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## HOPE Scholarship Status of Students in a Large Entry-Level Course in Teacher Education

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To the Graduate Council:

I am submitting herewith a dissertation written by Eleanore Claire Trant entitled "HOPE Scholarship Status of Students in a Large Entry-Level Course in Teacher Education." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in School Psychology.

Robert L. Williams, Major Professor

We have read this dissertation and recommend its acceptance:

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(Original signatures are on file with official student records.)

HOPE Scholarship Status of Students in a Large Entry-Level Course in Teacher Education

A Dissertation Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Eleanore Claire Trant

August 2016

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## **Dedication**

This dissertation is lovingly dedicated to my parents, Mary Claire and Tim Trant, and to my fiancé, Joe Heaton. Thank you for the unconditional support, encouragement, and guidance you have given to me.

## **Acknowledgements**

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## **Abstract**

The current study examined the extent to which socioeconomic variables (SES), pre-college academic variables, pre-course collegiate variables, and in-course achievement variables predicted students' probability of receiving and/or retaining the Helping Outstanding Students Educationally (HOPE) scholarship. The study was conducted in the Ed Psych 210 course ( $N = 181$ ). Much of the data came from the University's Registrar's Office. Bivariate Logistic Regression was used in all phases of the analysis. The predictive potential of each subset of variables was first done for variables in combination and then for variables separately.

Socioeconomic status (SES) measures and pre-college academic variable were used in predicting HOPE receipt. The strongest SES predictors of HOPE receipt were parental education level and the percentage of students eligible for free and reduced lunch in a student's school district. For the pre-college academic variables, HS GPA was a significantly stronger predictor of HOPE receipt than was ACT. When the SES variables were considered, both free and reduced lunch and poverty level were significantly related to scholarship loss. Although HS GPA remained a stronger predictor of HOPE retention than ACT scores, that difference was not significant.

The only pre-course collegiate predictor significantly related to HOPE loss was total credit hours completed. None of the collegiate in-course variables, when considered together, proved to be a significantly stronger predictor of HOPE retention than the other in-course variables. This finding was a function of high inter-correlations between most in-course variables. When the predictive potential of the in-course variables was considered separately, the final course grade was the strongest predictor of HOPE retention. Nonetheless, all but one of the course factors on which the final grade is based also significantly contributed to HOPE

retention.

When the top predictors from each subset model were examined together, final course grade was the strongest predictor of HOPE retention. In fact, final grade was a significantly stronger predictor of HOPE retention than overall collegiate GPA. This pattern suggests that the academic requirements in the Ed Psych 210 course closely matched the cognitive and study skills required to perform generally well in the course and retain the HOPE scholarship.

*Key Words:* HOPE scholarship receipt, HOPE Scholarship retention; SES predictors, Pre-college academic predictors, and In-course predictors



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## **Chapter I**

### **Introduction and Literature Review**

The ability to afford and attend college yields numerous benefits on individual, state, and national levels. College-educated adults earn more money annually, have a lower unemployment rate, and have greater job satisfaction than peers with only a high school diploma (Pew Research, 2014). In addition, states that have a higher educated workforce are more productive and have more economic success than states in which workers are less educated (Berger & Fisher, 2013). Furthermore, highly educated countries tend to have governments regarded as less corrupt, more effective, more politically stable, less violent, and more protective of human rights than countries with a less educated public (Corruption Perceptions Index, 2014; Lurie, 2014; The World Bank, 2014; The World Justice Project, 2014).

The benefits of education are especially important for individuals from low socioeconomic (SES) backgrounds. Research indicates that individuals from low-income backgrounds can increase their earning potential and enhance their quality of life through higher education (Beilin, 2015; Haskins & Rouse, 2013). Unfortunately, low SES students are much less likely to enroll in college, and those who do enroll are less likely to earn a four-year degree than high SES peers (The Pell Institute, 2015). In fact, about 20% of students from families earning \$20,000 or less per year enroll in a four-year university, while approximately 70% of students from families earning \$100,000 or more per year enroll in college (Bozick & Lauff, 2007). Furthermore, according to the U.S. Department of Education (as cited in Radford, Berkner, Wheelless, & Shephard, 2010) 58.6% of students whose family earns more than \$92,000 or more per year earn a bachelor's degree, whereas only 25.5% of students from families earning

\$32,000 or less earn a bachelor's degree. Furthermore, the national average rate of college graduation for all students is 54.9% (NCES, 2014).

### **Purpose of Lottery-funded Scholarships**

In the last few decades, the cost of attending college has seen a substantial increase. Researchers have found that even after adjustment for inflation, the average cost of attending a four-year university in 1981 was \$9,554 per year compared to \$23,066 in 2012 (NCES, 2013b). Because of the rising costs of higher education, students from all economic backgrounds, especially those from financially poor backgrounds, are finding it increasingly difficult to finance a college education. One way in which state policy-makers have sought to help students afford the rising costs of higher education is through lottery-funded scholarships. These scholarships are, as the name suggests, funded by individual state-lottery programs.

Lottery-funded scholarships provide monetary assistance for students to attend college in their state of legal residence (Penn & Kyle, 2007). Several U.S. states have lottery-funded scholarships, including Georgia, New Mexico, Florida, South Carolina, Kentucky, West Virginia, Tennessee, North Carolina, and Arkansas (NCSEAA, 2012; Tennessee Higher Education Commission, 2012). These states are known to have higher percentages of residents below the poverty level than is the case in other parts of the country (U.S. Census Bureau, 2012b). The availability of lottery-funded scholarships often fluctuate each year; however, due to state budget cutbacks, changes in state policies, and college tuition increases (HOPE Scholarship, 2012).

The initial purpose of the Georgia HOPE scholarship was to provide financial assistance for students from low to middle SES backgrounds to attend college (HOPE Scholarship Joint Study Commission Report, 2004). In fact, in its naissance, only students from families earning

\$66,000 or less were eligible for the scholarship. This income cap was raised to \$100,000 in 1994, and then eliminated entirely in 1995. The income cap was removed to make college more accessible to students from all income levels (Levitz & Thurm, 2012). The only state in which scholarship eligibility has an income requirement is North Carolina. The North Carolina Education Lottery Scholarship Program is only available to students whose Expected Family Contribution (EFC) is less than \$5,000 (College Foundation of North Carolina, 2015; NCSEAA, 2012).

In addition, state leaders wanted to ensure that top-performing students attended college in-state (Condon, Prince, & Stuckart, 2011; Dee & Jackson, 1999). Tennessee's HOPE scholarship has never included income requirements for eligibility, but does include an additional stipend called the ASPIRE award for low-income students (Heller, 2004; Tennessee, 2015). In order to qualify for the ASPIRE award, Tennessee students must be eligible for the HOPE scholarship and come from a household earning \$36,000 or less per year.

### **Eligibility Requirements for Hope Scholarship**

Each state has certain eligibility requirements in order for students to receive lottery-funded scholarships. In the state of Tennessee, high school students must be admitted to an eligible post-secondary institution, have at least a 3.0 GPA, and must have scored at least a 21 on the ACT or a 980 on the SAT (Tennessee, 2015). In addition, applicants must be enrolled as full-time students. Students enrolled part-time may be eligible to receive the HOPE scholarship at a prorated rate. Tennessee residents who attend high school in different states can still receive the scholarship if they attended high school in a county bordering Tennessee, are children of military members or civilian workers of the U.S. Department of defense, are children of religious workers in foreign nations, or who attended boarding schools accredited by the National

Association of Independent Schools (Tennessee, 2015). A report by the Tennessee Higher Education Commission (2012) comparing lottery-funded scholarships indicates that Florida, West Virginia, and South Carolina have the same GPA requirements as Tennessee with respect to receipt of lottery scholarships. On the other hand, Arkansas and Kentucky only require a 2.5 GPA to receive the scholarship. In North Carolina, students must make satisfactory academic progress according to the university in which they are enrolled (College Foundation of North Carolina 2015; NCSEAA, 2012; Tennessee Higher Education Commission, 2012). The ACT/SAT requirements vary more than the required GPAs: Florida requires a 26 on the ACT; West Virginia a 22 ACT/ 1020 SAT; Georgia 80% percentile or higher on SAT/ACT; Arkansas a 19 ACT; Kentucky 15 ACT/710 SAT, and South Carolina a 24 ACT/1100 SAT (Arkansas Department of Higher Education, 2014; College Foundation of West Virginia, 2014; Florida Student Financial Aid, 2014a; Georgia College 411, 2014; Kentucky Higher Education Assistance Authority, 2015; South Carolina Education Lottery, 2104; Tennessee Higher Education Commission, 2012).

New Mexico's system for earning a lottery-funded scholarship is different from those of other states and is the only system that bases eligibility for the scholarship on academic performance in college. Students must take 15 credit hours their first semester in college and have a 2.5 GPA in order to receive the scholarship. If they meet this requirement, students can receive the scholarship for up to 7 semesters (New Mexico Higher Education Department, 2015).

Each lottery-scholarship state also differs in the amount of financial assistance it provides to students. Currently in Tennessee, students attending four-year universities (public or private) receive up to \$6,000 per year (Tennessee, 2015). Beginning in the fall of 2015, the Tennessee HOPE scholarship award will vary according to students' year in school. Freshmen and



sophomores can receive up to \$5,250 a year, while juniors and seniors can receive up to \$6,750 per year. Arkansas, Florida, Georgia, Kentucky, South Carolina, and North Carolina, and West Virginia all offer scholarships that range from \$100 to \$7,000 per year. New Mexico's lottery scholarship covers tuition only (Arkansas Department of Higher Education, 2014; College Foundation of North Carolina 2015; College Foundation of West Virginia, 2014; Florida Student Financial Aid, 2014b; Georgia Student Finance Commission, 2014; Kentucky Higher Education Assistance Authority, 2015; South Carolina Education Lottery, 2014; Tennessee Higher Education Commission, 2012).

### **Benefits of Lottery-funded Scholarships**

The receipt of lottery-funded scholarships is associated with a number of academic-success variables. Students who receive and maintain lottery scholarships tend to have better academic achievement, earn more course credits, are less likely to drop out, and are more likely to graduate on time than non-recipients or those who lost the scholarship (Henry, Rubenstein, & Bugler, 2004; Trant et al., 2014). Furthermore, at the University of Tennessee in 2008, sophomore lottery scholarship recipients had an 82% retention rate, while non-recipients' retention rate was 60% (Tennessee Higher Education Commission, 2009). This retention-rate gap between lottery-scholarship recipients and non-recipients continued to grow in each subsequent year of college. Senior scholarship recipients in 2008 had a retention rate of 65%, whereas non-recipients had a retention rate of 37%.

Lottery-funded scholarships also have had positive effects on college enrollment. Tennessee, New Mexico, Georgia, and Florida have all seen surges in enrollment since implementing lottery-funded scholarships (Condon et al., 2011; Harkreader, Hughes, Tozzi, & Vanlandingham, 2008; Sack, 2004, Servin, 2008). After the HOPE scholarship was signed into

law in Tennessee in 2003, universities in the state saw a 24% increase in student enrollment (Heller, 2004). The number of students who applied to University of Tennessee-Knoxville has continued to grow every year since lottery scholarships were implemented (The Office of Institutional Research & Assessment, 2012). Moreover, the university received over 4,000 more applications in 2011 than in 2003.

### **Socioeconomic Predictors of College Success (SES)**

SES is multifaceted classification thought to have a large impact on student's educational opportunities and achievement. Research indicates that students from low SES backgrounds have poorer academic achievement and retention rates than more economically advantaged peers across grade levels (Alexander, Entwisle, & Kabbani, 2001; Reardon, 2013; Vail, 2004). The most comprehensive and appropriate way of measuring college students' SES is based on annual parental income, level of parental education, and status of parental occupation (ASHE Higher Education Report, 2007; Haycock, 2001). Community factors that have been used to determine students' SES include the percentage of students who received free or reduced lunch at their respective high schools, the average cost of homes in students' home towns, the average family income in students' residential location, and the percentage of residents living below the poverty line in students' county/parish (Crowe, Connor, & Petscher, 2009; Milne & Plourde, 2006; Rasnidsell, 2012; Sparks, 2012).

When using income as a measure of SES, researchers include more than just the families' take-home income (U.S. Census Bureau, 2012a). Income includes total earnings and governmental assistance (e.g., social security and food stamps), but excludes capital gain or loss. In addition, thresholds are determined by family size and the ages of family members. These thresholds do not vary regionally. The weighted average poverty threshold for a family of four is

\$23,021 (U.S. Census Bureau, 2012b).

