OTHER	7	2.1
No remedial courses	186	55.7
Not sure	40	12

Table 1 (continued)

*Demographic Characteristics of Participants (N = 334)*

Characteristic	<i>N</i>	%
Highest Single Date ACT score		
17 or under	35	10.5
18-21	145	43.4
22-25	99	29.6
26-30	48	14.3
31 or higher	6	1.8
I didn't take the ACT	1	0.3
High School GPA		
1.00-2.00	1	0.3
2.01-2.50	11	3.3
2.51-3.00	76	22.7
3.01-3.50	138	41.4
3.51-4.00	99	29.7
4.01 or higher	8	2.4
First Term College GPA		
Less than 1.00	20	5.9
1.00-2.00	51	15.2
2.01-2.50	45	13.4
2.51-3.00	63	18.8
3.01-3.50	67	20.1
3.51-4.00	88	26.3



### **Categorical Questions**

In addition to the Likert-scaled questions concerning the four constructs, there were other categorical questions that gave some insight into each of the four areas. These questions were added to the measurement device in order to attain a clearer sense of the population involved, as well as to give us some specific responses to the more general questions about responsibility, motivation, study habits/skills, and coping with stress. Each of the four constructs had 2 - 5 categorical questions in addition to the 3 - 8 Likert-scaled questions. For example, categorical questions allowed us to not only ask a student if he or she felt stressed about academics, but it also gave us what specifically stressed him or her out the most and how he or she may respond to it. These specific answers helped to add some details and specifics to the individual constructs.

### **Responsibility**

As previously stated, the responsibility construct (in terms of academic success) included specific areas like independent work, time management, dependability, attention to quality, self-discipline, self-regulated learning, teacher/student dynamics, and attendance (Celio & Sedlacek, 1976; Dey, 2008; Gambill et al., 2008; Pickhardt, 2009; Gerken & Volkwein, 2000; Le et al., 2005; Noel-Levitz, 2007; Paschke, 1981; Romano, 1982; Schwalb & Sedlacek, 1988; Willner, 1974; Wolfe, 2009). In terms of the Likert-scaled questions, the highest score possible was a 30 (choosing the answers worth 5 points on every question in the construct) and the lowest score possible was a 6 (choosing the answers worth 1 point on every question in the construct). The results of the survey showed that the average score for responsibility was 21.5 ( $SD = 2.86$ ), with a minimum

score of 14 and a maximum score of 29. These questions asked students about attendance, work quality, time spent studying, and time spent on outside assigned reading. An average score of 21.5 indicates that most students feel they fall on the responsible side of the responsible spectrum.

More specifically, the survey asked two additional questions about responsibility, one concerning how their high schools prepared them and the other asking them what they spent their time outside of school doing during the week of final exams. In terms of how high schools prepare students, most students fell on opposite sides of the spectrum, 39% ( $n = 131$ ) saying their high schools prepared them in ALL areas (choosing a college, financial aid, taking the right courses), while 26% ( $n = 87$ ) claimed their high schools did not prepare them in ANY of these areas. It was interesting to note that a large portion of students (60%) felt their high schools did not prepare them in one or more of these areas (i.e., choosing a college, financial aid, and taking the right courses). See Table 2 for participant information for the responsibility construct.

Table 2

*Participant Information for Responsibility Construct*

Likert Questions	<i>N</i>	%
Lowest acceptable Grade		
Doesn't matter, pass	7	2.1
D	1	.3
C	40	12.0
B	199	59.6
A	86	25.7
Quality of high school work		
Did really poor work	1	.3
Did poor work sometimes	1	.3
Did acceptable work	71	21.3
Did pretty good work	237	71.0
Did excellent work	24	7.2
High School Attendance		
Missed more than 20 days	13	3.9
Missed 10-20 days	26	7.8
Missed 5-10 days	76	22.8
Missed 3-5 days	123	36.8
Rarely missed, 2 or fewer	95	28.4

Table 2 (continued)

*Participant Information for Responsibility Construct*

Likert Questions	<i>N</i>	%
Time spent studying in high school		
I didn't study at all	67	20.1
Rarely studied (less than 2 hours a week)	143	42.8
Sometimes studied (3-5 hours a week)	94	28.1
Often studied (5-8 hours a week)	22	6.6
Always studied (more than 8 hours a week)	8	2.4
Approach to assigned reading		
Don't read assigned reading	14	4.2
Rarely reading assigned reading (1/4)	24	7.2
Sometimes read assigned reading (1/2)	64	19.2
Often read assigned reading (3/4)	123	36.8
Always read assigned reading	108	32.3
Perceived time management skills		
Never did work on time, studied	5	1.5
Rarely did work on time, studied	6	1.8
Sometimes did work on time, studied	111	33.2
Often did work on time, studied	189	56.6
Always did work on time, studied	21	6.3

## Motivation

The construct of motivation (in terms of collegiate success) refers to incentives, determination, work ethic, commitment, academic goals, career goals, and social influences/support (Cashin, 1979; DeVito, 1982; Lai, 2011; Landry, 2003; Le et al., 2005; Young, 2002). For the Likert-scaled questions, the highest possible score was 45 and the lowest possible score was 9. The survey results showed average motivation score of 28.9 ( $SD = 3.48$ ), with a high score of 38 and a low score of 19. These questions asked about the education of their parents, parental involvement, relationship with counselors, importance of academic achievement, and motivation to complete a degree. An average score of 28.9 indicates that most people find themselves in the middle of the spectrum when it comes to motivation. There were five categorical questions that were included in the motivation construct. These questions asked students about their extracurricular activities during high school, reason and purpose for enrolling in college, and the most likely reason for dropping out. When asked why students enrolled in college or why they were seeking a college degree, most students were motivated by financial gain, as opposed to getting an education or seeking a better life than their parents. Also, when asked what the most likely reason would be for dropping out of college before completing a degree, 55% ( $n = 185$ ) claimed that they “didn’t see any reason why they wouldn’t finish their degree,” and 15% ( $n = 52$ ) claimed a lack of academic skills or achievement would be the most likely reason for dropping out before finishing a degree.

One other interesting item is the education of the participants’ parents. This is part of the motivation construct because students whose parents have a college education are

more motivated to earn a degree themselves than students whose parents have not earned a degree, mainly because the expectations are lower for students whose parents do not have a college education (Tulsa Junior College, 1995). For this sample, only 37% ( $N = 123$ ) of the fathers had a college degree (i.e., bachelor's or associates) or higher (i.e., graduate, medical, or law degree). As far as the education of the mothers of the participants, the percentage was higher with 47% ( $N = 158$ ) having a college degree or higher. See Table 3 for participant information for the motivation construct.

Table 3

*Participant Information for Motivation Construct*

Likert Questions	<i>N</i>	%
Education of father		
Less than high school diploma	26	7.8
High school diploma	96	28.7
Some college (no degree)	65	19.5
College degree (associate's, bachelor's)	87	26.0
Graduate degree (master's, doctorate, MD)	36	10.8
Education of mother		
Less than high school diploma	15	4.5
High school diploma	81	24.3
Some college (no degree)	72	21.6
College degree (associate's, bachelor's)	119	35.6
Graduate degree (master's, doctorate, MD)	39	11.7
Parental involvement in high school		
They were never involved	11	3.3
They were rarely involved	46	13.8
They were somewhat involved	85	25.4
They were mostly involved	125	37.4
They were always involved	65	19.5

Table 3 (continued)

*Participant Information for Motivation Construct*

Likert Questions	<i>N</i>	%
Relationship with counselors in high school		
There were counselors in my school?	29	8.7
No experiences with counselors (good or bad)	42	12.6
I was just another face in the crowd	98	29.3
They tried to help, I made no effort	42	12.6
They really made an effort and helped me	120	35.9
Highest degree you plan to earn		
I don't plan on earning a degree	6	1.8
Associates degree	9	2.7
Bachelor's degree	156	46.7
Master's Degree	99	29.6
Ph.D., Medical Degree, Law Degree	63	18.9
Importance of academic achievement(to parents)		
Not important at all	9	2.7
Not very important (expected to pass)	12	3.6
Moderately important (C's or better)	98	29.3
Very important (nothing less than B's)	182	54.5
Extremely important (straight A's)	31	9.3



Table 3 (continued)

*Participant Information for Motivation Construct*

Likert Questions	<i>N</i>	%
Important of academic achievement (to you)		
Not important at all	2	.6
Not very important (expected to pass)	18	5.4
Moderately important (C's or better)	99	29.6
Very important (nothing less than B's)	171	51.2
Extremely important (straight A's)	40	12.0
Motivation to complete degree		
Not at all motivated	2	.6
Only a little motivated	3	.9
Motivated but not confident	26	7.8
Motivated and somewhat confident	95	28.4
Motivated and extremely confident (certain)	205	61.4

## Study Habits/Skills

As previously stated, one of the most influential sets of soft skills that affects academic achievement is a student's ability to study correctly and successfully (Aquino, 2011; Barrilleaux, 1972; Blumner & Richards, 1997; Crede & Kuncel, 2008; Gambill et al., 2008; Mussano, 1977; Pierog, 1976; Troutman, 1977; Young, 2002). In terms of the most current research, study behaviors included are time management, preparing for and taking exams, using information resources, taking class notes, and communicating with teachers and counselors (Conley, 2011). The average score for the study skills/habits construct was 30.6 ( $SD = 5$ ), with the highest score being a 44 and the lowest score being a 13. These questions asked students about the level of classes taken in high school, high school preparation, high school teachers' expectations, their skills in reading and writing, and their in-class attitudes. With an average score of 30.6, most of the students who participated in the study at least *believe* they have strong study skills and habits.

One interesting fact is that only 9% ( $N = 33$ ) of the students surveyed believed their high schools fully prepared them for their college experience. Also notable, 70% ( $N = 232$ ) of the students surveyed said some, most, or all of their teachers accepted late work or allowed them to redo unsatisfactory work. Almost 70% ( $N = 227$ ) of students felt that their weakest study skill concerned finding time each day outside of class to study or do homework. Finally, 74% ( $N = 245$ ) of students claimed their high schools did not prepare them with the proper study skills in reading, math, science, writing, or critical thinking. See Table 4 for participant information for the study habits/skills construct.