Another important component of SES is the level of education attained by a student's parents (Haycock, 2001). Research indicates that parents' education has a strong positive relationship to their children's academic success and retention in college (De Clercq, Galand, Dupont, & Frenay, 2013; Delaney, Harmon, & Redmond, 2011). The final component of SES is the status of students' parental occupations. Nakao and Treas (1994) created an occupational classification scale of hundreds of occupations called the Socioeconomic Index (SEI). Each occupation in the scale was given a score based on the income from the job and educational level required for the job.

### **Academic Contributors to Receipt of Lottery-Funded Scholarships**

The two main academic variables used to determine students' lottery-scholarship eligibility are high school grade point average and ACT/SAT scores (Tennessee, 2015). High School GPA and SAT/ACT scores are the primary requirements for college admission and have traditionally been good predictors of students' college GPAs, retention rates, and overall college success (Mattson, 2007; Pettijohn, 1995; Sparkman, Maulding, & Roberts, 2012). In most states, the GPA required for lottery scholarship receipt is similar to the GPA required to retain the scholarship in college.

Although both high school GPA and standardized test scores can be strong predictors of college success, they are not exact methods of determining future academic achievement. Some research suggests that standardized test scores have limited potential for predicting college GPA and retention in college (Hiss & Franks, 2014). This limited predictive validity of standardized test scores is especially true for minority students (Hoffman & Lowitzki, 2005). In addition, students' high school GPAs tend to be stronger predictors of college success than are

standardized test scores (Zheng et al., 2002). Due to this differential predictive potential, over 800 universities have made the submission of standardized test scores for admission optional (Strauss, 2014). However, the problem with using high school GPA as the only requirement for college admission and/or scholarship receipt is that high school curricula and grading methods are not standardized. Therefore, it is difficult to compare students' GPAs as objectively as one can with ACT/SAT scores (Sawyer, 2013). It is for this reason that high school GPA and standardized test scores are best used in combination when making admission or scholarship decisions (Noble, 1991).

Due to the weaknesses that can accompany the use of high school GPA and standardized test scores in predicting college outcomes, researchers have examined other student variables that are predictive of college success. Some of these variables include critical thinking ability, locus of control, self-concept, and educational aspirations (Hanson, 1994; Marsh, 1990; Rotter, 1966, Steward & Al Abdulla, 1989). For example, the ability to think critically in particular has been linked to college GPA and academic performance in individual courses (Giancarlo and Facione, 2001; Williams, Oliver, Allin, Winn, & Booher, 2003; Williams & Worth, 2002). However, little research has examined the predictive potential of critical thinking with lottery scholarship receipt and retention. However, because critical thinking is linked with college GPA, it may also be associated with HOPE scholarship retention. In fact, Trant et al. (2014) found critical thinking to be one of the top three predictors of HOPE scholarship retention. Nonetheless, critical thinking scores are virtually never used in selecting students for HOPE scholarship consideration.

## **Collegiate Predictors of Retention of Lottery-funded Scholarships**

In addition to requirements for earning the HOPE scholarship, each state has specific requirements students must meet in college to retain the scholarship. In order for Tennessee students to retain the scholarship, they must be continually enrolled minimally as part-time students. In addition, their GPA cannot fall below 2.75 during their first two years of college. When students are juniors and seniors, their GPA cannot fall below a 3.0. If students lose the HOPE scholarship, they have one opportunity to regain it by raising their GPA to the eligibility requirement according to their year in school (Tennessee, 2015).

Another important issue in examining the relationship between academic variables and performance in college is the extent to which HOPE retention is related to such collegiate measures as number of total credit hours earned, academic load per semester, and number of hours worked outside of school per week. Due to the rising cost of college attendance, the number of students with part or full time employment is steadily increasing (Lenaghan & Sengupta, 2007). In fact, over 70% of undergraduate students report being employed at least part-time (O'Shaughnessy, 2013). Therefore, most college students have to manage both academic and work commitments (Darolia, 2014; Lenaghan & Sengupta, 2007; Mounsey, Vandehey, & Diekhoff, 2013). Working a moderate number of hours outside of school has been positively associated with college GPA, time-management, communication skills, and interpersonal relationships (Darolia, 2014; Rowh, 1998).

On the other hand, full time employment in college is related to lower retention rates and higher stress levels among students (Mounsey et al., 2013; Orszag, Orszag, & Whitmore, 2001). This finding could be due to a decreased amount of time available to study, complete homework, and attend class. Furthermore, students who work full time report that their job limits the

number of credit hours they can take and their range of class options (Orszag et al., 2001).

Working a full time job, taking at least 12 credit hours, and maintaining the required GPA to retain the HOPE scholarship each semester could be a difficult combination for students struggling to afford college (Johnson, 2012).

### **Limitations of Lottery-Funded Scholarships**

Although lottery scholarships provide numerous benefits, scholarship programs are not without weaknesses. The first problem with lottery-funded scholarships is the fact that priority is no longer given to low-income applicants (HOPE Scholarship Joint Study Commission Report, 2004). Economically advantaged students currently receive lottery scholarships at a higher rate than their low SES peers (Penn & Kyle, 2007). Furthermore, students from low SES backgrounds are more likely to have difficulty meeting requirements to retain the scholarship than students from higher SES backgrounds (Reardon, 2013). Therefore, even though the original goal of lottery-funded scholarships was to provide financial assistance to low-income students, the scholarships are currently resulting in the opposite effect.

A second drawback of lottery scholarships relates to the amount of award given to students each year. Although the financial assistance is beneficial, it does not cover all university and personal expenses. For example, the estimated yearly budget for undergraduate students at the University of Tennessee during the 2014-2015 year is over \$28,000 (One Stop Express Student Services, 2015). With the HOPE scholarship covering less than a fourth of those expenses (\$6,000), students must find other financial assistance, gain employment, or acquire student loans. Affording college expenses will become even more difficult for freshmen and sophomores at the University of Tennessee beginning in the fall of 2015, as they will only receive up to \$5,250 for tuition and other school expenses per year (Tennessee, 2015). For the

lottery-funded scholarships to make college attendance truly accessible to all students, they need to provide additional funding to students, especially to those from economically limited backgrounds. Such states as Tennessee, have added extra stipends (the ASPIRE award) in order to help low-income students finance their college education (Tennessee, 2014).

### **Purpose of the Study**

Research indicates that students who receive the HOPE scholarship tend to perform better academically and have higher retention rates in college than non-recipients (Henry et al., 2004). However, a substantial percentage of students have not retained the scholarship. In Georgia, only 30% of students retained the HOPE scholarship until graduation (Diamond, 2011). Findings from Tennessee indicated that 47% of all HOPE recipients between 2003 and 2008 retained the scholarship (Carruthers & Ozek, 2013). Therefore, the purpose of the current study was to determine factors that are predictive of student receipt and retention of the HOPE scholarship. Identifying factors that are predictive of HOPE receipt and retention can provide invaluable information to educators and university officials on ways to help students obtain and keep the scholarship.

The factors examined included components of socioeconomic status, pre-college academic factors, pre-course collegiate variables, and in-course collegiate success in the Ed Psych 210 course (Psychoeducational Issues in Human Development). I initially determined the extent to which SES and pre-college academic variables predict both receipt and retention of the HOPE scholarship. I then examined the extent to which pre-course collegiate variables (external to Ed Psych 210) and in-course Ed Psych 210 variables predict retention of the HOPE scholarship.

## **Chapter II**

### **Methodology**

#### **Participants**

Participants were 181 undergraduate students enrolled in seven sections of the Educational Psychology 210 course (Psychoeducational Issues in Human Development). Students intending to apply to the University of Tennessee's Teacher-Education program must first earn a satisfactory grade in this course. The majority of participants were female (82.9%) and Caucasian (87.3%). African American students constituted 6.1% of the sample, followed by Asian (1.1%), American Indian (1.1%), multiple ethnicities (1.1%), and Hispanic students (.6%). A small portion of the students (2.2%) did not report their ethnicity.

Overall, the total course sample drew from 29 different majors. The most common major was Special Education (26.5%). Other popular majors included English (10.5%), History (10.5%), Exploratory Track (10.5%), and Psychology (8.3%). In addition, 1.7% of students' had not decided on a major. Furthermore, most students were enrolled in the College of Arts and Sciences (48.1%) and the College of Education, Health, and Human Sciences (44.2%).

According to data from the Registrar's Office, many students (26.0%) attended schools in counties with 14.20% of its residents living below the poverty level. An individual is considered to be living below the poverty line if they earn \$11,888 or less annually (U.S. Census Bureau, 2013a). The percentage of residents living below the poverty level in the students' counties ranged from 4.40% to 26.10%. In addition, the percentage of students receiving free or reduced lunch services in various counties represented in the sample ranged from 11% to 75.80%. The highest percentage of students (26.0%) attended schools in counties in which about 35% of students received free or reduced lunch.



The majority of students (78.5%) in the target course received the HOPE scholarship, while 21.5% did not receive the scholarship. In addition, 85.9% of the HOPE recipients had retained the scholarship until the data for the study were collected, while 14.1% had lost the scholarship. Students categorized as “out of state” were excluded from the current study because of their ineligibility for the HOPE scholarship.

### **Instruments**

The research data initially came from two inventories: an Identification Form and a Critical Thinking Test. The students also signed an informed consent form during the first week of classes (Appendix A). The informed consent explained the two main purposes of the research in which they would participate. The two purposes were to identify predictors of HOPE scholarship acceptance and retention and to use the findings in professional reports (e.g., conference presentations, journal publications, and dissertation). In addition, the informed consent statement notified students that their signature would give the researchers permission to use their course data, responses to the instruments used, and information from the Registrar’s office. Furthermore, students were assured that personal information used in research would be de-identified. The informed consent also highlighted that students could receive some course credit for agreeing to participate in research. However, if they did not want to participate, they had the opportunity to request an alternate assignment to receive the credit.

**Identification form.** Students were asked to complete the student ID form by the end of the first week of classes (Appendix B). This form contained questions pertaining to SES, including parental income and occupation. In addition, students were asked to indicate the number of credit hours they were taking and the number of hours they worked outside of school during the target semester. Students were taking an average of 15 credit hours that particular

semester (Fall 2014), which the University considers a full load. In addition, students were working outside of school an average of 9.5 hours per week the same semester. Four students did not report their credit hours and six students did not report their work hours.

Parental income was assessed by a parental income scale: (1) less than \$25,000; (2) \$25,000-\$49,999; (3) \$50,000-\$74,999; (4) \$75,000-\$149,999; (5) \$150,000-\$249,999; and (6) \$250,000 + per year (U.S. Census Bureau, 2012a). Students received a score from 1 to 6 for choosing one of these categories. Of the 181 participants, 16 did not indicate their combined parental income. The majority of students' annual parental incomes (31.5%) fell in the \$75,000 to \$149,000 range. In addition, 6.6% of students indicated that their parents' combined annual is less than \$25,000. Finally, 8.8% of students reported that their parents earned \$250,000 or more per year.

Parental occupation was quantified according the Nakao and Treas (1994) SEI scale. This scale classifies about 900 occupations based on a combination of salary and level of education required for the job. Each student's parental occupation, or its closest approximation, was given a numerical value based on this scale. Students whose parents were unemployed received a score of 0. Mothers' occupations ranged from 0 to 96 on this scale and fathers' from 0 to 97. Both mothers and fathers had an average occupational score of 55.9. Of the 181 students, 16 did not report their mother's occupation and 22 did not report their father's.

**Critical thinking test.** Students completed the Watson-Glaser Critical Thinking Appraisal, Form S (WGCTA) on the first day of the course (Watson & Glaser, 1994). After students took the test, graduate teaching assistants (GTAs) first calculated students' raw scores and then transformed those raw scores into percentile ranks. The test's manual provided norms for college graduates, which the GTAs used to convert the students' raw scores into percentile

ranks (Watson & Glaser, 1994, p. 57). The manual for the WGCTA reported both its internal consistency and test-retest reliability to be 0.81. Gadzella and Baloglu (2003) determined the psychometric properties of the WGCTA for college students enrolled in an educational psychology course. Their results showed that the WGCTA was a valid and reliable instrument for this population. All 181 participants completed the critical thinking test. The average critical thinking percentile rank for the participants was the 19<sup>th</sup> percentile according to a normative sample of college graduates (Watson & Glaser, 1994). The students' percentile ranks ranged from the 1<sup>st</sup> percentile to the 99<sup>th</sup>.

### **Registrar Data**

Student data were also obtained from the Registrar's Office (Appendix C). The Registrar's Office provided the following student information: Student residency status (in state vs. out of state), gender, ethnicity, college, major, transfer indicator, high school GPA, high school name, high school county, ACT composite score (or SAT-ACT converter equivalent), parent education level, term in which the student was first awarded the HOPE scholarship, term in which the student lost the scholarship, student's cumulative college GPA, and student's number of credit hours earned in college. The registrar's office did not report the total credit hours of 33 students and the ethnicity of one student. In addition, it did not report the high school county of nine students, the ACT or SAT-ACT converter score of 20 students, and the high school GPA of 16 students.

The Registrar's data provided information regarding the education of each students parents in the following categories: (1) high school degree/GED or less; (2) some college or a 2 year/associate's degree; (3) 4-year college degree; (4) some graduate coursework or professional degree; or (5) education unknown or classified in more than one category. Of the sample, 10.5%

of students' parents received a high school diploma/GED or less; 12.2% of the parents completed a two-year degree or some college; 36.5% completed a 4-year college degree; 9.4% completed some graduate school or earned a professional degree; and 31.5% of parental education was unclassified or in more than one category. The latter category was not included in the data analysis

Beyond the information received from the Registrar's Office, I used such additional sources as the U.S. Census Bureau to determine the percentage of students receiving free and reduced lunch in each student's school district and percent of residents living below the poverty line in each student's school county. For example, in Knox County, TN schools, 34.8% of students receive free or reduced lunch (Kids Count Data Center, 2012). In addition 14.2% of residents live below the poverty line (U.S. Census Bureau, 2013b). The majority of the student lunch data was gathered from the Kids Count Data Center (2012). In addition, the majority of the data on the percentage of residents living below the poverty line by county was collected from the U.S. Census Bureau (2013b).

### **Course Grades**

Participants' grades in the Ed Psych 210 course were primarily based on attendance, participation in class discussion, written questions submitted for class discussion, practice exam scores, and scores on major exams. Throughout the semester, students had the possibility of earning a total of 60 points for class attendance, 60 points for creating and posting questions in an online journal, and 60 points for class participation. Furthermore, students were given five practice exams and five unit exams throughout the course. They had the opportunity to earn up to 25 points from the combined practice exams and 250 points from the unit exams. Finally, students had a final exam at the end of the semester worth a possible 100 points.

Individual student grades were posted on the course website throughout the semester, and hard copies of all student work was stored in the safeguarded GTA office. The students' final letter grade was based on the percentage of points they earned from the total number of points available in the course. The criterion-referenced grading scale was organized as follows: 90-100% of total possible points equaled an A, 88-89% a B+, 80-87% a B, 78-79% a C+, 70%-77% a C, 63%-69% a D, and any percentage below 60% an F. Of the participants, 37.6% of students received an A, 4.4% received a B+, and 32.6% earned a B. Furthermore, 4.4% of students received a C+ and 12.7% earned a C. Finally, 3.3% earned a D and .6% (one student) failed the course. Eight students (4.4%) did not complete the course and, consequently, did not receive a final grade.

### **Overall Predictor Variables**

The study included four subsets of potential predictors of HOPE receipt and/or HOPE retention: socioeconomic variables, pre-college academic variables, pre-course collegiate variables, and in-course collegiate variables. The socioeconomic variables included percent of students eligible for free and reduced lunch in a student's school system, the percent of individuals living below the poverty line in each student's school county, the highest education level of a students' parents, the job level of the mother in the family, the job level of the father in the family, and the total income level of a student's parents. The other pre-college category consisted of two conventional determinants of admission to college: high school GPA and ACT score.

All other predictors were assessed at the collegiate level. The first of these assessments was pre-course collegiate variables, which included total credit hours taken in college, course credit enrolled in the current semester, work hours per week, and critical thinking percentile.

The second set of the college-level predictors was performance measure within the Ed Psych 210 course, which included final grade, class attendance, practice exams, unit exams, final exam, participation total, capped participation credit, and written questions for class discussion. The means, ranges, and standard deviations for each of the predictor variables can be found in Table 1.

## Chapter III

### Results of the Study

#### Statistical Procedures

The current study primarily used a binary logistic regression analysis to determine the probability of SES dimensions, pre-college academic variables, in-college pre-course measures, and in-course college performance variables predicting students' receipt or non-receipt of the HOPE scholarship and retention or loss of the scholarship. The SES and pre-college academic variables were assessed as predictors of both HOPE receipt and HOPE retention. All the other variables were used to predict only HOPE retention vs. loss.

Logistic regression was used to determine the strength of potential predictors of placement in dichotomous criterion groups (received or did not receive the HOPE scholarship, lost or retained the scholarship). Standardized  $\beta$  weights were calculated in addition to the unstandardized  $b$  weights and the odds ratios that SPSS computes for Logistic regression analysis. Standardized  $\beta$  weights,  $b(Std)$ , were used because they provide a more consistent way to compare the predictive potential of variables than unstandardized  $b$  weights or odds ratios (King, 2007). King provided a methodology for computing standardized  $\beta$  weights by using Excel software in addition to SPSS software. The standardized beta weight adjusts all variables in a subset of variables to be on the same scale, allowing change in predicted probability of HOPE status to be directly and equitably compared across variables.

The logistic regression analysis was first done with each subgroup of possible predictors. Because the standardized beta weight of each variable could be affected by the beta weights of other variables in that subset, a follow-up logistic regression for each variable separately in each

subset of possible predictors. Finally, group means (HOPE receipt vs. non-receipt, HOPE retention vs. loss) were compared for all the separate variables in each subset of variables.

Before conducting the logistical regression analysis for each subset of variables, I computed inter-correlations between the variables in each subset. The finding of high inter-correlations between predictors has been labeled multicollinearity, a statistical phenomenon that can distort the predictive potential among highly correlated variables. A high correlation among predictors suggests that they considerably overlap with one another, which can lead to deceptive or uninterpretable results (Keith, 2005). For example, in my study, the percentage of students eligible for free or reduced lunch in each student's county correlated highly (.871) with the percent of residents living below the poverty line in these counties (Table 2). To correct for this over-lap in predictors, I combined the lunch and poverty variables into one variable by adding them together for the SES analysis of combined variables.

### **Predictors of HOPE Receipt**

**SES predictors of HOPE receipt.** The first analysis assessed SES variables as possible predictors of HOPE receipt, with the logistic regression analysis done with the combined SES variables (Table 3). This model was statistically significant,  $X^2(5) = 15.109, p < .010$ , and explained 23.1% of the variance in HOPE scholarship receipt. It also correctly classified 84.8% of the combined receipt and non-receipt cases. This model correctly categorized 98.8% of the HOPE recipients, but only 22.2% of the non-recipients. The predictor variables are ordered hierarchically in Table 3 according to their standardized  $\beta$  weights.

Level of parental education was the strongest SES predictor of HOPE receipt and also was significant ( $p < .011$ ). A one standard-deviation parental-education increase raised students' probability of receiving the HOPE scholarship by 12.61%. Father and mother's occupation



levels were also significant predictors of HOPE receipt. Father's occupational level was the second strongest SES predictor. As opposed to the parental education predictor, father's occupation yielded a negative standardized  $\beta$  weight for receipt of the HOPE scholarship. A one standard-deviation increase in father's job decreased the students' likelihood of receiving the HOPE scholarship by 11.30%. Mother's occupation had the third strongest beta weight, which was also negative. A one standard deviation increase in mother's job decreased students' likelihood of receiving the HOPE scholarship by 10.70%. The weakest predictor in this model was combined parental income.

In the logistic analysis with separate SES variables, the percentage of students receiving free or reduced lunch in each student's school county had the strongest beta weight. Free and reduced lunch was also the only statistically significant single predictor ( $p = .033$ ) of HOPE receipt (Table 4). In addition, the model was significant,  $X^2(1) = 4.931, p < .026$ , and correctly classified 79.9% of all cases. It also predicted 100% of HOPE recipients, but none of those who did not receive the scholarship. Furthermore, it accounted for 4.4% of the variance in HOPE scholarship receipt. The percentage of students receiving free or reduced lunch in each participants' county had a negative  $\beta$  weight, meaning that a one standard deviation increase in this variable decreased student likelihood of receiving the HOPE scholarship by 7.17%. The second strongest predictor was mothers' occupational status. This variable was also a negative predictor, with a one standard deviation increase in mothers' occupation decreasing students' likelihood of receiving the HOPE scholarship by 6.52%.

Finally, the HOPE group means (receipt vs. non-receipt) were compared across the SES variables (see Table 5). Only one of these comparisons, percentage of students eligible for free- and reduced-lunch, produced a significant difference ( $p < .031$ ). Also, HOPE recipients had a

lower percentage below the poverty line than the HOPE non-recipients. Again, less poverty means more HOPE recipients. Thus, this pattern suggests that students from more affluent homes are advantaged in obtaining HOPE scholarships.

**Pre-college predictors of HOPE receipt.** Binary logistic regression was then conducted with the pre-college academic predictors of HOPE scholarship receipt. I targeted the two academic variables commonly used for collegiate admission and merit scholarships. I first determined that these variables did not correlate highly with each other (Table 6). When the logistic regression was done with the combination of these variables, High school GPA (HS GPA) was a significantly stronger predictor of HOPE receipt than was ACT score (see Table 7). HS GPA was also a significant predictor of HOPE receipt in the combined analysis ( $p = .011$ ), while ACT was not ( $p = .305$ ). A one standard deviation increase in HS GPA increased students' probability of receiving the HOPE scholarship by 8.07%, while a one standard deviation increase in ACT only increased students' probability of receiving the scholarship by 3.54%. This model was statistically significant,  $X^2(2) = 11.577, p < .003$ , and explained 12.5% of the variance in HOPE receipt versus non receipt. In addition, this model correctly classified 4.3% of those who did not receive the HOPE scholarship and 99.3% of those who did. Overall, this model correctly classified 85.4% of the cases.

The same pattern held when high school GPA ( $p = .001$ ) and ACT ( $p = .225$ ) were separately evaluated in the logistic regression analysis (see Table 8). The model for HS GPA was statistically significant,  $X^2(1) = 15.836, p < .001$ , and correctly classified 83.6% of all cases. Furthermore, it correctly predicted 10.7% of those who did not receive the scholarship and 98.5% of those who did. The model explained 15.3% of the variance in receipt of the scholarship. In this model, a one standard deviation increase in HS GPA increased students'

probability of receiving HOPE by 10.67%. The model for ACT was also statistically significant,  $\chi^2(1) = 4.581, p < .032$ . This model explained 4.9% of the variance in HOPE receipt and correctly classified 100% of HOPE recipients. However, it did not correctly classify any non-recipients of the HOPE scholarship. Overall, it correctly classified 84.5% of students. A one standard-deviation increase in ACT scores increased students' likelihood of receiving the HOPE scholarship by only 6.46%.

The group comparisons showed that the GPA mean was significantly higher for HOPE recipients than non-recipients ( $p = .006$ ) (see Table 9). The ACT means also differed significantly for HOPE recipients vs. non-recipients ( $p = .036$ ). A close scrutiny of Table 9 shows that HOPE recipients had a HS GPA relatively close to a B+ and ACT scores about two points apart (26.21 vs. 24.80).

**Comparison of superordinate predictors of HOPE receipt.** Finally, a logistic regression analysis compared the relative predictive potential of the strongest predictors from the two sub-sets of predictors for HOPE receipt (Table 10). These variables were HS GPA and free and reduced lunch. This model was significant  $\chi^2(3) = 16.766, p < .001$ , and explained 16.5% of the variance in HOPE receipt versus non-receipt. Overall, this model correctly classified 85% of all cases. In addition, it predicted 99.2% of those who received the scholarship and 17.9% of those who did not receive it. The variable with the stronger standardized  $\beta$  weight in this model was HS GPA. A one standard-deviation increase in HS GPA increased students' probability of receiving the scholarship by 10.13%. HS GPA was also the only statistically significant predictor in this model ( $p = .001$ ). The variances and predictive potential of each significant HOPE Scholarship retention model can be found in Table 11.