Table 4

*Participant Information for Study Habits/Skills Construct*

Likert Questions	<i>N</i>	%
Level of classes taken in high school		
Resource/Special Ed	1	.3
Resource/Special Ed and standard courses	4	1.2
Standard courses	71	21.3
Some standard some honors courses	164	49.1
Mostly honors/AP courses	94	28.1
Overall high school preparation for college		
High school didn't prepare me at all	11	3.3
Not really, my high school didn't prepare me	46	13.8
Somewhat, my high school prepared me	85	25.4
Mostly, my high school prepared	125	37.4
My high school fully prepared me	65	19.5
High school teacher's approach to classes/work		
All accepted late work, redone work	51	15.3
Most accepted late work, redone work	102	30.5
Some (3-4) accepted late work, redone work	79	23.7
Few (1-2) accepted late work, redone work	83	24.9
None accepted late work, redone work (strict)	16	4.8

Table 4 (continued)

*Participant Information for Study Habits/Skills Construct*

Likert Questions	<i>N</i>	%
Perceived academic writing ability		
Terrible writer, writing is difficult	34	10.2
Less than average writer, sometimes hard	55	16.5
Average writer, not difficult	117	35.0
Better than average writer, mostly easy	101	30.2
Great writer, always easy	25	7.5
Frequency of reading for pleasure		
Hate reading, rarely read at all	41	12.3
Dislike reading, only when I have to	47	14.1
Tolerate reading, short pieces	104	31.1
Enjoy reading, 1-3 books a year	75	22.5
Love reading, more than 3 a year	59	17.7
Frequency of reading for information		
Hate reading, rarely read at all	30	9.0
Dislike reading, only when I have to	38	11.4
Tolerate reading, short pieces	150	44.9
Enjoy reading, 1-3 books a year	84	25.1
Love reading, more than 3 a year	31	9.3

Table 4 (continued)

*Participant Information for Study Habits/Skills Construct*

Likert Questions	<i>N</i>	%
Perceived reading/comprehension level		
Terrible reading, rarely understand	11	3.3
Less than average reader, understand little	20	6.0
Average reading, understand some	120	35.9
Better than average reader, understand most	143	42.8
Excellent reader, understand all	39	11.7
Behavior/attitude during class		
I never pay attention during class	3	.9
I rarely pay attention during class	13	3.9
I somewhat pay attention during class	51	15.3
I mostly pay attention during class	233	69.8
I always pay attention during class	30	9.0
Perceived overall literacy skills		
I have very weak literacy skills	10	3.0
I have moderately weak literacy skills	18	5.4
I have average literacy skills	97	29.0
I have pretty strong literacy skills	151	45.2
I have extremely strong literacy skills	57	17.1

## **Coping with Stress**

Beginning college for the first time can be extremely stressful. The stressors included in adjusting to college life are sleep deprivation, procrastination, financial concerns, loneliness, independence or living alone, nutrition/health, and emotional control (Araas, 2008; Brougham, Zail, Mendoza, & Miller, 2009; Earnest & Dwyer, 2010; Forbus, Newbold, & Mehta, 2011; Mahmoud, 2011). The average score for the coping with stress construct was 10.26 ( $SD = 2.2$ ) with a high score of 15 and a low score of 3. These questions asked students about living independently, emotionally responding to stress, and speaking in front of group/class. An average score of 10.26 indicates that most students did not struggle with stress, although this survey was given during their first month of college, so stress may not have had a chance to affect them yet. Almost 60% ( $n = 194$ ) claim that they rarely or never feel stressed about academics. In two different questions, students said that a lack of sleep was the most likely response to any stress they felt about academics or college life. According to almost 70% ( $n = 224$ ) of the participants, the most stressful part of their college experience is how to pay for their education/student loans. See Table 5 for participant information for the coping with stress construct.

Table 5

*Participant Information for Coping with Stress Construct*

Likert Questions	<i>N</i>	%
Effects of living independently		
I am afraid of being lonely	14	4.2
I am somewhat nervous of being lonely	39	11.7
I am not really nervous about it	76	22.8
I am mostly excited about it	82	24.6
I am excited about it and not afraid at all	112	33.5
Common emotional response to stress		
Respond only negatively	24	7.2
Often respond negatively	42	12.6
Sometimes respond negatively	132	39
Mostly respond positively	110	32.9
I don't feel stressed	22	6.6
Perceptions of public speaking		
Do not like it, can't do it	13	3.9
Do not like it, I really struggle	61	18.3
Do not like it, but I can do it	111	33.2
I don't mind, pretty good at it	101	30.2
I like speaking in front of people	47	14.1

## Reliability

First, the Likert-scaled questions were recoded to be analyzed. All of the Likert-scaled questions had five scored choices. Depending on what the questions asked the participant, the answers started with a low-scoring response (A = 1) to a high-scoring response (E = 5). A few of the questions had a choice “F,” noting a response worth “0” points, for an answer like “I don’t know.” For example, item # 23 asked participants how important academic achievement was to them in high school. The answer choices looked like this:

- a.) Not important at all, I didn’t really care if I passed or failed (1 point)
- b.) Not very important, I only expected to pass (2 points)
- c.) Moderately important, I expected C’s or better (3 points)
- d.) Very important, I didn’t accept anything less than A’s or B’s (4 points)
- e.) Extremely important, I didn’t accept anything less than A’s (5 points)
- f.) I don’t know (0 points)

For each construct, a sub-score was generated. The responses with the higher number of assigned points indicated a higher level of positive skills, attitudes, and experiences in the individual constructs. This recoding added five new variables with a total score for each of the four constructs (i.e., responsibility, motivation, study habits/skills, and coping with stress) plus a consideration of a literacy component which was created by using relevant questions taken from each of the four constructs. For a chart showing means and standard deviations for each of the constructs, see Table 6.



Table 6

*Means and Standard Deviations of Soft Skills Constructs*

Construct	<i>M</i>	<i>SD</i>	<i>N</i>
Responsibility	21.49	2.86	329
Motivation	28.93	3.48	297
Coping with stress	10.26	2.22	320
Study habits/skills	30.61	4.99	315
Literacy subset	23.86	4.46	320

To verify the reliability of the testing instrument (i.e., the 27 Likert-scaled questions) and then for each of the five constructs we used Cronbach's alpha. Cronbach's alpha measures the internal consistency of the items (Tavakol & Dennick, 2011). The same was done for the individual constructs (i.e., responsibility, coping with stress, study habits/skills, motivation, and a literacy subset). The resulting overall Cronbach's alpha for the 27 items was .725, a score reflecting acceptable internal consistency. A score above a level of .7 is considered acceptable in terms of reliability (Tavakol & Dennick, 2011). A person who scores highly on one question will presumably score highly on other questions within the same construct. Although the overall reliability of the measure was acceptable, the internal consistencies of the separate constructs were not as high as we want to see. The Cronbach's alpha for responsibility (6 items) was .541, for coping with stress (3 items) was .441, for study habits/skills (9 items) was .724, for motivation (8 items) was .379, and for literacy (7 items) was .709, respectively. These low alpha values were understandable considering the number of items in each construct. The coping with stress construct had an original Cronbach's alpha of .154 (with the addition of item # 40), but that question was an "error" question because 27 students wrote in an answer that claimed they "didn't take exams" or they were "exempt from exams." In addition, some of those same students who wrote in their answers also chose the response "I didn't study for finals," so their answers made the question not mutually exclusive and exhaustive. The answer choice included students who did not study because they were *not* taking exams and students who did not study and *did* take exams. After running the analysis, Cronbach's alpha for the coping with stress construct changed to .441, so the item (# 40) was removed from the construct. The internal consistencies of some of the constructs are

too low to be considered reliable. It may be because of the small number of items in each construct. Cronbach's alpha is very sensitive to the number of items in the measure and tends to decrease as the number of items in a measure decrease (Tavakol & Dennick, 2011). The scores for internal consistency for all the constructs can be seen in Table 7.

Table 7

*Definition of Variables and Sample item*

Variable	Sample Item	No. of Items	Cronbach's $\alpha$
RES	Lowest acceptable grade	6	.54
MOT	Highest intended degree	8	.38
STRS	Common emotional response	3	.44
STD	Reading comprehension ability	9	.72
LIT	Perceived writing ability	7	.71
<b>TOTLIK</b>	<b>TOTAL SOFT SKILLS ITEMS</b>	<b>27</b>	<b>.73</b>

## Correlations

Once the reliability of the instrument was validated, correlations were computed between all nine variables including high school GPA, highest single date ACT score, responsibility construct, motivation construct, coping with stress construct, study habits and skills construct, literacy construct, university term GPA, and the total soft skills construct. Correlational analyses were conducted to examine the construct validity of the instrument as well as the relationship between a student's soft skills (in general and with individual constructs) and the student's first semester college GPA. The total score of the soft skills measure was correlated with both HS GPA,  $r(248) = .28, p < .01$  and ACT ( $r(249) = .17, p < .01$ ), demonstrating that the soft skills measure is likely tapping into some of the same skills as other measures highly regarded as estimating college readiness showing some construct validity. These results provide some evidence of construct validity for the soft skills measure. Correlations were also used to examine the relationship between high school GPA, ACT scores, and university term GPA. As demonstrated in many studies, a student's ACT score has been shown to be correlated with his or her first semester college GPA (ACT, 2011; "ACT Profile," 2010; Allen & Sconing, 2005; Olson, 2006; Marklein, 2007; Sawyer, 2010; Stehlick, 2010). Not surprisingly, the results in this study also showed that ACT score was correlated with first semester college GPA,  $r(332) = .31, p < .01$ . The results showed that high school GPA is correlated with a student's general soft skills,  $r(248) = .28, p < .01$ , but high school GPA is also correlated with first term college GPA,  $r(331) = .51, p < .01$ , and ACT score,  $r(331) = .37, p < .01$ .

In the next set of analyses, we attempted to discover what variance a person's soft skills contributes to his or her first semester GPA in college. And, if soft skills do contribute variance in a person's first semester college GPA, which specific areas (constructs) appear to hold the most weight. Initially, the relationship between first semester college GPA and total soft skills was examined. First semester college GPA was highly correlated with a person's general soft skills,  $r(249) = .26, p < .01$ . As far as the specific constructs are concerned, first semester college GPA was the most highly correlated with responsibility,  $r(327) = .25, p < .01$ . There was also a correlation between first term college GPA and motivation,  $r(295) = .24, p < .01$ , and first term college GPA and study habits/skills,  $r(313) = .20, p < .01$ . There was no significant correlation between first term GPA and coping with stress. In general terms, the correlational analyses supported what this study attempted to reinforce; that soft skills have a significant relationship and impact on first semester college GPA. For a complete table of the correlations, see Table 8. For a table of correlations with first term college GPA, ACT, GPA, and soft skills, see Table 9.

Table 8

*Intercorrelations for First Term College GPA and Eight Other Variables*

Measure	1	2	3	4	5	6	7	8	9
1. HS GPA	—								
2. ACT	.366**	—							
3. TERM GPA	.513**	.310**	—						
4. RES	.317**	-.067	.246**	—					
5. MOT	.269**	.049	.237**	.366**	—				
6. STRS	-.125*	.032	.018	.017	.093	—			
7. STUD	.228**	.414**	.200**	.346**	.347**	.190**	—		
8. LIT	.114*	.333**	.108	.270**	.269**	.319**	.895**	—	
9. TOTLIK	.280**	.171**	.256**	.665**	.703**	.325**	.794**	.721**	—

\*\*Correlation is significant at the 0.01 level

\* Correlation is significant at the 0.05 level

Table 9

*Intercorrelations for First Term College GPA, ACT, HS GPA, and Soft Skills*

Measure	1	2	3	4
1. HS GPA	—			
2. ACT	.366**	—		
3. Term GPA	.513**	.310**	—	
4. TOTLIK	.280**	.171**	.256**	—

\*\*Correlation is significant at the 0.01 level



## Multiple Linear Regression

Next, a multiple linear regression was established to determine if students' first term college GPA could be predicted by the soft skills survey. The researcher hoped to determine if the soft skills survey could predict variance above and beyond the traditional methods (i.e., ACT and HS GPA) used to predict college success. First, we conducted a regression analysis to determine how much variance ACT score and high school GPA accounted for in first term college GPA. High school GPA and highest single date ACT score were entered first (Model 1) and then the soft skills score was added (Model 2). The first analysis showed that high school GPA and ACT score accounted for over 25.0% of the variance in first term college GPA. The total amount of variance increased from 25.6% to 26.8% when the soft skills score was added. The change in *R*-squared was a significant increase of 1.2%. This showed that the soft skills measure accounted for 1.2% more of the variance in first term college GPA than ACT score and high school GPA. The complete model summary can be seen in Table 10.

Table 10

*Regression Analysis Summary for Variables Predicting First Semester College GPA*

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate	R-Square Change	F Change	df1	df2	Sig F Change
1	.506 <sup>a</sup>	.256	.250	.865209	.256	42.565	2	247	.000
2	.518	.268	.259	.860043	.012	3.976	1	246	.047

a. Predictors: (Constant), HS GPA, Best ACT Comp

b. Predictors: (Constant), HS GPA, Best ACT Comp, TOTLIK

c. Dependent Variable: TERM GPA

## **CHAPTER V: Discussion**

In the twenty-first century, earning a college degree or certification has become not just a suggestion for creating a better way of life for an individual, but a necessity. Most students who graduate from high school are interested in continuing their education in college or choose to pursue some other type of post-secondary education; however, fewer than half of those who actually enter college will ever graduate with a degree (Kuh, et al., 2006). While the reasons for leaving college before completing a degree involve many facets, one of the biggest reasons for dropping out is often a lack of physical, mental, and/or academic preparation. Current measures used by colleges to determine a student's readiness for post-secondary education involve ACT score and high school GPA. Much research has shown the value of using these two measures when choosing incoming students at the university level; however, since more than half of students will eventually drop out of school before earning a degree, there appears to be something missing in current college readiness measures.

Many students have high GPA's and high ACT scores, but then still leave college without a degree. Many contributing factors have been suggested to explain the discrepancy between being a high school graduate and being college ready. Some of the suggested reasons for this gap include grade inflation (in high school), the push for a high graduation rate, the obsession with standardized tests, and a lack of "soft" skills in high school graduates, such as responsibility, motivation, study habits/skills, and coping with stress (Barrilleaux, 1972; Casillas, Robbins, & Langley, 2005; Johnson & Rochkind, 2009; Pickhardt, 2009; Troutman, 1977). This study explored the "soft" skills explanation and attempted to determine if a person's skills in or attitude towards responsibility,

motivation, study habits/skills, and/or coping with stress had an impact on his or her first term college GPA. After surveying and gathering data on 334 new freshmen at a large university in Tennessee, the data were analyzed and examined to determine if and how much variance a person's soft skills had in terms of predicting first term college GPA. The purpose of this study was to answer the following questions: 1) Are the items on the soft skills survey valid and reliable? 2) Do soft skills add to high school GPA and ACT in terms of predicting first semester college GPA? 3) Which soft skills are the strongest predictors of college GPA?

**Research Question 1:**

Are the items on the measuring device (soft skills survey) reliable and valid? The purpose of the survey was to determine the level of a person's soft skills. Numerous studies have provided evidence that ACT and GPA predict college academic success; however, since more than half of these students eventually drop out of school before completing a degree, the researcher proposed the idea that a lack of "soft" skills accounted for the discrepancy between high school success and college success. The skills needed to be successful in college go far beyond academic measures. Researchers have noted that non-academic skills are important to college success including independent work, time management, dependability, attention to quality, self-discipline, self-regulated learning, teacher/student dynamics, attendance, motivation, determination, work ethic, commitment, academic goals, career goals, social influences/support, a strong academic background, critical thinking, problem solving, inquisitiveness, self-advocacy, standards/expectations, communication skills, adjusting to college life, sleep deprivation,

procrastination, financial concerns, loneliness, independence/living alone, nutrition or health, and emotional control. Once a student reaches college, the expectations are far greater than when he or she is in high school, and the ability to reach those expectations comes from behavior and habits as much as it does academic ability. These non-academic skills can be thought to fit within four constructs: responsibility, motivation, study habits/skills, and coping with stress. The questions on the survey were asked in Likert-scale format to assign a score to each participant for each of the constructs as well as to determine an overall score. For the instrument to be reliable, a person who scored high in one of the individual constructs would probably score high in the other constructs as well as in the overall measurement of soft skills. To test the reliability of the instrument, we used Cronbach's alpha and obtained a score of .73, demonstrating the survey items were reliable.

### **Research Question 2:**

Do soft skills add to high school GPA and ACT in terms of predicting first semester college GPA? The regression analysis models demonstrated that ACT and high school GPA account for 25% of the variance in first term college GPA, and that our soft skills measurement added to the variance. This finding confirms the general belief among researchers that college readiness consists of many components and is not limited solely to academic measures. To answer the question if soft skills add to the predictive power of first term college GPA, correlations were run to see where the relationships lay. Not surprisingly, first term college GPA was most highly correlated with high school GPA. Many studies have shown that GPA is a clear predictor of behavior and habits more

than it is of academic skill level (Sawyer, 2010), and in this participant sample it is no different. First term college GPA was also highly correlated with ACT score, adding support to the national standard of  $ACT + HS\ GPA = College\ Ready$ . In addition, first term GPA was highly correlated with a person's total soft skills score (all four constructs). As far as which soft skills were the strongest predictors of first term college GPA, responsibility was first, followed by motivation and then study habits/skills. First term college GPA was not correlated with coping with stress. This finding could be because of the limitations with the coping with stress construct, or because these students were only six weeks into their college experiences and stressors were not a factor yet. All of these relationships between first term college GPA and all of the other variables confirm what many researchers consistently report: that college readiness is a multi-faceted formula that cannot be limited to only academic measures (ACT, 2007; Hooker and Brand, 2010; Robbins et al., 2004; Schulz, 2008). Being college ready not only involves the necessary academic skills, it also involves *using* those skills in a successful and appropriate way in order to earn a college degree. Being responsible, managing your time, studying efficiently, seeking help when needed, solving problems, communicating with others, and having a plan or goal are all necessary pieces to the true definition of college readiness. These skills go above and beyond having the academic knowledge to successfully complete college coursework. So based on the results of the correlation analysis, there is a clear relationship between first term college GPA and all of these non-academic skills.

**Research Question 3:**

Which items (soft skills) are the strongest predictors of college GPA? When determining which of the constructs has the strongest relationship with first term college GPA, we again looked at the correlations table to determine where the strongest correlations lay. Of the four constructs, responsibility appears to be the strongest predictor of GPA. This is not surprising considering the effect independent work, time management, dependability, attention to quality, self-discipline, self-regulated learning, teacher/student dynamics, and attendance have on academic performance and achievement. This is supported in much of the literature reviewed (see Celio & Sedlacek, 1976; Dey, 2008; Gambill et al., 2008; Pickhardt, 2009; Gerken & Volkwein, 2000; Le et al., 2005; Noel-Levitz, 2007; Paschke, 1981; Romano, 1982; Schwalb & Sedlacek, 1988; Willner, 1974; Wolfe, 2009). In addition, responsibility overlaps all of the constructs; a person motivated to earn a degree will be responsible enough to find time to study, turn in quality work, and seek assistance when needed. Someone with strong study habits and skills is often responsible enough to read and study outside of class (time management) as well as take notes or review to learn/retain the information. Being responsible is a necessary piece to the college readiness equation, and while intelligence is also a necessary attribute, one could argue that responsibility may be *the* key to academic and personal success. While academic skills may be present, the knowledge of how to use those skills appropriately and adequately must also exist.