## Predictors of HOPE Retention

**SES predictors of HOPE retention.** Binary Logistic regression analyses were then used to examine the extent to which the four subsets of variables predicted retention of the HOPE scholarship. Results from the SES subgroup indicates that this model was significant,  $X^2(5) = 11.270$ ,  $p < .046$ . The model explained 27.3% of the variance in students' retaining versus losing the HOPE scholarship. Overall, the model correctly classified 87.7% of students. In addition, this model correctly predicted 97.3% of HOPE retainers, but did not correctly classify any of the HOPE losers. None of the standardized  $\beta$  weights for the combined SES variables resulted in significant prediction of HOPE retention (see Table 12). Though non-significant, the variable with the strongest  $\beta$  weight for HOPE retention was combined parental income. A one standard-deviation increase in parental income increased students' likelihood of retaining the HOPE scholarship by 10.27%. The weakest predictor in this model was parental education. A one standard-deviation increase in parental education decreased students' probability of retaining the HOPE scholarship by only .08%.

When the SES variables were considered separately, the logistic regression yielded two significant predictors (both negative) of HOPE retention: free and reduced lunch ( $p = .021$ ) and poverty ( $p = .046$ ) (see Table 13). Lunch had the strongest  $\beta$  weight and the model was also statistically significant,  $X^2(1) = 6.304$ ,  $p < .012$ . This model correctly classified 85.4% of all cases, 100% of HOPE retainers, and none of the HOPE losers. Furthermore, it accounted for 8.0% of the variance between HOPE retainers and HOPE losers. A one standard deviation increase in free and reduced lunch percentages decreased students' likelihood of retaining the HOPE scholarship by 9.25%. The model for poverty was also significant,  $X^2 = 4.418$ ,  $p < .036$ , and correctly classified 85.4% of all cases. In addition, it correctly classified 100% of HOPE

retainers but none of the HOPE losers. The model for poverty accounted for 5.6% of the variance in HOPE retention versus loss. A one standard-deviation increase in poverty decreased students' likelihood of retaining the HOPE scholarship by 7.02%.

The group comparisons revealed that the free and reduced lunch ( $p = .018$ ) and poverty percentage ( $p = .042$ ) were both significantly lower for HOPE retainers than non-retainers (see Table 14). A smaller percentage of student eligible for free and reduced lunch and living below the poverty level in a student's school county, the greater their probability of retaining the HOPE scholarship. None of the other SES variables differed significantly for HOPE retainers and non-retainers.

**Pre-college academic predictors of HOPE retention.** Although the standardized  $\beta$  weights for both the combined and separate academic predictors revealed a tendency for high school GPA to be a stronger predictor of HOPE retention than was ACT, none of these differences in the predictive potential of these two variables proved statistically significant (see Tables 15, 16, and 17). Although high school GPA was quite useful in predicting receipt of the HOPE scholarship, it proved relatively weak in predicting whether HOPE recipients would retain the scholarship in college.

For the combined pre-college academic predictors (Table 15), the model was not statistically significant,  $X^2(2) = 3.208, p < .201$ , and only accounted for 4.1% of the variance between HOPE retainers and losers. In addition, it correctly classified 85.2% of all cases and 100% of HOPE retainers. However, it did not correctly classify any students who lost the HOPE scholarship. A one standard-deviation increase in HS GPA increased students' likelihood of retaining the scholarship by 7.49%, while a one standard-deviation increase in ACT score decreased students' probability of retaining the scholarship by 1.51%. When the variables were

examined separately (Table 16), neither of the models for HS GPA nor ACT score was significant. A one standard deviation increase in HS GPA increased students' likelihood of retaining the scholarship by 6.37% and a one standard deviation increase in ACT increased students' likelihood of retaining the scholarship by only 1.01%. The group comparisons between HOPE retainers and losers did not reveal any significant differences for HS GPA or ACT (see Table 17).

**Pre-course collegiate predictors of HOPE retention.** Of the four pre-course collegiate predictors (total credit hours accumulated, average work hours per week in the current semester, average credit hours in the current semester, and critical thinking percentile), only total credit hours and average work hours per week showed significant potential for predicting HOPE retention. In addition, none of these variables correlated highly with each other (Table 18). In the analysis of the combined predictors, none of them yielded significantly higher potential to predict HOPE retention than the other predictors (see Table 19). Also, this model was not statistically significant,  $X^2(4) = 7.210$   $p < .125$ , and accounted for only 9.6% of the variance in HOPE retention versus HOPE loss. The predictor with the strongest  $\beta$  weight was total credit hours earned. A one standard-deviation increase in credit hours decreased students' likelihood of retaining the scholarship by 5.55%. The weakest predictor was critical thinking percentile, with a one standard-deviation increase in this variable only resulting in a .032% increase in probability of retaining the HOPE scholarship.

When logistic regression analysis was used to assess the predictive potential of the separate variables, total credit hours ( $p = .033$ ) was significantly but negatively predictive of HOPE retention (see Table 20). This model was also statistically significant,  $X^2(1) = 4.263$ ,  $p < .039$ , and correctly classified 84.4% of all cases. In addition, it correctly classified 100% of

HOPE retainers, but none of the HOPE losers. This model also accounted for 5.7% of the variance in HOPE retention versus HOPE loss.

In the group comparisons between HOPE retainers and losers, only work hours per week ( $p = .048$ ) significantly predicted HOPE retention vs. loss (see Table 21). The combination of results across the three levels of analysis revealed that students with fewer accumulated credit hours and fewer work hours per week were more likely to retain the HOPE scholarship than those with more accumulated credit hours and more work hours per week.

**In-course collegiate predictors of HOPE retention.** Because the two participation variables (participation cap and participation total) were highly correlated ( $r = .901$ ), the three exams (practice exams, unit exams, and final exams) were highly inter-correlated, I first ran a logistic-regression analysis that included these two combinations of variables (see Tables 22 and 23). In addition, final course grade highly was correlated with exam scores, so final course grade was removed from this analysis. Results indicated that this model was significant,  $X^2(4) = 13.464, p < .009$ , and explained 20.8% of the variance between HOPE retainers and losers. It correctly classified 14.3% of those who did not retain HOPE, 99.1% of those who did, and 89.1% of cases overall. Class attendance was the strongest predictor in this model. In addition, it was the only significant predictor ( $p = .029$ ). A one standard deviation increase in attendance increased students' likelihood of retaining the HOPE scholarship by 9.34%.

Next, logistic regression was done for HOPE retention with the combined in-course variables with all of the original variables included (Table 24). Results indicated that this model was significant,  $X^2(8) = 17.880, p < .022$ , and explained 27.1% of the variance in retaining versus losing the HOPE scholarship. The model correctly predicted 21.4% of those who lost the HOPE scholarship and 99.0% of those who did not. Overall, it correctly classified 89.9% of

students. A one standard-deviation increase in the final grade increased their likelihood of having retained the HOPE scholarship by 19.39%. The variable with the strongest  $\beta$  weight was final course grade. However, none of the variables in this model predicted a significantly greater amount of the variance in HOPE retention than any other variables.

On the other hand, when the in-course variables were considered separately, all but one (written questions submitted for class discussion) significantly predicted HOPE retention (see Table 25). In addition all of the predictor models were statistically significant, except for submission of written questions for class discussion. The variable with the strongest  $\beta$  weight was final course grade. A one standard- deviation increase in final grade increased students' likelihood of retaining the HOPE scholarship by 14.28%. Furthermore, it explained 17.5% of the variance in HOPE retention versus loss. This model correctly classified 86.3% of all cases, 98.3% of HOPE retainers, and 5.6% of HOPE losers. The variable with the weakest beta weight was written questions submitted for class discussion. A one standard deviation increase in written question scores increased students' probability of retaining the scholarship by 4.18%.

Likewise, HOPE-retention and HOPE-loss groups differed significantly on all in-course variables except submission of written questions for class discussion (see Table 26). Among all of the significant differences between HOPE retention and loss groups, performance on practice exams appeared to produce a greater group difference than even performance on regular exams.

**Comparison of superordinate predictors of HOPE retention.** A logistic regression analysis was then done with the top predictors from each of the HOPE retention versus HOPE loss models (see Table 27). These variables were final course grade, total credit hours, free and reduced lunch, and HS GPA. This model was statistically significant,  $X^2(4) = 26.477, p < .001$ , and accounted for 35.1% of the variance between HOPE retainers and HOPE losers.



Furthermore, it correctly classified 38.9% of HOPE losers and 99.0% of HOPE retainers. This model correctly classified 89.7% of cases overall. Final course grade had the strongest standardized  $\beta$  weight and was statistically significant predictor of HOPE retention ( $p = .001$ ). A one standard-deviation increase in students' final grade increased their likelihood of retaining the HOPE scholarship by 18.92%. Total credit hours was also a significant but negative predictor of HOPE retention ( $p = .011$ ). A one standard-deviation increase in total credit hours reduced students' likelihood of retaining the HOPE scholarship by 8.80%. None of the other superordinate variables were significant predictors of HOPE retention. The variances and predicted percentages of each significant HOPE Scholarship retention model can be found in Table 30.

## **Chapter IV**

### **Discussion**

The purpose of the study was twofold: (a) determine which SES and pre-college academic variables best predict receipt of the HOPE scholarship; (b) determine which SES, pre-college academic, pre-course collegiate, and in-course collegiate variables best predicted retention of the HOPE scholarship. Standardized beta weights in binary logistic regression analyses indicated the strength of predictors in all phases of the analyses. Variables within subsets of variables were first considered together and then independently in predicting HOPE receipt and retention. The top predictors from each HOPE receipt versus non-receipt and HOPE retention versus loss models were also analyzed with binary logistic regression analyses.

#### **Overview of Principal Findings**

**Predictors of HOPE receipt.** The educational level of students' parents was the strongest predictor of HOPE receipt when the SES variables were examined in combination. Therefore, the higher the education of a student's parents, the greater the likelihood that the student would receive the HOPE scholarship. Percentage of students in a school system eligible for free and reduced lunch was the strongest SES predictor of HOPE receipt, when examined independently. The latter finding indicates that the higher the percentage of students in a school district eligible for free and reduced lunch, the lower the probability of students in that district receiving a HOPE scholarship. Higher percentages of students eligible for free and reduced lunch probably suggests that the school district has more students from economically poor backgrounds and less resources in their schools than districts with a lower percentage of students qualifying for free and reduced lunch.

Information regarding only two academic variables is typically available to educators

prior to students' being considered for a HOPE scholarship: high school GPA and ACT scores. When these variables were considered together, the predictive power of HS GPA was more than two times stronger than that of ACT scores. When the predictive power of these variables was considered separately, the predictive power HS GPA was close to two times stronger than that of ACT. Consequently, ACT does have some power to predict HOPE receipt, but that predictive potential is far overshadowed by HS GPA when the two variables are combined.

On the surface, one might expect ACT to be the more consistent and objective variable than HS GPA. Certainly, high schools vary in their grading standards. For example, academically poor schools may give a high percentage of As, whereas academically challenging schools may give a much lower percentage of As. Despite the considerable diversity in grading standards across high schools, HS GPA was a more powerful predictor of HOPE receipt than ACT scores.

When HS GPA and free and reduced lunch were examined together, HS GPA had a stronger standardized beta weight than the lunch variable. HS GPA was two and a half times stronger than the lunch variable and was the only significant predictor in this model. Therefore, it appears HS GPA remains a strong predictor of HOPE receipt regardless of students' SES background.

**Predictors of HOPE retention.** For the combination of SES variables, none of the five variables significantly predicted HOPE retention at a higher level than the other SES variables. However, when the SES variables were considered separately, both free and reduced lunch and poverty level significantly predicted HOPE retention at a higher level than the other SES variables. However, in both cases, the direction of the standardized beta weight was negative, indicating that the lower the percentage of free and reduced lunch and poverty levels, the higher

the probability of students' retaining the HOPE scholarship. Group comparisons of means for these variables confirmed the directionality of differences established through logistic regression analysis.