In addition, the lack of responsibility in adolescents can be attributed to many facets. While society blames lowered high school expectations, this is only a part of the overall picture of responsibility. Students need to be taught responsibility at home as

well as school, so that these skills are reinforced in all areas of their lives. Many colleges have orientation courses available in reading, writing, study skills, university resources, and math; however, maybe an orientation course in responsibility could better prepare students for the expectations placed on them once they begin their college experience. Most students know what it means to be responsible, but clearly, few have been forced to adhere to expectations and be held accountable when they fail to do so.

### **Limitations**

As with all studies done at a single location, there is of course a limitation of generalizing to another population. All of the participants were incoming freshmen at one university in Tennessee, and although the population was somewhat diverse, geographic, socioeconomic, and multicultural limitations may have affected the results. In addition, some of the population was surveyed at a different time. The first administration of the surveys resulted in 287 useable responses. Because we were trying to reach 341 participants to accurately represent the university freshmen population, we administered an additional 100 surveys approximately 6 weeks later. This is where we obtained the additional 47 surveys, resulting in a participant size of 334. Research shows (as reported earlier) that the initial 6-8 weeks of college require the most adjustment for incoming students, and because the second cohort of students had been in college an additional 6 weeks, this may have affected their responses to certain questions. Another limitation with the sample of participants is the fact that we compared their soft skills score to their first term college GPA. Many studies show that the biggest attrition occurs between the first and second years of college (Araas, 2008; Brougham, Zail, Mendoza, & Miller,



2009; Earnest & Dwyer, 2010; Forbus, Newbold, & Mehta, 2011; Mahmoud, 2011), so using their first term GPA as the dependent variable may not be the best predictor of college success or degree attainment.

A common limitation with survey research is response rate. As stated earlier, the response rate for this study was 66.8%. This is close to the average response rate for face-to-face survey administration which is 70% (Weisberg, Krosnick, & Bowen, 1996), so non-response in this survey was not alarming. According to Weisberg et al., researchers hope that people who refuse to respond do not differ much from those who do respond, other than being less cooperative. The higher the refusal rate, the more important it is to discover if the refusals belong to a specific group or occur for a specific reason (1996). This did not appear to be the case for the current study, however, the non-responders in any survey study affect final results (Weisberg et al., 1996).

Another limitation with the soft skills constructs was the coping with stress construct. This construct only had 4 questions where the others had 6 or more. One of those 4 questions was greatly affecting the reliability of the construct and was removed. This raised the reliability of the construct from .15 to .44. There was a problem with the question as well as the responses (see explanation on p. 84). Because this construct had only 3 questions, its ability to accurately measure stress was probably affected. The analysis did not identify the coping with stress variable as a scaled variable as it did the other four constructs (including the literacy component). Adding more questions to the construct may improve the coping and stress construct. The construct needs more questions measuring the stress a college student encounters. This construct was also weak because most of the students claimed stress had no effect on them. This was the first six

weeks of their college experiences, so the stresses of college academics may or may not have affected them yet.

Another limitation was using survey data for regression. Since survey data is not interval data, there is no way to know if the differences between one level of responses is of equal distance from the next level of response. According to Fields (2005), choosing variables for regression is a complex task, specifically because the ways in which they are entered can greatly impact outcome. Assigning a certain amount of points to certain responses (weighting) is never exact, and that is always a limitation in survey data (Fields, 2005).

The way in which the literacy component was constructed is another limitation to the study because this construct was not independent. The items were pulled from each of the four primary constructs. This created high levels of correlation between literacy and the other variables, including the total soft skills score. Because the literacy component pulled 4 of its 7 questions from the study/habits and skills construct (as seen by a correlation of .90), these constructs could be adjusted and combined to create one study skills/literacy construct. One interesting note is that item #50 asked students about their perceived literacy skills (reading, writing, speaking, spelling, comprehension) and 91% ( $n = 305$ ) believed they had average-or-better skills in all of these areas. This seems to contradict their measured academic achievement as 54% ( $n = 180$ ) of the participants had an ACT score of 21 or under, when 21 is just hitting the benchmark for ACT standards (ACT, 2010, ACT 2011, ACT 2005, ACT 2009, ACT 2008).

## **Future Research**

One of the biggest implications for future research is following this group of students throughout their college careers. Using the current results from the soft skills survey and considering the participants' grades at the completion of each year will allow us to consider if ACT, HS GPA, and the survey increase their predictive utility as students progress through college as other studies have indicated (Robbins et al., 2004). Likewise, the survey may help predict which are likely to obtain a degree and which students are likely to drop out of college before completing a degree. Because research has shown that ACT and high school GPA contribute to close to 68% of the variance in college GPA (Robbins et al., 2004) and the results from this study showed that they only contribute 25% on the variance, the probability that the variance increases as students continue in school is likely. Although the 1.2% increase we saw may not have practical significance, over time the utility/predictability may increase. That, in addition to changing the instrument, will hopefully increase its utility. The variance contributed by soft skills may increase as a student continues academic progress towards a college degree. Ideally, we will follow this group of students for 5 years to see if the soft skills measurement is not only a predictor of college GPA, but also of degree attainment.

In addition, a factor analysis should be used to determine the validity of the constructs. This would tell us whether or not the questions within each construct are measuring what they are intended to measure. Measuring soft skills is a difficult task, and because these characteristics are mostly intrinsic, there is much overlap between questions and constructs. For the individual constructs to be valid, items cover the range of skills and attitudes that fall within that construct, but should also be distinct from the

other constructs. For example, the question about the education of a person's parents could fall under the motivation construct (studies show that children of educated parents are more motivated to succeed) as well as the responsibility construct (studies also show that children of educated parents are more academically responsible). For the constructs in this survey instrument to be valid, they must contain items that are exhaustive and exclusive (Thayer-Hart, 2010). Ensuring the constructs each contain items that measure that particular skill (i.e. responsibility, motivation, study habits/skills, and coping with stress) will provide researchers a clearer picture of which areas have the most impact on college GPA and possibly degree attainment.

## **Conclusion**

Ultimately the goal is to increase the graduation rates in post-secondary institutions, and this will only be possible if we can discover, identify, and remediate potential factors that contribute to attrition. The goal of adding a soft skills measurement to current college readiness formulas is to hopefully bridge the gap between high school graduation, college enrollment, and degree attainment. Another possibility is to have either high school seniors take the survey at the end of their high school education or to have college freshmen take the survey upon admissions to immediately identify weaknesses in areas that affect college success. If we can identify patterns of answers for students who end up leaving college either in the first year or before they obtain degrees, we can possibly point these young adults in the right direction or provide support to remove those road blocks from their future success. Clearly there can be no doubt to the value of soft skills like having responsibility, being motivated, coping with stress, and

studying efficiently. Enhancement of these skills, in addition to quantitative academic measurements such as ACT and GPA, will increase the potential for a more well-rounded, prepared college graduate. This, in turn, will enable these college graduates to be successful, contributing members of society, armed not only with the academic skills needed to understand a job, but also with all the soft skills needed to perform the job successfully.

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## **APPENDICES**

**APPENDIX A**

## Soft Skills Survey (original)

NAME \_\_\_\_\_

MTSU M# \_\_\_\_\_

## 1.) AGE

- a.) 18-20
- b.) 21-25
- c.) 26 and older

## 2.) GENDER

- a.) Male
- b.) Female

## 3.) ETHNICITY

- a.) Asian/Pacific Islander
- b.) Hispanic
- c.) African-American
- d.) Caucasian
- e.) Native American
- f.) Other

## 4.) I GRADUATED FROM HIGH SCHOOL:

- a.) Within the last 6 months
- b.) Within the last 12 months
- c.) More than 1 year ago

## \*5.) LEVEL OF CLASSES TAKEN IN HIGH SCHOOL

- a.) Resource/Special Education courses
- b.) Resource/Special Education courses and standard courses
- c.) Standard courses
- d.) Some standard and some honors/AP courses
- e.) Mostly honors/AP courses

## \*6.) HIGH SCHOOL GRADE POINT AVERAGE (GPA) UPON GRADUATION

- a.) 1.0-2.0
- b.) 2.01-2.5
- c.) 2.51-3.0
- d.) 3.01-3.5
- e.) 3.51-4.0
- f.) 4.0 or above

\*7.) HIGHEST LEVEL OF EDUCATION ACHIEVED BY FATHER

- a.) Less than a high school diploma
- b.) High school diploma
- c.) Some college (no degree)
- d.) College degree (associate's, bachelor's, certificate)
- e.) Graduate degree (master's, doctorate, law school, medical degree)
- f.) I don't know

\*8.) HIGHEST LEVEL OF EDUCATION ACHIEVED BY MOTHER

- a.) Less than a high school diploma
- b.) High school diploma
- c.) Some college (no degree)
- d.) College degree (associate's, bachelor's, certificate)
- e.) Graduate degree (master's, doctorate, law school)
- f.) I don't know

\*9.) HIGHEST ACT CUMULATIVE SCORE

- a.) 17 or under
- b.) 18-21
- c.) 22-25
- d.) 26-30
- e.) 31 or higher
- f.) I took the SAT, not ACT

10.) What is your greatest concern about adjusting from high school to college life?

- a.) Time management
- b.) Studying efficiently
- c.) Financial security
- d.) Degree completion
- e.) Choosing a career

11.) When it comes to completing a degree, my biggest concern is:

- a.) That I am not prepared to succeed academically
- b.) Choosing the right degree/program
- c.) Earning a degree in four years
- d.) Being motivated to earn good grades
- e.) I have no concerns about completing a degree

- \*12.) How would you rate your parents'/guardians' involvement in your high school career?
- a.) My parents/guardians were never involved in my high school career
  - b.) My parents/guardians were rarely involved in my high school career
  - c.) My parents/guardians were somewhat involved in my high school career
  - d.) My parents/guardians were involved in most aspects of my high school career
  - e.) My parents/guardians were involved in ALL aspects of my high school career
- 13.) What extracurricular activities were you involved in during your high school career?
- a.) I was involved in athletics
  - b.) I was involved in academic clubs
  - c.) I was involved in band/dance/arts
  - d.) I was involved in more than one of these areas
  - e.) I wasn't involved in any extracurricular activities
- \*14.) Do you feel as though your overall high school experience (academic and social) prepared you to be successful (earn a college degree) at the college level?
- a.) No, my high school experience didn't at all prepare me
  - b.) Not really, my high school experience didn't fully prepare me
  - c.) Somewhat, my high school experience partially prepared me
  - d.) Mostly, my high school experience prepared me
  - e.) Yes, my high school experience fully prepared me
- 15.) What was the biggest reason for choosing MTSU to continue your education?
- a.) MTSU has the degree program for the career I desire to achieve
  - b.) MTSU is the only college I was applied to get into
  - c.) Many of my friends and family attend MTSU
  - d.) MTSU is the most convenient to where I work/live
  - e.) MTSU is a the most financially affordable school where I was accepted
  - f.) My parents/relatives are MTSU alumni
- \*16.) Concerning my teachers in high school, what was the approach to classes/school work?
- a.) All of my teachers accepted late work, let students redo work, and helped students pass their classes
  - b.) Most of my teachers (all but 1-2) accepted late work, let students redo work, and helped students pass their classes
  - c.) A few of my teachers (3-4) accepted late work, let students redo work, and helped students pass their classes
  - d.) Only 1-2 of my teachers accepted late work, let students redo work, and helped students pass their classes
  - e.) All of my teachers were strict, late work wasn't accepted, and less than excellent work was not allowed to be redone

- \*17.) Which of these describes your relationship/experiences with the counselors in your high school?
- a.) There were counselors in my school?
  - b.) I never had any experiences with the counselors in my high school, good or bad
  - f.) I usually felt like I was just another face in the crowd
  - g.) They tried to help me, but I didn't really make an effort to use their expertise
  - h.) They really made an effort to get to know me and help me make the right decisions
- 18.) My goal/purpose for enrolling in post-secondary education is:
- a.) My career/position desired requires a degree/certificate
  - b.) To become a more well-rounded, educated person
  - c.) To earn a higher paying job/position
  - d.) Because my parents/guardians expect me to go
  - e.) I have no goal/purpose for enrolling in post-secondary education
- \*19.) What do you consider an acceptable grade for any given course?
- a.) Doesn't matter, as long as I pass
  - b.) D
  - c.) C
  - d.) B
  - e.) A
- \*20.) What is the highest degree you intend to earn?
- a.) I don't plan on or I don't know if I'm going to earn a degree
  - b.) Associates Degree
  - c.) Bachelor's Degree
  - d.) Master's Degree
  - e.) Ph.D., Medical Degree, or Law degree
- 21.) What is your motivation for earning a college degree?
- a.) I seek a better life than the one my parents/guardians have achieved
  - b.) I want a higher paying job so I can take care of myself and my family
  - c.) All of my friends are going to college so I am going too
  - d.) The job I desire requires a specific degree/training
  - e.) I want to increase my education for personal gain
- \*22.) How important was academic achievement to your parents/guardians in high school?
- a.) Not important at all, my parents/guardians never checked my grades
  - b.) Not very important, my parents/guardians only expected me to pass
  - c.) Moderately important, my parents/guardians expected C's or better
  - d.) Very important, my parents/guardians didn't accept less than A's and B's
  - e.) Extremely important, my parents/guardians didn't accept anything less than A's

- \*23.) How important was academic achievement to you in high school?
- a.) Not important at all, I didn't really care if I passed or failed
  - b.) Not very important, I only expected to pass
  - c.) Moderately important, I expected C's or better
  - d.) Very important, I didn't accept anything less than A's or B's
  - e.) Extremely important, I didn't accept anything less than A's
- 24.) Based on your knowledge of your skills right now, what do you think the most likely reason might be for dropping out of college before obtaining a degree?
- a.) Accepting a good job offer
  - b.) To enter the military
  - c.) Cost more than I could afford
  - d.) Lack of academic skills/achievement
  - e.) Marriage/Family concerns
  - f.) Dissatisfaction with MTSU
  - g.) I don't see any reason not to finish my degree
- 25.) In high school, how would you describe HOW you studied for an upcoming test?
- a.) I studied using notecards or notes, memorizing information
  - b.) I studied with a friend, quizzing each other from notes or textbooks
  - c.) I studied with a tutor, teacher, or parent, getting help to better understand the information
  - d.) I rarely studied, mostly skimming the material in class right before the test
  - e.) I used more than one of these ways to study
- \*26.) My evaluation of my academic writing skills is:
- a.) I am a terrible writer, and completing papers/essays is always difficult for me
  - b.) I am a less-than-average writer, and completing papers/essays is sometimes difficult for me
  - c.) I am an average writer, and completing papers/essays is moderately easy for me
  - d.) I am a better-than-average writer, and completing papers/essay is mostly easy for me
  - e.) I am a great writer, and completing papers/essays is always easy for me
- \*27.) Presently, how often do you read for pleasure (reading outside of school)
- a.) I hate reading, and I rarely read anything at all
  - b.) I dislike reading, and I only read what is assigned for school/work
  - c.) I tolerate reading, and I read only what I am assigned, or short pieces in which I am interested
  - d.) I enjoy reading, and I read 1-3 books a year
  - e.) I love reading, and I read 4 or more books a year



\*28.) Presently, how often do you read for information or knowledge?

- a.) I hate reading, and I rarely read anything at all
- b.) I dislike reading, and I only read what is assigned for school/work
- c.) I tolerate reading, and I read only what I am assigned, or short pieces in which I am interested
- d.) I enjoy reading, and I look up information often
- e.) I am constantly looking up and reading information daily

\*29.) How would you rate your ability to read and comprehend what you read?

- a.) I am a terrible reader, and I rarely understand anything I read
- b.) I am a less-than-average reader, and I often don't understand what I am reading
- c.) I am an average reader, and I sometimes don't understand what I am reading
- d.) I am a good reader and I understand most everything I read
- e.) I am an excellent reader and I understand all that I read

30.) Presently, what is your weakest study skill?

- a.) Note taking
- b.) Staying focused in class
- c.) Managing time every day/week to study
- d.) Doing outside work (homework, extra assignments, assigned readings)
- e.) Staying caught up in classes (doing work on time)

31.) Academically, if you had to pick an area where you feel your high school did NOT prepare you for college, what would that area be?

- a.) Writing
- b.) Reading
- c.) Math
- d.) Science
- e.) Non-academic areas (critical thinking, responsibility, motivation)
- f.) My high school prepared me in all areas
- g.) My high school didn't prepare me in any of these areas

32.) In non-academic areas, if you had to pick an area where you feel your high school did NOT help you in terms of college, what would that area be?

- a.) Helping me choose the right college/university to attend
- b.) Taking the right courses in high school
- c.) Helping me with financial concerns (scholarships, grants, loans)
- d.) My high school helped me in all of these areas
- e.) My high school didn't help me in any of these areas

- \*33.) When it comes to the quality of the work/assignments you turned in (high school), how good was the work you turned in?
- a.) I did really poor work, rarely passing
  - b.) I did poor work, sometimes not passing
  - c.) I did acceptable work, rarely rechecking it or getting others to check it
  - d.) I did good work most of the time, getting it checked, earning A's and B's
  - e.) I made sure the work I turned in was excellent (checked by me, teachers, parent, friend)
- \*34.) How would you rate your attendance in high school?
- a.) I missed more than 20 days of school each year
  - b.) I missed 10-20 days of school each year
  - c.) I missed 5-10 days of school each year
  - d.) I missed less than 3-5 days of school each year
  - e.) I rarely missed school (2 days or less)
- \*35.) How much time did you spend studying in high school during the week?
- a.) I didn't study at all
  - b.) I rarely studied outside of school, less than 2 hours a week/
  - c.) I sometimes studied outside of school, 3-5 hours a week
  - d.) I often studied outside of school, 5-8 hours a week
  - e.) I always studied outside of school, more than 8 hours a week
- 36.) In high school, during the week of finals I spent the majority of my time outside of school:
- a.) Studying for my final exams by myself
  - b.) Studying for my final exams with a friend or in study groups
  - c.) On social networking sites (Twitter, 'Facebook, Personal Email, etc.)
  - d.) I studied using a combination of these strategies
  - e.) Getting extra help from the teacher or a tutor
  - f.) The tests were easy so I didn't study much at all
- 37.) If I'm faced with a course/teacher/assignment in college that I do not understand, my course of action involves:
- a.) Dropping the course and choosing an easier course
  - b.) Dropping the course and choosing the same course with a different professor
  - c.) Asking a classmate for assistance
  - d.) Meeting with the professor outside of class time to seek guidance
  - e.) Visiting a learning/tutoring lab to seek help from graduate assistants/other professors
  - f.) Remaining in the class, doing what I can, and "sink or swim"

- \*38.) How do you approach assigned readings for school/work?
- a.) I don't read what I am assigned to read
  - b.) I read very little (1/4) of what I am assigned to read
  - c.) I read some (half) of what I am assigned to read
  - d.) I read most (3/4) of the things I am assigned to read
  - e.) I always read what I am assigned to read
- \*39.) How would you rate yourself in terms of TIME MANAGEMENT (preparing for exams, completing homework, getting enough sleep, etc.) during high school?
- a.) I never did my work on time and I never studied for tests
  - b.) I rarely did my work on time and I rarely studied for tests (1/4 of the time)
  - c.) I did my work on time most of the time, sometimes turning in work late and sometimes not studying for tests (half the time)
  - d.) I did my work on time, turning in assignments when they were due and studying the night before tests
  - e.) I did my work in advance, often turning in assignments early and studying for tests days in advance
- \*40.) During finals week of your senior year of high school, how much time did you spend studying?
- a.) I never studied
  - b.) I only studied once or twice a week
  - c.) I studied every other night for an hour or more
  - d.) I studied an hour or less every night
  - e.) I studied more than an hour every night
- \*41.) Presently, which of these descriptions best describes how you act during a class?
- a.) I never pay attention during class
  - b.) I rarely pay attention during class, often daydreaming, texting, or doing something else
  - c.) I somewhat pay attention in class, taking limited notes and seeking help from others later
  - d.) I pay attention during class, taking notes and studying before a test
  - e.) I pay close attention during class, taking good notes and then reviewing them later
- 42.) When it comes to financial concerns, I am MOSTLY worried about:
- a.) How to pay for my education
  - b.) How to pay my personal bills
  - c.) How to pay back my student loans
  - d.) How to support my children/family
  - e.) I don't have financial concerns