For the two pre-college academic variables considered in combination, high school GPA was seven times stronger in predicting HOPE retention than was ACT. Plus, HS GPA positively predicted HOPE retention, whereas ACT negatively predicted HOPE retention. When the two pre-college academic variables were considered separately, HS GPA was still six times stronger than ACT as a predictor of HOPE retention. These findings would follow from the assumption that a record of past academic accomplishment is one of the better predictors of future academic accomplishments. It appears that students who were able to maximize their GPAs in high school are typically able to continue to do so in college. These findings are aligned with previous research that indicates that students' high school GPAs are better predictors of college performance than standardized test scores (Hiss & Franks, 2014). However, the predictive power of high school GPA was significantly more powerful in predicting HOPE receipt than in predicting HOPE retention.

Once students get to college, several aspects of their college life may affect the probability of their retaining the HOPE scholarship (e.g., total credit hours completed, academic load at the time of the study, work hours at the time of the study, and their critical thinking percentile at the time of the study). With these potential predictors combined, total credit hours proved to be the strongest predictor of HOPE retention, with work hours not far behind (five times stronger than students' academic load in the current semester). Both of these predictors were negatively related to HOPE retention. As great as these differences appeared in standardized beta weight, neither was statistically superior to other pre-course predictors.

However, when these college predictors were considered separately, total credit hours completed was a significantly stronger predictor of HOPE retention than the other pre-course variables. Therefore, the greater the number of credit hours students accumulate, the more opportunities they have to potentially lose the scholarship. Nonetheless, group comparisons of HOPE retainers vs. losers did yield a significant difference in self-reported work hours per week, with the retainers working fewer hours than the losers.

Finally, performance measures in the course in which our data were collected showed that none of these measures was a significantly more powerful predictor than the other in-course variables. On the other hand, when the exam variables and participation variables were integrated and final course grade was removed because of high inter-correlations, attendance was a significant predictor of retention. In addition, when the in-course variables were considered separately, seven of eight were significant predictors of HOPE retention. In absolute terms, the final grade was the strongest predictor of HOPE retention in both combined and separate variables analyses, with its standardized beta weight more than four times as strong as that of the weakest predictor (written questions for class discussion) in the separate-variables analysis.

Similar findings resulted from the analysis done with the top predictors in each of the HOPE retention versus loss models. In this comparison, final course grade had a standardized beta weight more than nine times stronger than the weakest predictor (HS GPA). Inasmuch as the target course has been recognized as one of the most stringent courses taken by Teacher Education students in our university, the final grade represents a significant measure of one's academic potential and accomplishment.

## **Differences in Findings from Previous Research**

The study that most directly paralleled the nature of the current study was conducted by (Trant et al., 2014). However, one major difference in the scope of these studies makes parallel comparisons difficult. The previous study only examined predictors of HOPE retention vs. HOPE loss. The current study also examined the strength of predictors for HOPE receipt vs. HOPE non-receipt. Another distinction in the two studies was that more of the measures in the previous study were self-reported by students than was the case in the current study, which used self-report only for credit hours enrolled in the current semester, work hours in the current semester, parental income, and parental occupation. In contrast, much more of the data analyzed in the current study came from the official records of the University's Registrar's office (e.g., parental education level, total credit hours taken by students prior to the current semester, high school grade point average, and ACT scores) and reports by independent agencies, e.g., percent of residents living below the poverty line by county (U.S. Census Bureau, 2013b); Free and reduced lunch percentages (Kids Count Data Center, 2012).

In every comparison between the current and previous studies, the designation of SES, pre-course academic variables, and in-course achievement variables were somewhat different. Even though some of the variables were the same across the two studies, a different combination of variables could mean that the same variable would have a higher or lower standardized beta weight in the current study than in the previous study. Although both studies included some parental variables as SES variables, the current study added the percentage of students on free and reduced lunch in a student's school district and the percentage of residents living below the poverty line in each student's county as SES variables.

The pre-course findings in the past (Trant et al., 2014) and current study yielded the same

top predictor from the same combination of variables. High school GPA had the highest standardized beta weight for pre-college academic variables in both studies. Thus, whether self-reported by students, as was done in the previous study, or derived from Registrar records, as was done in the current study, high school GPA proved to be the top pre-college academic predictor of HOPE retention. Thus, in determining how to weight a variety of pre-college predictors of students' retention of the HOPE scholarship, one might conclude that high school GPA appears to be the most valid and reliable predictor.

The number of in-course predictors for HOPE retention was greater in the current than in the previous study (Trant et al., 2014). The past study used only three predictors (attendance, exam scores, and participation), but the current study spanned eight predictors (including the three used in the past study). The order of predictive potential of these three variables was generally the same in both studies (attendance, exam scores, and participation). In both studies, the standardized beta weight for participation was negative and almost precisely the same (-.079 compared to -.071) in the logistic analysis for combined variables. Although class participation has generally been considered a contributor to course performance, one can overdo participation (Carstens, Wright, Cole, Edge, & Williams, 2013; Krohn et al., 2010). In fact, there may be a curvilinear relationship between participation and other course performance measures: some students need to participate more, while others need to participate less and listen more to optimize their contribution to class discussion. Overall, student success on the different academic tasks in the target course appears to be highly consistent with performance skills required to retain the HOPE scholarship.

## **Strategies that Help At-risk Students Be Successful in College**

The most important SES predictors of HOPE scholarship receipt and HOPE retention appear to be whether a student has gone to school in a county that has a substantial percentage of students eligible for free and reduced lunch and a substantial percentage of residents below the poverty level. In both cases, higher percentages reduce the likelihood that one will receive and retain a HOPE scholarship. While providing free and reduced lunch is certainly considered an appropriate way to assist students from poor homes, it is not a positive indicator that students are likely to be offered a HOPE scholarship and retain the scholarship if received.

Our data suggest that students from a school system with a substantial percentage of students qualifying for free and reduced lunch and having parents who are not highly educated will need more assistance in college to retain their HOPE scholarship (e.g., management of their time, effective and efficient study skills, test taking strategies, strategies for preparing for exam, and structuring and writing course papers) than students from more affluent backgrounds. This proposition generally aligns with the results of our study that students from economically disadvantaged backgrounds are less likely to receive and retain the HOPE scholarship than students from more affluent backgrounds. Therefore, at-risk students need to receive assistance from early on in their school careers until college graduation. Promoting admission and academic success of economically disadvantaged students can lead to multiple benefits across generations.

One potential reason that students struggle academically in college could be their lack of preparation for the rigor and autonomy of the college environment. In college, students are more independent and have more control over behavior, such as attending class, studying for exams, and balancing school and social lives. A way in which college readiness can be promoted in



high school students is dual enrollment at a local community college while in high school (Gamez-Vargas & Oliva, 2013). Dual enrollment can help students gradually transition into the college environment with guidance from high school teachers and college professors.

Research demonstrates that students dually enrolled in a community college while in high school are more likely to subsequently attend a four-year university and have a higher GPA during their freshman year of college than peers who do not (Crouse & Allen, 2014; Lichtenberger, Witt, Blankenberger, & Franklin, 2014). Furthermore, dual enrollment could potentially reduce the number of remedial classes students take once entering college, decrease the amount of time it takes to earn a college degree, and lessen college costs (Lichtenberger et. al, 2014).

A way to make dual enrollment in high school and college even more successful would involve collaboration between community college professors and local high schools teachers (Lym, 2014). Collaborative programs should identify several areas in which high schools could increase students' college readiness. Some of Lym's (2014) recommendations for high school teachers include an increased emphasis on independent learning, introducing students to college syllabi and assignments, informing students about what they will be expected to do in college, and teaching students how to avoid plagiarism in their writing.

Another way in which students could prepare for the rigors of attending a four-year university would be to attend a two-year community college first. This arrangement could be particularly cost-efficient in the state of Tennessee because of a new lottery-funded scholarship called Tennessee Promise (Drive to 55, 2015). This scholarship makes all two-year community colleges and technical schools in the state of Tennessee free to all Tennessee residents starting in the fall of 2015. This program also provides students with a mentor to help them with the

application process. In order to retain the Promise scholarship, students must maintain a 2.0 GPA and participate in at least eight hours of community service per semester.

One of the reasons the Tennessee Promise scholarship was implemented was to help disadvantaged and minority students attain a college degree. Research shows that the majority of students enrolled in community colleges are first-generation, ethnic minorities, with a full-time job (Free Up the Two-Year Colleges, 2014). Therefore, the Promise scholarship is especially beneficial for students from low SES backgrounds. This scholarship is also part of a plan to increase the percent of Tennessee residents with college degrees from 32% to 55% by the year 2025. Politicians around the United States, including President Barack Obama, are impressed with the Promise Scholarship and its predicted outcomes. In fact, President Obama proposed a plan to make community and technical colleges free across the country, which could help as many as 9 million individuals earn a college degree (Bidwell, 2015). The short and long-term effects of the Promise scholarship and President Obama's initiative to make it nationwide should be closely studied in the coming years.

Increasing students' college readiness is an important first step in increasing their likelihood of receiving and retaining the HOPE scholarship. However, students, especially those at-risk for academic difficulties, need to receive assistance throughout their college careers. One way that the federal government has addressed this need is through the TRIO program (U.S. Department of Education, 2013). The TRIO program finances college resource centers designed to assist disadvantaged students across the country. Eligible students include those who are from low-income families, are first-generation college students, or who have a physical disability. TRIO programs on college campuses provide students with services such as free tutoring, academic coaching, and mental health counseling. Students who participate in TRIO programs

tend to have higher GPAs and retention rates than disadvantaged students who did not receive these services (Dervarics, 1997).

Although TRIO programs have been effective in helping disadvantaged students succeed in college, only about 10% of eligible students participate in the program (Jean, 2011). In fact, at the University of Tennessee, only about 250 students of approximately 1,646 likely eligible for the program are served by the TRIO program (Tennessee, 2010). One reason for this small number of participants is insufficient federal funding to provide services to all who would qualify (Jean, 2011). Another reason could be that there is limited awareness about students assistance programs as TRIO and its benefits among students who would qualify for the program (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2009). Schools with TRIO funded programs should work to increase its visibility to students who meet the financial criteria for TRIO and whose pre-college and early college experiences suggest they could benefit from the services of this program.

Due to the limitations of TRIO programs, some universities have implemented their own programs in order to increase the success of disadvantaged college students. For example, Georgetown University has a scholarship program that provides low-income students with financial aid, academic assistance, and social support (McMurtrie, 2014). This program has been available for ten years and serves about 10% of the undergraduate students at Georgetown University. Students involved in this program are given a peer mentor for their freshman year, extra academic assistance before classes begin (if needed), access to counseling services, career advising, money-management seminars, and access to networking events. This program has shown considerable positive effects at Georgetown, including a 97% graduation rate of low-income students (Owsiany, 2014). Other universities implementing similar programs designed

to provide financial, academic, and social support to students include Duke and Wake Forest Universities (Oguntoyinbo, 2014).

A program similar to Georgetown's scholarship program is the "Say Yes to Education" organization (Say Yes to Education, 2015b). This program's mission is to increase students' academic success throughout their entire school experience (Georgetown University, 2013). This non-profit organization provides students with scholarships, mentoring, tutoring, family support, and legal assistance among other services beginning as early as elementary school. Over 70 private colleges, state universities, and community colleges have partnered with the "Say Yes Program," including Harvard, Duke, Tulane, and Yale Universities (Say Yes to Education, 2015a). Research on the effects of this program demonstrates that 90% of participants advance from their freshman year to sophomore year of college. This matriculation rate is significantly higher than the national average of 67% (Georgetown University, 2013). The continued expansion of programs such as "Say Yes to Education" and other privately funded low-income student assistance programs can help fill in the gaps that state and federally funded programs leave behind.

Another way in which financial-aid practitioners can help low-income students succeed in college is through greater funding on a needs basis. Lottery scholarships such as the Tennessee HOPE scholarship were designed with the intent of making college more affordable for students from all economic backgrounds (Penn & Kyle, 2007). However, due to the fact that lottery scholarships have become more merit-based and less need-based, the share of lottery-scholarships for low-income students appears to be shrinking (Dynarski, 2000). Some argue that strictly merit-based financial aid takes funds away from those who need them most and puts these funds into the hands of students who could afford college without scholarship aid (Heller &

Martin, 2002). Moreover, the rising cost of tuition further limits the possibility of low-income students' attending college without substantial scholarship aid.