- 43.) When stressed about academics/college success, do you participate in:
- a.) Substance abuse (alcohol, drugs, pills)
  - b.) Poor nutrition (eating habits)
  - c.) Physical inactivity (no exercise)
  - d.) Lack of sleep/rest
  - e.) None of the above (stress doesn't affect me)
- \*44.) Does living independently of your parents/guardians in college concern you?
- a.) I am afraid of feeling lonely and not making new friends
  - b.) I am somewhat nervous about meeting new people and feeling lonely
  - c.) I am not really nervous about making new friends or feeling lonely
  - d.) I am mostly excited about meeting new friends and I don't believe I will feel lonely
  - e.) I am excited about living on my own and I make new friends easily
- 45.) When it comes to stress about life (school, money, relationships), how do you respond?
- a.) Stress affects my nutrition, and I make poor food choices and overeat or don't eat enough
  - b.) Stress affects my sleep, and I either sleep too much or not enough
  - c.) Stress has a positive effect on me, and I use exercise as an outlet
  - d.) Stress brings out the best in me, and I thrive under pressure and deadlines
  - e.) Stress has no effect on me, positive or negative
- \*46.) What is your most common emotional response to stress about academics?
- a.) I do not handle stress well and I respond negatively
  - b.) I rarely handle stress well, and I often respond negatively
  - c.) I sometimes cannot handle stress, and I sometimes respond negatively
  - d.) I rarely struggle with handling stress, and I respond positively
  - e.) I don't ever feel stressed
- 47.) When it comes to financial concerns, I am MOSTLY worried about:
- a.) How to pay for my education
  - b.) How to pay my personal bills
  - c.) How to pay back my student loans
  - d.) How to support my children/family
  - e.) I don't have financial concerns
- \*48.) To what extent would you say you are motivated and determined to complete your college degree?
- a.) I am not at all motivated and determined to complete my degree
  - b.) I am only a little bit motivated and determined to complete my degree
  - c.) I am motivated and determined to complete my degree, although I am not sure I can
  - d.) I am motivated and determined to complete my degree, and I'm pretty sure I will
  - e.) I am motivated and determined to complete my degree, and I am certain I will

- \*49.) How do you feel about speaking in front of a group of people?
- a.) I do not like speaking in front of people and when I try, I can't
  - b.) I do not like speaking in front of people and when I try, I really struggle
  - c.) I do not like speaking in front of people, but I can with practice and note cards
  - d.) I don't mind speaking in front of people, and I can with practice and note cards
  - e.) I like speaking in front of people, and I can do so often without practice or notes
- 50.) Are you taking any prescribed (remedial) coursework at MTSU?
- a.) Yes, I'm enrolled in remedial math and reading/English courses
  - b.) Yes, I'm enrolled in a remedial reading/English course
  - c.) Yes, I'm enrolled in a remedial math course
  - d.) Yes, I'm enrolled in another remedial course (other than math or English)
  - e.) No, I'm not enrolled in any remedial courses
  - f.) I'm not sure
- \*51.) How would you currently rate your overall literacy skills? (reading, writing, speaking, spelling, comprehension)?
- a.) I have very weak literacy skills
  - b.) I have moderately weak literacy skills
  - c.) I have average literacy skills
  - d.) I have pretty strong literacy skills
  - e.) I have extremely strong literacy skills

## **APPENDIX B**

### **Instructions and Soft Skills Survey**

#### **SOFT SKILLS STUDY (recoded)**

##### **Title of Study**

Predicting college students' first year success: should 'soft skills' be taken into consideration to more accurately predict the retention and academic achievement of college freshmen?

##### **Abstract**

Due to the current state of college dropouts, with over 57% of college freshmen leaving during their first year, it is important that research is conducted to determine the causes of and possible solutions for such a high percentage of college dropouts. The purpose of this study is to determine if non-academic skills (i.e. responsibility, study habits and skills, motivation, and coping with stress) are significant predictors of first semester college GPA. The researcher hopes to determine if current college readiness decisions should include information about non-academic or soft skills in addition to high school GPA and ACT scores.

##### **Description of Study**

This is a survey study. The survey asks 51 multiple choice questions about non-academic skills such as responsibility, study habits, motivation, and coping with stress that may impact college success. These skills are labeled as 'soft skills.' This study should take no longer than 30 minutes to complete. The current study is safe and confidential, because once survey results are linked with the appropriate academic information, all identifying information will be removed to protect the participants.

##### **Directions**

Once you have signed the informed consent, you may take the following survey. Please take your time to answer each question. Please answer all questions as honestly as possible. If any questions make you feel uncomfortable, feel free to skip them. Thank you for your time and help with this research study.

## SOFT SKILLS SURVEY (recoded)

NAME \_\_\_\_\_

MTSU M# \_\_\_\_\_

- 1.) AGE
  - a.) 18-20
  - b.) 21-25
  - c.) 26 and older
- 2.) GENDER
  - a.) Male
  - b.) Female
- 3.) ETHNICITY
  - a.) Asian/Pacific Islander
  - b.) Hispanic
  - c.) African-American
  - d.) Caucasian
  - e.) Native American
  - f.) Other
- 4.) I GRADUATED FROM HIGH SCHOOL:
  - a.) Within the last 6 months
  - b.) Within the last 12 months
  - c.) More than 1 year ago
- 5.) LEVEL OF CLASSES TAKEN IN HIGH SCHOOL
  - a.) Resource/Special Education courses
  - b.) Resource/Special Education courses and standard courses
  - c.) Standard courses
  - d.) Some standard and some honors/AP courses
  - e.) Mostly honors/AP courses
- 6.) HIGH SCHOOL GRADE POINT AVERAGE (GPA) UPON GRADUATION
  - a.) 1.0-2.0
  - b.) 2.01-2.5
  - c.) 2.51-3.0
  - d.) 3.01-3.5
  - e.) 3.51-4.0
  - f.) 4.01 or above
- 7.) HIGHEST LEVEL OF EDUCATION ACHIEVED BY FATHER
  - a.) Less than a high school diploma
  - b.) High school diploma
  - c.) Some college (no degree)
  - d.) College degree (associate's, bachelor's, certificate)
  - e.) Graduate degree (master's, doctorate, law school, medical degree)
  - f.) I don't know

## 8.) HIGHEST LEVEL OF EDUCATION ACHIEVED BY MOTHER

- a.) Less than a high school diploma
- b.) High school diploma
- c.) Some college (no degree)
- d.) College degree (associate's, bachelor's, certificate)
- e.) Graduate degree (master's, doctorate, law school)
- f.) I don't know

## 9.) HIGHEST ACT CUMULATIVE SCORE

- a.) 17 or under
- b.) 18-21
- c.) 22-25
- d.) 26-30
- e.) 31 or higher
- f.) I took the SAT, not ACT

## 10.) What is your greatest concern about adjusting from high school to college life?

- a.) Time management
- b.) Studying efficiently
- c.) Financial security
- d.) Degree completion
- e.) Choosing a career
- f.) Two or more concerns

## 11.) When it comes to completing a degree, my biggest concern is:

- a.) That I am not prepared to succeed academically
- b.) Choosing the right degree/program
- c.) Earning a degree in four years
- d.) Being motivated to earn good grades
- e.) I have no concerns about completing a degree
- f.) Two or more of these concerns

## 12.) How would you rate your parents'/guardians' involvement in your high school career?

- a.) My parents/guardians were never involved in my high school career
- b.) My parents/guardians were rarely involved in my high school career
- c.) My parents/guardians were somewhat involved in my high school career
- d.) My parents/guardians were involved in most aspects of my high school career
- e.) My parents/guardians were involved in ALL aspects of my high school career

## 13.) What extracurricular activities were you involved in during your high school career?

- a.) I was involved in athletics
- b.) I was involved in academic clubs
- c.) I was involved in band/dance/arts
- d.) I was involved in more than one of these areas
- e.) I wasn't involved in any extracurricular activities

## 14.) Do you feel as though your overall high school experience (academic and social) prepared you to be successful (earn a college degree) at the college level?

- a.) No, my high school experience didn't at all prepare me
- b.) Not really, my high school experience didn't fully prepare me
- c.) Somewhat, my high school experience partially prepared me
- d.) Mostly, my high school experience prepared me
- e.) Yes, my high school experience fully prepared me



- 15.) What was the biggest reason for choosing MTSU to continue your education?
- a.) MTSU has the degree program for the career I desire to achieve
  - b.) MTSU is the only college I was applied to get into
  - c.) Many of my friends and family attend MTSU
  - d.) MTSU is the most convenient to where I work/live
  - e.) MTSU is a the most financially affordable school where I was accepted
  - f.) My parents/relatives are MTSU alumni
  - g.) Two or more of these reasons
- 16.) Concerning my teachers in high school, what was the approach to classes/school work?
- a.) All of my teachers accepted late work, let students redo work, and helped students pass their classes
  - b.) Most of my teachers (all but 1-2) accepted late work, let students redo work, and helped students pass their classes
  - c.) A few of my teachers (3-4) accepted late work, let students redo work, and helped students pass their classes
  - d.) Only 1-2 of my teachers accepted late work, let students redo work, and helped students pass their classes
  - e.) All of my teachers were strict, late work wasn't accepted, and less than excellent work was not allowed to be redone
- 17.) Which of these describes your relationship/experiences with the counselors in your high school?
- a.) There were counselors in my school?
  - b.) I never had any experiences with the counselors in my high school, good or bad
  - c.) I usually felt like I was just another face in the crowd
  - d.) They tried to help me, but I didn't really make an effort to use their expertise
  - e.) They really made an effort to get to know me and help me make the right decisions
- 18.) My goal/purpose for enrolling in post-secondary education is:
- a.) My career/position desired requires a degree/certificate
  - b.) To become a more well-rounded, educated person
  - c.) To earn a higher paying job/position
  - d.) Because my parents/guardians expect me to go
  - e.) I have no goal/purpose for enrolling in post-secondary education
  - f.) Two or more of these reasons
- 19.) What do you consider the lowest acceptable grade for any given course?
- a.) Doesn't matter, as long as I pass
  - b.) D
  - c.) C
  - d.) B
  - e.) A
- 20.) What is the highest degree you intend to earn?
- a.) I don't plan on or I don't know if I'm going to earn a degree
  - b.) Associates Degree
  - c.) Bachelor's Degree
  - d.) Master's Degree
  - e.) Ph.D., Medical Degree, or Law degree

- 21.) What is your motivation for earning a college degree?
- a.) I seek a better life than the one my parents/guardians have achieved
  - b.) I want a higher paying job so I can take care of myself and my family
  - c.) All of my friends are going to college so I am going too
  - d.) The job I desire requires a specific degree/training
  - e.) I want to increase my education for personal gain
  - f.) Two or more of these motivate me
- 22.) How important was academic achievement to your parents/guardians in high school?
- a.) Not important at all, my parents/guardians never checked my grades
  - b.) Not very important, my parents/guardians only expected me to pass
  - c.) Moderately important, my parents/guardians expected C's or better
  - d.) Very important, my parents/guardians didn't accept less than A's and B's
  - e.) Extremely important, my parents/guardians didn't accept anything less than A's
- 23.) How important was academic achievement to you in high school?
- a.) Not important at all, I didn't really care if I passed or failed
  - b.) Not very important, I only expected to pass
  - c.) Moderately important, I expected C's or better
  - d.) Very important, I didn't accept anything less than A's or B's
  - e.) Extremely important, I didn't accept anything less than A's
- 24.) Based on your knowledge of your skills right now, what do you think the most likely reason might be for dropping out of college before obtaining a degree?
- a.) Accepting a good job offer
  - b.) Joining the military
  - c.) Cost more than I could afford
  - d.) Lack of academic skills/achievement
  - e.) Marriage/Family concerns
  - f.) Dissatisfaction with MTSU
  - g.) I don't see any reason not to finish my degree
  - h.) Two or more of these might be a reason I drop out before finishing
- 25.) In high school, how would you describe HOW you studied for an upcoming test?
- a.) I studied using notecards or notes, memorizing information
  - b.) I studied with a friend, quizzing each other from notes or textbooks
  - c.) I studied with a tutor, teacher, or parent, getting help to better understand the information
  - d.) I rarely studied, mostly skimming the material in class right before the test
  - e.) I used more than one of these ways to study
- 26.) My evaluation of my academic writing skills is:
- a.) I am a terrible writer, and completing papers/essays is always difficult for me
  - b.) I am a less-than-average writer, and completing papers/essays is sometimes difficult for me
  - c.) I am an average writer, and completing papers/essays is moderately easy for me
  - d.) I am a better-than-average writer, and completing papers/essay is mostly easy for me
  - e.) I am a great writer, and completing papers/essays is always easy for me
- 27.) Presently, how often do you read for pleasure (reading outside of school)
- a.) I hate reading, and I rarely read anything at all
  - b.) I dislike reading, and I only read what is assigned for school/work
  - c.) I tolerate reading, and I read only what I am assigned, or short pieces in which I am interested
  - d.) I enjoy reading, and I read 1-3 books a year
  - e.) I love reading, and I read 4 or more books a year

28.) Presently, how often do you read for information or knowledge?

- a.) I hate reading, and I rarely read anything at all
- b.) I dislike reading, and I only read what is assigned for school/work
- c.) I tolerate reading, and I read only what I am assigned, or short pieces in which I am interested
- d.) I enjoy reading, and I look up information often
- e.) I am constantly looking up and reading information daily

29.) How would you rate your ability to read and comprehend what you read?

- a.) I am a terrible reader, and I rarely understand anything I read
- b.) I am a less-than-average reader, and I often don't understand what I am reading
- c.) I am an average reader, and I sometimes don't understand what I am reading
- d.) I am a good reader and I understand most everything I read
- e.) I am an excellent reader and I understand all that I read

30.) Presently, what is your weakest study skill?

- a.) Note taking
- b.) Staying focused in class
- c.) Managing time every day/week to study
- d.) Doing outside work (homework, extra assignments, assigned readings)
- e.) Staying caught up in classes (doing work on time)
- f.) I'm weak in more than one of these areas

31.) Academically, if you had to pick an area where you feel your high school did NOT prepare you for college, what would that area be?

- a.) Writing
- b.) Reading
- c.) Math
- d.) Science
- e.) Non-academic areas (critical thinking, responsibility, motivation)
- f.) My high school prepared me in all areas
- g.) My high school didn't prepare me in any of these areas
- h.) I wasn't prepared in two or more of these areas (A-E)

32.) In non-academic areas, if you had to pick an area where you feel your high school did NOT help you in terms of college, what would that area be?

- a.) Helping me choose the right college/university to attend
- b.) Taking the right courses in high school
- c.) Helping me with financial concerns (scholarships, grants, loans)
- d.) My high school helped me in all of these areas
- e.) My high school didn't help me in any of these areas
- f.) My high school didn't help me in two of these areas (A-C)

33.) When it comes to the quality of the work/assignments you turned in (high school), how good was the work you turned in?

- a.) I did really poor work, rarely passing
- b.) I did poor work, sometimes not passing
- c.) I did acceptable work, rarely rechecking it or getting others to check it
- d.) I did good work most of the time, getting it checked, earning A's and B's
- e.) I made sure the work I turned in was excellent (checked by me, teachers, parent, friend)

- 34.) How would you rate your attendance in high school?
- a.) I missed more than 20 days of school each year
  - b.) I missed 10-20 days of school each year
  - c.) I missed 5-10 days of school each year
  - d.) I missed less than 3-5 days of school each year
  - e.) I rarely or never missed school (2 days or less)
- 35.) How much time did you spend studying in high school during the week?
- a.) I didn't study at all
  - b.) I rarely studied outside of school, less than 2 hours a week/
  - c.) I sometimes studied outside of school, 3-5 hours a week
  - d.) I often studied outside of school, 5-8 hours a week
  - e.) I always studied outside of school, more than 8 hours a week
- 36.) In high school, during the week of finals I spent the majority of my time outside of school:
- a.) Studying for my final exams by myself
  - b.) Studying for my final exams with a friend or in study groups
  - c.) On social networking sites (Twitter, Facebook, Personal Email, etc.)
  - d.) I studied using a combination of these strategies
  - e.) Getting extra help from the teacher or a tutor
  - f.) The tests were easy so I didn't study much at all
  - g.) I was exempt or didn't take finals
- 37.) If I'm faced with a course/teacher/assignment in college that I do not understand, my course of action involves:
- a.) Dropping the course and choosing an easier course
  - b.) Dropping the course and choosing the same course with a different professor
  - c.) Asking a classmate for assistance
  - d.) Meeting with the professor outside of class time to seek guidance
  - e.) Visiting a learning/tutoring lab to seek help from graduate assistants/other professors
  - f.) Remaining in the class, doing what I can, and "sink or swim"
  - g.) My course of action involves two or more of these
- 38.) How do you approach assigned readings for school/work?
- a.) I don't read what I am assigned to read
  - b.) I read very little (1/4) of what I am assigned to read
  - c.) I read some (half) of what I am assigned to read
  - d.) I read most (3/4) of the things I am assigned to read
  - e.) I always read what I am assigned to read
- 39.) How would you rate yourself in terms of TIME MANAGEMENT (preparing for exams, completing homework, getting enough sleep, etc.) during high school?
- a.) I never did my work on time and I never studied for tests
  - b.) I rarely did my work on time and I rarely studied for tests (1/4 of the time)
  - c.) I did my work on time most of the time, sometimes turning in work late and sometimes not studying for tests (half the time)
  - d.) I did my work on time, turning in assignments when they were due and studying the night before tests
  - e.) I did my work in advance, often turning in assignments early and studying for tests days in advance

- 40.) During finals week of your senior year of high school, how much time did you spend studying?
- a.) I never studied
  - b.) I only studied once or twice a week
  - c.) I studied every other night for an hour or more
  - d.) I studied an hour or less every night
  - e.) I studied more than an hour every night
  - f.) I was exempt or didn't take finals
- 41.) Presently, which of these descriptions best describes how you act during a class?
- a.) I never pay attention during class
  - b.) I rarely pay attention during class, often daydreaming, texting, or doing something else
  - c.) I somewhat pay attention in class, taking limited notes and seeking help from others later
  - d.) I pay attention during class, taking notes and studying before a test
  - e.) I pay close attention during class, taking good notes and then reviewing them later
- 42.) When stressed about academics/college success, do you participate in:
- a.) Substance abuse (alcohol, drugs, pills)
  - b.) Poor nutrition (eating habits)
  - c.) Physical inactivity (no exercise)
  - d.) Lack of sleep/rest
  - e.) None of the above (stress doesn't affect me)
  - f.) I participate in two or more of these activities
- 43.) Does living independently of your parents/guardians in college concern you?
- a.) I am afraid of feeling lonely and not making new friends
  - b.) I am somewhat nervous about meeting new people and feeling lonely
  - c.) I am not really nervous about making new friends or feeling lonely
  - d.) I am mostly excited about meeting new friends and I don't believe I will feel lonely
  - e.) I am excited about living on my own and I make new friends easily
  - f.) I will be living at home or with family
- 44.) When it comes to stress about life (school, money, relationships), how do you respond?
- a.) Stress affects my nutrition, and I make poor food choices and overeat or don't eat enough
  - b.) Stress affects my sleep, and I either sleep too much or not enough
  - c.) Stress has a positive effect on me, and I use exercise as an outlet
  - d.) Stress brings out the best in me, and I thrive under pressure and deadlines
  - e.) Stress has no effect on me, positive or negative
  - f.) I respond in two or more of these ways
- 45.) What is your most common emotional response to stress about academics?
- a.) I do not handle stress well and I respond negatively
  - b.) I rarely handle stress well, and I often respond negatively
  - c.) I sometimes cannot handle stress, and I sometimes respond negatively
  - d.) I rarely struggle with handling stress, and I respond positively
  - e.) I don't ever feel stressed
- 46.) When it comes to financial concerns, I am MOSTLY worried about:
- a.) How to pay for my education
  - b.) How to pay my personal bills
  - c.) How to pay back my student loans
  - d.) How to support my children/family
  - e.) I don't have financial concerns
  - f.) I worry about two or more of these areas (A-D)