A number of states, including Tennessee, Arkansas, and Kentucky have implemented need-based stipends in addition to lottery scholarship funds. Tennessee students eligible for the HOPE scholarship and from families that earn \$36,000 or less per year are qualified for the ASPIRE award. This award grants students an additional stipend of \$1,500 to \$2,250 per year (Tennessee, 2015). In Arkansas, the "GO! Opportunities Grant" gives low-income students \$500 to \$1,000 dollars per semester depending on how many credit hours they are taking (Arkansas, 2014). Finally, Kentucky provides low-income students with monetary bonuses based on the number of AP/IB exams they pass (Seiler et al., 2011). To make the greatest difference in society, universities need to implement a multiplicity of the programs reviewed in this section. The aim would be to make college as attainable for low-income students as those from more affluent backgrounds.

### **Limitations of the Study**

Several limitations of this study could affect the generalizability of the obtained results. The first limitation is due to the study's small sample size. Only 181 of the students enrolled in the eight sections of the target course were eligible to participate in the study. Students who were classified as "out of state" or who did not sign the informed consent were not included in the study. Of the participants, 78.5% of students received the HOPE scholarship, while 21.5% did not. Of the students who received the scholarship, 14.1% eventually lost it. Therefore, the majority of participants both received and retained the HOPE scholarship.

A second limitation of the current study was its use of a convenience sample rather than a randomly selected sample. All of the students were enrolled in the same course, and the majority

of them were pursuing majors in areas such as special education, English, history, and psychology. Furthermore, the bulk of the students were female (82.9%) and Caucasian (87.3%). Therefore, it would be difficult to generalize results from this study to students with more diverse backgrounds and college majors.

A third limitation of the current study is the self-report nature of some data. Although the majority of the data came from objective sources (Registrar's office, course grades), we used self-report for the following variables: parental income, parental occupation, work hours, and current credit hours. In addition, information regarding the percentage of students receiving free and reduced lunch in each student's high school county was gathered from government reports (U.S. Census Bureau, 2013b) instead of asking students directly if they participated in this program. Our intent was to minimize social desirability tendencies that can invalidate self-report measures. However, gathering individual information on each student from an objective source would have been more beneficial but also more difficult to arrange.

A final limitation of the current study relates to the students who did not receive the HOPE scholarship. Although all students included in the study were classified as "in-state" by the Registrar's Office, the Registrar's data did not identify what percentage of in-state non-recipients actually applied for the HOPE scholarship. In addition, 11 of the "in-state" students attended high schools in different states, and the states in which four students attended high school were not reported. As earlier noted, students classified as Tennessee residents who attend high school in different states can still receive the scholarship if they attend high school in a county bordering Tennessee, are children of military members or civilian workers of the U.S. Department of defense, are children of religious workers in foreign nations, or attended schools accredited by the National Association of Independent Schools (Tennessee, 2015).

Of the students who attended high school out of state or whose state was not reported, two received the HOPE Scholarship. I cannot be sure if the other non-recipients did not apply for the scholarship, were denied because of GPA or ACT/SAT score, or if they were ineligible for residency reasons. Finally, Tennessee residents who initially attend college out of state can transfer back to a Tennessee university and maintain eligibility for receipt of the HOPE scholarship. However, this switch is only possible if the student attends college in any state within 16 months of high school graduation, maintains continuous enrollment, and earns the required GPA for the HOPE scholarship at the out-of-state university (Tennessee, 2015). According to the Registrar, 54.1% of students in the study were classified as transfer students. However, the Registrar did not indicate from which schools students transferred. Therefore, some students may have not been eligible for the HOPE scholarship because of their college performance rather than high school performance.

### **Unresolved Research Issues**

A number of unexpected findings emerged in the study. First, when SES variables were examined together in predicting HOPE receipt, mother and father's occupations were significantly related to non-receipt of the HOPE scholarship. The scale used to determine parental occupation ratings combined both income and education required for a job (Nakao & Treas, 1994). Previous research demonstrates that students from families with higher incomes and more educated parents typically have greater academic success (Alexander et al.; De Clercq et al, 2013; Vail, 2004). Therefore, it seems counterintuitive that the more prestigious the parental jobs, the less likely students are to receive the HOPE scholarship. Furthermore, parental education and occupation positively correlated with each other, yet parental education had a positive beta weight for receipt of the HOPE scholarship but parental occupation did not.

Parental income also had a negative beta weight for retention of the HOPE scholarship. It appears that having highly educated parents is more beneficial to receiving the HOPE scholarship than their income or occupational status. Perhaps there is not as much incentive for students whose parents have a prestigious job and/or high salary to strive hard to receive the HOPE scholarship. If these students do not receive the scholarship, their parents could still potentially cover college expenses with little difficulty.

A second unexpected finding of the study was the failure of critical thinking ability to predict retention of the HOPE scholarship. Critical thinking percentile had the smallest standardized beta weight when the pre-course collegiate factors were examined both together and separately. This finding is counter to previous research, which links critical thinking ability to individual course performance and overall college GPA, as well as to retention of the HOPE scholarship (Giancarlo & Facione, 2001; Trant et al., 2014; Williams et al., 2003; Williams & Worth, 2002). However, critical thinking was combined with a different set of variables in the current study than in the reports identified above, which could have altered its apparent predictive potential in the current study.

Another surprising finding was the negative relationship between total credit hours completed and retention of the HOPE scholarship. I had assumed that the more credit hours students had completed, the less the probability of losing the HOPE scholarship. Work hours and academic load in the current semester were also negatively related to retention of the HOPE scholarship. One possible explanation for the negative relationship between credit hours accumulated and HOPE retention is student overload—rapidly accumulating credit hours and working a considerable number of hours per week. Thus, a possibility that needs to be double-checked is the rate at which one accumulates credit hours. Future research should examine the



differences between students who consistently take the minimum number of required credit hours versus those who take the maximum number of credit hours that their university allows. Furthermore, future research should examine if taking summer courses or mini-terms in addition to regular semester attendance affects student retention rates. In addition, juniors and seniors have to maintain a higher GPA (3.0) to retain the scholarship than freshmen and sophomores (2.75). Taking heavier loads each semester, taking advanced college courses, and working more hours per week could be a combination that adds vulnerability to losing the HOPE scholarship.

A fourth somewhat mixed finding in the current study was the lack of relationship between number of hours worked outside of school and HOPE scholarship retention. Research demonstrates that students who work a moderate number of hours outside of school tend to have better GPAs and time management skills (Darolia, 2014; Mounsey et al., 2013; Orszag et al., 2001; Rowh, 1998). However, students who work full time tend to have more stress and academic difficulty. These findings suggest a curvilinear relationship between hours worked outside of school and HOPE retention. Perhaps the type of work also affects academic achievement. For example, having an on-campus work-study job that allows students time to do school work on the job would presumably be more beneficial to HOPE scholarship retention than working nights in a restaurant. Future research should examine how different types and amount of work experiences affect student's academic performance and retention of the HOPE scholarship.

A final unexpected finding came from an examination of in-course variables that contributed to HOPE retention. Aside from the final grade in the course and exam scores, performance on practice exams was the number one independent predictor of HOPE retention, making performance on practice exams about as strong in predicting HOPE retention as major

exams (even though far more credit potential was attached to major exams). Overall, students have appeared more cavalier about taking and performing well on practice exams than performing well on major exams, which carried ten times more credit than the practice exams. Perhaps performance on practice exams reflected a stronger blend of work habits and cognitive skills than performance on major exams.

One possible generalization regarding retention of HOPE scholarships is that performance in a high-demand course can be a strong predictor of HOPE retention. Whether performance on a few high-demand courses would be a stronger predictor of HOPE retention than overall collegiate GPA remains to be determined. However, as an afterthought to our study, I compared the standardized beta weight of the final grade in the Ed Psych 210 course with that of students' overall GPA (not including the semester in which the study was done) in predicting HOPE retention or loss (see Tables 28 and 29). I found that the final grade in the Ed Psych 210 course was a significantly better predictor of HOPE retention than collegiate GPA (the criterion on which HOPE retention or loss is determined). The Ed Psych 210 course apparently subsumes several of the cognitive and behavior patterns necessary for overall success in college and retention of the HOPE scholarship.

### **Future Directions for Research**

Several interesting issues that developed from this study warrant further examination. In the state of Tennessee, students who lose the HOPE scholarship have one opportunity to regain it (Tennessee, 2015). However, in the current study, I did not have access to the percent of participants who lost and then subsequently regained the HOPE scholarship. Future research should examine the differences between students who lose the scholarship and never regain it, those who lose it but then regain and keep it for the duration of college, and those who regain the

scholarship but lose it a second time. In addition, the predictive potential that SES, pre-course high school, pre-course collegiate, and in-course factors predict student placement into these groups should be researched. Finally, the long-term effects that losing then regaining the HOPE scholarship has on student academic achievement and college retention rates should be investigated.

Another area of information that I did not have access to for this study was the amount of monetary support students received from sources other than the HOPE Scholarship. These sources could include parental support, outside jobs, other merit or need-based scholarships, and/or student loans. Perhaps, students who have substantial financial support from parents, scholarships, or a well-paying job do not have as much incentive to retain the HOPE scholarship as those who rely on it as their main source of funding. Therefore, it could be useful to determine how vital HOPE Scholarship aid is to students' ability to afford college expenses and how that need affects HOPE retention probability.

A third area of future research could examine additional aspects of students' lives that may affect their chances of retaining the HOPE scholarship. Facets of students' lives that may influence their academic performance include the number of clubs or organizations in which they are involved, the amount and frequency of alcohol consumption and/or illicit drug use, the presence of interpersonal conflicts, physical and/or mental health issues, and family emergencies or tragedies. All of these factors could potentially affect students' likelihood of retaining the HOPE Scholarship in a given semester, irrespective of previous academic performance or SES background.

A final area that should be researched further is the amount of outside academic support students receive and how that contributes to HOPE receipt and retention. Support programs that

could influence HOPE Scholarship receipt include ACT/SAT prep courses and academic tutoring. In college, student participation in TRIO programs or academic coaching/tutoring from university student success centers could increase their likelihood of retaining the scholarship. The degree to which participation in these programs contributes to HOPE receipt and retention could provide valuable information for helping all students succeed.

### **Concluding Note**

Earning a college degree generates countless benefits in an individual's life. These outcomes are especially salient for individuals from economically disadvantaged backgrounds. Lottery scholarship programs, such as the Tennessee HOPE scholarship, provide students' with financial assistance needed to pursue this goal. The post-college opportunities for scholarship recipients will likely be greatly enhanced if they are able to retain the scholarship until graduation. This dissertation has described a number of university programs that could greatly increase the probability of financially poor students' retaining scholarship aid and graduating from college. Upon graduation, these students can also become major contributors to society by addressing society's needs with their acquired collegiate expertise. Without college, individuals from financially poor backgrounds may become more dependent on society than contributors to the resources of society. College teachers, administrative leaders, and public officials have the opportunity and responsibility to help all students, especially those at-risk for academic difficulties, to succeed in college by mobilizing the multiplicity of collegiate resources described in this dissertation.

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## Appendices

## **Appendix A**

### **Tables**

Table 1

*Predictor-Variable Descriptives*

Variable	Minimum	Maximum	Mean	Standard Deviation
Parental Education	1.00	4.00	2.6532	.90207
Parental Income	1.00	6.00	3.6606	1.37706
Mother's Job	.00	96.00	55.8909	16.69636
Father's Job	.00	97.00	55.9057	21.65313
Lunch	11.00	75.80	39.2733	12.63564
Poverty	4.40	26.10	14.6907	4.48288
HS GPA	1.50	4.00	3.7121	.41271
ACT	19.00	34.00	25.9876	3.09028
Total Credit Hours	.00	133.00	38.4257	23.35648
Semester Hours	11.00	20.00	15.2542	1.60885
Work Hours	.00	40.00	9.4457	11.00933
Critical Thinking	1.00	99.00	19.3978	24.16970
Final Grade	146.00	573.00	482.1272	53.23354
Final Exam	55.00	97.00	81.5789	8.35875
Unit Exam	124.00	239.00	196.8081	22.80667
Practice Exam	15.00	122.00	90.4424	20.25910
Attendance	20.00	60.00	43.4884	9.88914
Participation Cap	.00	60.00	51.1686	12.04526
Participation Total	.00	160.00	71.1395	28.39927
Written Questions	14.00	60.00	48.0696	10.66163

Table 2

*Correlation Matrix of Socioeconomic Predictors*

		Mom Job	Poverty	Income	Lunch	Dad Job	Parent Ed
Mom Job							
	Pearson Correlation	1.000	.062	.330***	.063	.154	.449***
	Sig. (2-tailed)		.440	.001	.434	.057	.001
Poverty							
	Pearson Correlation	----	1.000	-.142	.871***	-.113	-.020
	Sig. (2-tailed)	----		.076	.001	.166	.827
Income							
	Pearson Correlation	----	----	1.000	-.205*	.421***	.443***
	Sig. (2-tailed)	----	----		.010	.001	.001
Lunch							
	Pearson Correlation	----	----	----	1.000	-.099	-.107
	Sig. (2-tailed)	----	----	----		.225	.244
Dad Job							
	Pearson Correlation	----	----	----	----	1.000	.327***
	Sig. (2-tailed)	----	----	----	----		.001
Parent Ed							
	Pearson Correlation	----	----	----	----	----	1.000
	Sig. (2-tailed)	----	----	----	----	----	

\* $p < .05$ ., \*\*\* $p < .001$ .

Table 3

*Combined Socioeconomic Predictors of HOPE Scholarship Receipt*

$$X^2(5) = 15.109, p < .010$$

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio
Parent ED	.1261	.937	6.415	.011*	2.552
Dad Job	-.1130	-.035	4.238	.040*	.966
Mom Job	-.1070	-.043	4.139	.042*	.958
Lunch/Poverty <sup>b</sup>	-.0646	-.026	2.054	.152	.975
Income	-.0148	-.072	.075	.784	.930

*Note:* HOPE scholarship coded as 1 for *did not receive* and 2 for *received*

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

<sup>b</sup>Combination of Lunch and Poverty Variables

\* $p < .05$ .



Table 4

*Separate Socioeconomic Predictors of HOPE Scholarship Receipt*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1)$
Lunch	-.0717	-.035	4.540	.033*	.965	4.931, $p < .026$
Mom Job	-.0652	-.025	3.719	.054	.976	3.957, $p < .047$
Dad Job	-.0627	-.018	3.103	.078	.982	3.328, $p < .068$
Parent ED	.0408	.290	1.383	.240	1.337	1.370, $p < .242$
Poverty	-.0174	-.024	.304	.581	.977	.307, $p < .580$
Income	-.0039	-.017	.139	.903	.983	.015, $p < .903$

*Note:* HOPE scholarship coded as 1 for *did not receive* and 2 for *received*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\* $p < .05$ .

Table 5

*Results of t-tests for Socioeconomic Predictors and HOPE Scholarship Receipt*

	HOPE Received	N	Mean	Standard Deviation	Standard Error Mean	Sig (2-tailed)
Lunch						
	Yes	137	38.2226	12.45312	1.06394	.031*
	No	35	43.3857	12.68123	2.14352	
Poverty						
	Yes	137	14.5956	4.42704	.37823	.584
	No	35	15.0629	4.74324	.80175	
Mom Job						
	Yes	133	54.6541	16.62421	1.44150	.052
	No	32	61.0313	16.25301	2.87315	
Dad Job						
	Yes	127	54.3780	22.15133	1.96561	.076
	No	32	61.9688	18.64868	3.29665	
Income						
	Yes	130	3.6538	1.33359	.11696	.904
	No	35	3.6857	1.54865	.26177	
Parent Ed						
	Yes	100	2.7000	.87039	.20833	.240
	No	24	2.4583	1.02062	.20833	

\* $p < .05$ .

Table 6

*Correlation Matrix of Pre-College Academic Predictors*

		HS GPA	ACT
HS GPA	Pearson Correlation	1.000	.378 <sup>***</sup>
	Sig. (2-tailed)		.001
ACT	Pearson Correlation	----	1.000
	Sig. (2-tailed)	----	

\*\*\* $p < .001$ .

Table 7

*Combined Pre-College Academic Predictors of HOPE Scholarship Receipt*

$$\chi^2 (2) = 11.577, p < .003$$

Predictor	$b(\text{Std})^a$	$b$	Wald's t	Sig.	Odds-Ratio
HS GPA	.0807	1.565	6.423	.011*	4.785
ACT	.0354	.092	1.051	.305	1.096

*Note:* HOPE scholarship coded as 1 for *did not receive* and 2 for *received*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\* $p < .05$ .

Table 8

*Separate Pre-college Academic Predictors of HOPE Scholarship Receipt*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1) =$
HS GPA	.1067	1.830	13.88	.001***	6.232	15.936, $p < .001$
ACT	.0646	.159	1.475	.225	.095	4.581, $p < .032$

*Note:* HOPE scholarship coded as 1 for *did not receive* and 2 for *received*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\*\*\*  $p < .001$ .

Table 9

*Results of t-tests for Pre-College Academic Predictors and HOPE Scholarship Receipt*

	HOPE Receipt	N	Mean	Standard Deviation	Standard Error Mean	Sig (2-tailed)
HS GPA	Yes	137	3.7752	.31465	.02688	.006**
	No	28	3.4036	.64576	.12204	
ACT	Yes	136	26.2059	3.07948	.26406	.036*
	No	25	24.8000	2.92973	.58595	

\* $p < .05$ ., \*\* $p < .01$ .

Table 10

*Superordinate Predictors of HOPE Scholarship Receipt*

$$X^2 (2) = 16.766, p < .001$$

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio
HS GPA	.1013	1.696	11.915	.001***	.976
Lunch	-.0438	-.024	1.599	.206	5.454

*Note:* HOPE scholarship coded as 1 for *did not receive* and 2 for *received*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\*\*\* $p < .001$ .

Table 11

*HOPE Scholarship Receipt Models*

Model	X <sup>2</sup>	Variance	Overall Correct	Correct Receipt	Correct Non-Receipt
Combined SES	15.109**	23.1	84.8	98.8	22.2
Lunch	4.931*	4.4	79.9	100.0	0.0
Combined Pre-College Academic	11.577**	12.5	85.4	99.3	4.3
HS GPA	15.836***	15.3	83.6	98.5	10.7
ACT	4.581*	4.9	84.5	100.0	0.0
Superordinate	16.766***	16.5	85.0	99.2	17.9

\* $p < .05$ ., \*\* $p < .01$ , \*\*\* $p < .001$ .

*Note:* Only significant models from the combined and separate analyses included in table.



Table 12

*Combined Socioeconomic Predictors of HOPE Scholarship Retention*

$$X^2 (5) = 11.270, p < .046$$

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio
Income	.1027	.777	3.660	.056	2.176
Lunch/Poverty <sup>b</sup>	-.0926	-.058	3.404	.065	.944
Mom Job	-.0910	-.057	2.763	.096	.945
Dad Job	.0122	.006	.096	.757	1.006
Parent ED	-.0077	-.091	.021	.884	.913

*Note:* HOPE scholarship coded as 1 for *did not receive* and 2 for *received*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

<sup>b</sup> Combination of Lunch and Poverty Variables

Table 13

*Separate Socioeconomic Predictors of HOPE Scholarship Retention*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1) =$
Lunch	-.0925	-.056	5.350	.021*	.945	6.304, $p < .012$
Poverty	-.0702	-.124	3.994	.046*	.883	4.418, $p < .036$
Parent ED	.0393	.405	1.427	.232	1.500	1.399, $p < .237$
Income	.0364	.232	1.413	.235	1.261	1.419, $p < .234$
Dad Job	.0125	.005	.206	.650	1.005	.202, $p < .653$
Mom Job	.0061	.003	.053	.817	1.003	.053, $p < .818$

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\* $p < .05$ .

Table 14

*Results of t-tests for Socioeconomic Predictors and HOPE Scholarship Retention*

	HOPE Retained	N	Mean	Standard Deviation	Standard Error Mean	Sig (2-tailed)
Lunch	Yes	117	37.1880	12.34472	1.14127	.018*
	No	20	44.2750	11.59759	2.59330	
Poverty	Yes	117	14.2786	4.35973	.40306	.042*
	No	20	16.4500	4.47243	1.00007	
Mom Job	Yes	114	54.7895	16.10243	1.49970	.819
	No	19	53.8421	20.40224	4.68060	
Dad Job	Yes	110	54.7273	22.19592	2.11630	.653
	No	17	52.1176	22.39666	5.43199	
Income	Yes	113	3.7080	1.30028	.12232	.234
	No	17	3.2941	1.53153	.37145	
Parent Ed	Yes	88	2.7386	.86429	.09213	.231
	No	12	2.4167	.90034	.25990	

\* $p < .05$ .

Table 15

*Combined Pre-College Academic Predictors of HOPE Scholarship Retention*

$$X^2 (2) = 3.208, p < .201$$

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio
HS GPA	.0749	1.373	3.237	.072	3.947
ACT	-.0151	-.037	.173	.677	.964

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

Table 16

*Separate Pre-College Academic Predictors of HOPE Scholarship Retention*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1) =$
HS GPA	.0637	1.154	2.881	.090	3.170	2.710, $p < .100$
ACT	.0101	.026	.269	.604	2.952	.106, $p < .745$

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

Table 17

*Results of t-tests for Pre-College Academic Predictors and HOPE Scholarship Retention*

	HOPE Retained	N	Mean	Standard Deviation	Standard Error Mean	Sig (2-tailed)
HS GPA						
	Yes	117	3.7944	.29995	.02773	.083
	No	20	3.6625	.37908	.08477	
ACT						
	Yes	116	26.2414	3.10573	.28836	.747
	No	20	26.0000	2.99122	.66886	

Table 18

*Correlation Matrix of Pre-Course Collegiate Predictors of HOPE Scholarship Retention*

		Semester Hours	Total Credit Hours	Work Hours	CT Percent
Semester Hours	Pearson Correlation	1.000	.172*	.055	.121
	Sig. (2- tailed)		.038	.470	.109
Total Credit Hours	Pearson Correlation	----	1.000	.118	.164*
	Sig. (2- tailed)	----		.159	.046
Work Hours	Pearson Correlation	----	----	1.000	-.006
	Sig. (2- tailed)	----	----		.935
CT Percent	Pearson Correlation	----	----	----	1.000
	Sig. (2- tailed)	----	----	----	

\* $p < .05$ .

Table 19

*Combined Pre-Course Collegiate Predictors of HOPE Scholarship Retention*

$$X^2 (4) = 7.210, p < .125$$

Predictor	$b(\text{Std})^a$	$b$	Wald's t	Sig.	Odds-Ratio
Total Credit Hours	-.0555	-.018	3.539	.060	.982
Work Hours	-.0507	-.035	2.323	.127	.966
Semester Hours	-.0063	-.030	.038	.845	.970
Critical Thinking Percentile	.0032	.001	.021	.885	1.001

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.



Table 20

*Separate Pre-Course Collegiate Predictors of HOPE Scholarship Retention*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1) =$
Total Credit Hours	-.0569	-.019	4.522	.033*	.981	4.263, $p < .039$
Work Hours	-.0550	-.041	3.759	.053	.960	3.754, $p < .053$
Semester Hours	-.0231	-.119	.574	.449	.888	.575, $p < .448$
Critical Thinking Percentile	-.0088	-.003	.121	.728	.997	.117, $p < .732$

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\* $p < .05$ .

Table 21

*Results of t-tests for Pre-Course Collegiate Predictors of HOPE Scholarship Retention*

	HOPE Retained	N	Mean	Standard Deviation	Standard Error Mean	Sig (2-tailed)
Total Credit Hours						
	Yes	108	38.6852	21.90449	2.09022	.089
	No	20	51.5000	30.82634	6.89298	
Semester Hours						
	Yes	120	15.4167	1.53712	.14091	.452
	No	20	15.7000	1.65752	.37063	
Work Hours						
	Yes	119	9.1765	10.94199	.99341	.048*
	No	20	14.4250	10.46331	2.33967	
Critical Thinking						
	Yes	122	19.9016	25.89758	2.31014	.730
	No	20	22.0500	25.07772	5.60755	

\* $p < .05$ .