- 47.) To what extent would you say you are motivated and determined to complete your college degree?
- a.) I am not at all motivated and determined to complete my degree
  - b.) I am only a little bit motivated and determined to complete my degree
  - c.) I am motivated and determined to complete my degree, although I am not sure I can
  - d.) I am motivated and determined to complete my degree, and I'm pretty sure I will
  - e.) I am motivated and determined to complete my degree, and I am certain I will
- 48.) How do you feel about speaking in front of a group of people?
- a.) I do not like speaking in front of people and when I try, I can't
  - b.) I do not like speaking in front of people and when I try, I really struggle
  - c.) I do not like speaking in front of people, but I can with practice and note cards
  - d.) I don't mind speaking in front of people, and I can with practice and note cards
  - e.) I like speaking in front of people, and I can do so often without practice or notes
- 49.) Are you taking any prescribed (remedial) coursework at MTSU?
- a.) Yes, I'm enrolled in remedial math and reading/English courses
  - b.) Yes, I'm enrolled in a remedial reading/English course
  - c.) Yes, I'm enrolled in a remedial math course
  - d.) Yes, I'm enrolled in another remedial course (other than math or English)
  - e.) No, I'm not enrolled in any remedial courses
  - f.) I'm not sure
- 50.) How would you currently rate your overall literacy skills? (reading, writing, speaking, spelling, comprehension)?
- a.) I have very weak literacy skills
  - b.) I have moderately weak literacy skills
  - c.) I have average literacy skills
  - d.) I have pretty strong literacy skills
  - e.) I have extremely strong literacy skills

## APPENDIX C

### Approved Consent Form

<b>Middle Tennessee State University Institutional Review Board</b> <b>Informed Consent Document for Research</b>	<b>MTSU</b> <b>IRB Approved</b> <b>Date: 9/3/2012</b>
<p><b>Principal Investigator:</b> Erica D. Powell, Doctoral Candidate  <b>Study Title:</b> Predicting college students' first year success: Should soft skills be taken into consideration to more accurately predict the retention and academic achievement of college freshmen?  <b>Institution:</b> Ph.D. Program in Literacy Studies, MTSU</p>	
<p>Name of participant: _____ Age: _____</p>	
<p>The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given below. You will be given an opportunity to ask questions, and your questions will be answered.</p>	
<p>Your participation in this research study is voluntary. You are also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study.</p>	
<p>For additional information about giving consent or your rights as a participant in this study, please feel free to contact the Office of Compliance at (615) 494-8918.</p>	
<p><b>1. Purpose of the study:</b>          The purpose of this study is to answer the following questions about soft skills (non-academic skills like responsibility, motivation, study habits and skills, and coping with stress): 1) Are the items on the measuring device (soft skills survey) valid and reliable? 2) Do soft skills add to high school GPA and ACT in terms of predicting college GPA at the end of a student's first semester of college? 3) Which items (soft skills) are the strongest predictors of college GPA?</p>	
<p><b>2. Description of procedures to be followed and approximate duration of the study:</b>          The entire experimental session lasts no more than 30 minutes, during which you will answer questions on a survey (either on paper or electronically) about some non-academic characteristics including responsibility, motivation, coping with stress, and study habits/skills.</p>	
<p>We are requesting access to your high school GPA, your highest single date ACT score, your hours attempted, your hours earned, GPA hours earned, and your first semester college GPA, as well as your GPA at the end of your freshman, sophomore, junior, and senior year. We will be accessing your ACT score and high school GPA to determine if there is any relationship between them and your GPA. Please note that your name and any identifying information will not be linked to your scores in our records, and all personal information will be securely stored.</p>	
<p><b>3. Expected costs:</b>          There will be no cost to you for the data collected for this study.</p>	
<p><b>4. Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of participation in this study:</b>          The risk involved is minimal. It is no more than one would experience in daily life activities.</p>	
<p><b>5. Unforeseeable risks:</b>          n/a</p>	
<p><b>6. Compensation in case of study-related injury:</b>          n/a</p>	
<p>Adapted from Vanderbilt University</p>	
<b>1</b>	

**Middle Tennessee State University Institutional Review Board  
Informed Consent Document for Research**

MTSU  
IRB Approved  
Date: 9/3/2012

**Principal Investigator:** Erica D. Powell, Doctoral Candidate

**Study Title:** Predicting college students' first year success: Should soft skills be taken into consideration to more accurately predict the retention and academic achievement of college freshmen?

**Institution:** Ph.D. Program in Literacy Studies, MTSU

Name of participant: \_\_\_\_\_ Age: \_\_\_\_\_

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given below. You will be given an opportunity to ask questions, and your questions will be answered.

Your participation in this research study is voluntary. You are also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study.

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**1. Purpose of the study:**

The purpose of this study is to answer the following questions about soft skills (non-academic skills like responsibility, motivation, study habits and skills, and coping with stress): 1) Are the items on the measuring device (soft skills survey) valid and reliable? 2) Do soft skills add to high school GPA and ACT in terms of predicting college GPA at the end of a student's first semester of college? 3) Which items (soft skills) are the strongest predictors of college GPA?

**2. Description of procedures to be followed and approximate duration of the study:**

The entire experimental session lasts no more than 30 minutes, during which you will answer questions on a survey (either on paper or electronically) about some non-academic characteristics including responsibility, motivation, coping with stress, and study habits/skills.

We are requesting access to your high school GPA, your highest single date ACT score, your hours attempted, your hours earned, GPA hours earned, and your first semester college GPA, as well as your GPA at the end of your freshman, sophomore, junior, and senior year. We will be accessing your ACT score and high school GPA to determine if there is any relationship between them and your GPA. Please note that your name and any identifying information will not be linked to your scores in our records, and all personal information will be securely stored.

**3. Expected costs:**

There will be no cost to you for the data collected for this study.

**4. Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of participation in this study:**

The risk involved is minimal. It is no more than one would experience in daily life activities.

**5. Unforeseeable risks:**

n/a

**6. Compensation in case of study-related injury:**

n/a



## APPENDIX D

### IRB Approval



September 3, 2012

Erica D. Powell  
Ph.D. Program in Literacy Studies  
edp2p@mtmail.mtsu.edu

Protocol Title: "Predicting College Students' First Year Success: Should 'Soft Skills' be Taken into Consideration to More Accurately Predict the Academic Achievement of College Freshmen?"

Protocol Number: **13-033**

Dear Investigator(s),

The MTSU Institutional Review Board, or a representative of the IRB, has reviewed the research proposal identified above. The MTSU IRB or its representative has determined that the study poses minimal risk to participants and qualifies for an expedited review under 45 CFR 46.110 Category 7.

Approval is granted for one (1) year from the date of this letter for 400 participants.

According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. **If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance (c/o Emily Born, Box 134) before they begin to work on the project.** Any change to the protocol must be submitted to the IRB before implementing this change.

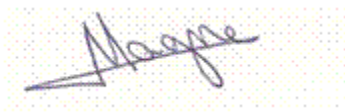
Please note that any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918.

**You will need to submit an end-of-project form to the Office of Compliance upon completion of your research located on the IRB website.** Complete research means that you have finished collecting and analyzing data. **Should you not finish your research within the one (1) year period, you must submit a Progress Report and request a**

**continuation prior to the expiration date.** Please allow time for review and requested revisions. Your study expires **September 2, 2013**.

Also, all research materials must be retained by the PI or faculty advisor (if the PI is a student) for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in purple ink, appearing to read "Magne", is shown on a light blue dotted background.

Cyrille Magne  
IRB representative

Middle Tennessee State University

## APPENDIX E

### Approval Records Department



**Computer Print-Out Request Form for Unscheduled Reports Mail or Deliver to  
Room 207 Cope Administration Building—Enrollment Technical Systems**

Name of person requesting information Erica D. Powell  
 Phone number 615-925-9911 Email Address edp2p@mtmail.mtsu.edu  
 Today's date August 13, 2012 Previous Work Order Number \_\_\_\_\_  
 Department or organization represented Literacy Studies

Information requested:

1. Selection criteria: see attached Excel sheet

2. Sort order: \_\_\_\_\_

3. Output format: \_\_\_\_\_

Semester of information requested Fall 2012

Output desired:

Lists: ☒ Y ☐ N How many copies? 2

Labels: ☐ Y ☐ N How many sets? \_\_\_\_\_

Address preference in rank order: ☐ Local ☒ Permanent

Purpose of printout in detail

The purpose of the dissertation study is to determine if soft skills are as powerful a predictor of college academic achievement as are high school GPA and ACT score.

Check one:

☐ Charge to MTSU account number \_\_\_\_\_

☐ Requestor will pay MTSU directly. (Requestor should see the secretary in Information Technology Division, Cope Administration Building, Room 003, for bill.)

Distribution:

Contact when information is available. Phone 615-925-9911 E-mail edp2p@mtmail.mtsu.edu

Erica D. Powell  
 Signature of requestor (Accepting responsibility for payment and proper use of information)

8/13/12  
 Date

Samir W. Khan  
 Approval: Dean, department chair, organization faculty sponsor, etc.

8/13/12  
 Date

Kathy K. K. K.  
 Approval: Enrollment Technical Systems

8/14/12  
 Date

Note: Please check with your department head before requesting information to determine whether or not the information is on file in his/her office. Much information can be obtained from the semester enrollment statistical reports.

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