Table 22

*Correlation Matrix of In-Course Collegiate Predictors of HOPE Scholarship Retention*

		Final grade	Final Exam	Unit Exam	Practice Exam	Attendance	Part. Cap	Part. Total	Questions
Final Grade									
	Pearson	1.000	.694***	.838***	.712***	.211**	.500***	.455***	.558***
	Correlation								
	Sig. (2-tailed)		.001	.001	.001	.005	.001	.001	.001
Final Exam									
	Pearson	----	1.000	.711***	.494***	.017	.219**	.181*	.095
	Correlation								
	Sig. (2-tailed)	----		.001	.001	.830	.004	.018	.238
Unit Exam									
	Pearson	----	----	1.000	.612***	.114	.190**	.213**	.255***
	Correlation								
	Sig. (2-tailed)	----	----		.001	.135	.012	.005	.001
Practice Exam									
	Pearson	----	----	----	1.000	.234***	.281***	.322***	.295***
	Correlation								
	Sig. (2-tailed)	----	----	----		.003	.000	.001	.001
Attendance									
	Pearson	----	----	----	----	1.000	-.049	.169*	.212**
	Correlation								
	Sig. (2-tailed)	----	----	----	----		.521	.026	.008
Participation									
Cap	Pearson	----	----	----	----	----	1.000	.901***	.247**
	Correlation								
	Sig. (2-tailed)	----	----	----	----	----		.001	.002
Participation									
Total	Pearson	----	----	----	----	----	----	1.000	.260***
	Correlation								
	Sig. (2-tailed)	----	----	----	----	----	----		.001
Questions									
	Pearson	----	----	----	----	----	----	----	1.000
	Correlation								
	Sig. (2-tailed)	----	----	----	----	----	----	----	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 23

*Integrated In-Course Collegiate Predictors of HOPE Scholarship Retention*

$$\chi^2 (4) = 13.464, p < .009$$

Predictor	b(Std) <sup>a</sup>	b	Wald's t	Sig.	Odds-Ratio
Attendance	0.0934	.082	4.746	.029*	1.085
Exams Combined <sup>b</sup>	0.0657	.013	3.166	.075	1.013
Participation Combined <sup>c</sup>	0.0623	.014	2.337	.126	1.014
Questions	-0.0049	-.004	.017	.897	.996

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup>b(Std) = Standardized beta weight.

<sup>b</sup>Combined practice exams, unit exams, and final exam.

<sup>c</sup>Combined total participation and participation cap.

\* $p < .05$ .

Table 24

*Combined In-Course Collegiate Predictors of HOPE Scholarship Retention*

$$\chi^2 (8) = 17.880, p < .022$$

Predictor	b(Std) <sup>a</sup>	b	Wald's t	Sig.	Odds-Ratio
Final Grade	0.1939	.030	1.575	.209	1.039
Attendance	0.0858	.073	2.508	.113	1.076
Total Participation	-0.0707	-.021	.708	.400	.979
Submitted Questions	-0.0619	-.049	1.052	.305	.952
Unit Exams	-0.0567	-.021	.336	.562	.979
Participation Capped	0.0556	.039	.397	.529	1.040
Final Exam	-0.0554	-.056	.631	.427	.946
Practice Exams	0.0215	.009	.023	.704	1.009

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup>b(Std) = Standardized beta weight.

Table 25

*Separate In-Course Collegiate Predictors of HOPE Scholarship Retention*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1) =$
Final Grade	.1428	.021	12.605	.001***	1.022	14.405, $p < .001$
Exams	.1212	.042	9.679	.002**	1.043	10.942, $p < .001$
Practice Exams	.1001	.042	10.354	.001**	1.043	10.979, $p < .001$
Attendance	.0694	.060	3.897	.048*	1.062	4.473, $p < .034$
Final Exam	.0660	.067	5.264	.022*	1.069	5.234, $p < .022$
Participation Total	.0651	.020	4.085	.043*	1.020	4.354, $p < .037$
Participation Cap	.0486	.035	4.175	.041*	1.036	3.843, $p < .050$
Submitted Questions	.0418	.035	2.203	.138	1.035	2.122, $p < .145$

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 26

*Results of t-tests for In-Course Collegiate Predictors of HOPE Scholarship Retention*

	HOPE Retained	N	Mean	Standard Deviation	Standard Error Mean	Sig (2-tailed)
Final Grade						
	Yes	119	493.8992	41.40159	3.79528	.001***
	No	18	449.8333	48.82532	11.50824	
Final Exam						
	Yes	118	82.6356	7.82137	.72002	.017*
	No	18	77.7222	9.52894	2.24599	
Attendance						
	Yes	119	44.5546	9.60552	.88054	.042*
	No	18	39.5556	9.81129	2.31254	
Participation Cap						
	Yes	119	52.2857	11.68611	1.07218	.031*
	No	18	45.7778	12.48319	2.94232	
Participation Total						
	Yes	119	72.5882	26.85094	2.46142	.041*
	No	18	58.5000	27.51524	6.48540	
Submitted Questions						
	Yes	110	48.8818	10.59057	1.00977	.133
	No	16	44.6250	10.00583	2.50146	
Practice Exams						
	Yes	114	93.6667	18.33786	1.71750	.001***
	No	17	76.0000	21.91461	5.31507	
Exams						
	Yes	119	201.4790	19.42384	1.78058	.001***
	No	18	184.1667	23.73939	5.59543	

\* $p < .05$ ., \*\*\* $p < .001$ .

Table 27

*Superordinate Predictors of HOPE Scholarship Retention*

$$X^2(4) = 26.477, p < .001$$

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio
Final Grade	.1892	.027	12.904	.001***	1.027
Total Credit Hours	-.0880	-.029	6.430	.011*	.971
Lunch	-.0804	-.049	3.188	.074	.953
HS GPA	-.0092	-.173	.035	.851	.841

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\* $p < .05$ , \*\*\* $p < .001$ .



Table 28

*Combined Collegiate Predictors of HOPE Scholarship Retention*

$$X^2 (2) = 22.647, p < .001$$

Predictor	$b(\text{Std})^a$	$b$	Wald's t	Sig.	Odds-Ratio
Final Grade	.1553	.022	12.246	.001***	1.022
College GPA	.0844	.964	7.118	.008**	2.621

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\*\* $p < .01$ , \*\*\* $p < .001$ .

Table 29

*Separate Collegiate Predictors of HOPE Scholarship Retention*

Predictor	$b(\text{Std})^a$	$b$	Wald's $t$	Sig.	Odds-Ratio	$X^2 (1) =$
Final Grade	.1428	.021	12.605	.001***	1.022	14.405, $p < .001$
College GPA	.0915	1.034	8.075	.004**	2.812	10.271, $p < .001$

*Note:* HOPE scholarship coded as 1 for *lost* and 2 for *retained*.

<sup>a</sup> $b(\text{Std})$  = Standardized beta weight.

\*\* $p < .01$ , \*\*\*  $p < .001$ .

Table 30

*HOPE Scholarship Retention Models*

Model	$\chi^2$	Variance	Overall Correct	Correct Retained	Correct Lost
Combined SES	11.270*	27.3	87.7	97.3	0.0
Lunch	6.304*	8.0	85.4	100.0	0.0
Poverty	4.418*	5.6	85.4	100.0	0.0
Total Credit Hours	4.263*	5.7	84.4	100.0	0.0
Integrated In-Course	13.464**	20.8	89.1	99.1	14.3
Combined In-Course	17.880*	27.1	89.9	99.0	21.4
Final Grade	14.405***	17.5	86.3	98.3	5.6
Practice Exams	10.979***	14.9	87.0	99.1	5.9
Exams	10.942***	14.2	86.9	100.0	0.0
Attendance	4.473*	5.9	86.9	100.0	0.0
Final Exam	5.234*	7.0	86.8	100.0	0.0
Participation Total	3.843*	5.1	86.9	100.0	0.0
Participation Cap	4.223*	5.6	86.9	100.0	0.0
Superordinate	26.477***	35.1	89.7	99.0	38.9
Collegiate	22.647***	29.8	86.2	96.2	27.8
College GPA	10.271***	13.3	82.0	97.2	0.0

\*\* $p < .01$ , \*\*\*  $p < .001$ .

*Note:* Only significant models from the combined and separate analyses included in table.

## Appendix B

### Informed Consent Statement for Ed Psych 210 Research (Fall 2014)

Most of the instructional and assessment procedures included in Ed Psych 210 are based on past research in the course. Whenever we add or modify a procedure in the course, we evaluate its effect on student performance before making it a permanent feature of the course. When procedures do not prove effective in upgrading student performance, we do not continue their use in the course. We consider research to be the lifeline for any profession (especially education) that attempts to improve its professional practices. Certainly, research in the 210 course has been vital to the continued improvement of the course.

Research in the 210 course targets two broad areas: (1) all assessment and instructional procedures in the course and (2) special surveys and inventories regarding student perspectives/skills that may be associated with content issues in the course and/or performance measures in the course. Area 1 is an evaluation of factors that may predict reception and retention of a HOPE scholarship. This examination will focus on your course performance and other characteristics such as parental and school background. Your consent will give us permission to access some information from the registrar's office concerning your school background prior to attending the University and your academic record at the University. Area 2 involves your completing three instruments: Critical Thinking Test, Thinking Styles Inventory, and a Student Identification Form. The Critical Thinking Test will be taken in class and the other instruments will be taken out of class. Although you will sign your name on the answer sheets for these instruments (to permit us to give you credit for taking the instruments), no names will be included in the research database for the 210 course.

The purpose of our research is twofold: (1) identify predictors of HOPE scholarship acceptance and retention; (2) use the findings in professional reports (e.g., conference presentations, journal publications, and dissertations). You will receive some credit (approximately 3% of the total course credit) for participating in the research. If you elect not to participate in the research, you may request alternative credit-producing activities from your instructor. Signing this informed consent statement gives us permission to include your course data, responses to the three instruments identified above, and information from the Registrar's Office in our overall database.

The research in the course is supervised by Dr. Robert Williams, who also supervises the teaching of all 210 sections. All the GTAs who work with the 210 sections will also be a part of the research team. You may direct your questions regarding the research this semester either to Dr. Williams (bobwilliams@utk.edu) or the GTA who works with your section. If you are willing to participate in our research endeavors this semester, please sign your name below and bring the signed Informed Consent Statement to the second class period.

Name \_\_\_\_\_

210 Section (time and week days) \_\_\_\_\_ Today's Date \_\_\_\_\_ .

## Appendix C

### Ed Psych 210 Student Identification Form

#### Demographic Information

Print Name \_\_\_\_\_ ID number \_\_\_\_\_

Preferred phone number \_\_\_\_\_ Email address \_\_\_\_\_

Expected grade in EP 210 (circle one):      A      B+      B      C+      C

Have you previously taken some portion of the Ed Psych 210 course? Yes \_\_\_\_\_ No \_\_\_\_\_

Course hours this semester \_\_\_\_\_ Employment hours this semester \_\_\_\_\_

Career aspiration \_\_\_\_\_

Reason for career choice \_\_\_\_\_

Have you applied to the Teacher Preparation Program? Yes \_\_\_\_\_ No \_\_\_\_\_

Have you been accepted to the Teacher Preparation Program? Yes \_\_\_\_\_ No \_\_\_\_\_

Have you applied to the Speech Pathology Program? Yes \_\_\_\_\_ No \_\_\_\_\_

With what grade level are you planning to work (circle at least one)? Kindergarten   Primary  
Middle Grades   High School   None

If you are planning to teach in high school, what subject(s) are you planning to teach?

\_\_\_\_\_

Major strengths as a student \_\_\_\_\_

Problem areas as a student \_\_\_\_\_

Combined parental income per year (circle one of the options):

- Less than \$25,000
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$149,999
- \$150,000 to \$249,99
- \$250,000+

Mother's Occupation (past or current) \_\_\_\_\_

Father's Occupation (past or current) \_\_\_\_\_

Number of siblings still living at home \_\_\_\_\_

Number of siblings currently enrolled in college \_\_\_\_\_

Number of step/half siblings \_\_\_\_\_

## Appendix D

Mann, Caroline <mmann8@utk.edu>

Thu 7/10/2014 3:09 PM

**To:** Trant, Ellie;

Hi Ellie,

Thank you for working with our office to coordinate the data collection for this project. The data elements we can provide are as follows:

Student Name  
Student ID  
Residency  
Gender  
Ethnicity  
College  
Major  
Transfer Indicator  
HS GPA  
HS Name  
HS County  
HS State  
ACT Composite (or SAT-Converted ACT Equivalent)  
Parent Education Level  
Term in which a student was first awarded the HOPE scholarship  
Term in which a student lost the HOPE scholarship  
Cumulative UTK GPA  
Number of hours earned at UTK

These data will be pulled on the first day of class and again at the end of term after grades have been posted.

We understand that the researchers will procure an IRB to support this investigation. We would like to ask that the data, once provided, be scrubbed of all personally identifiable information. Once we receive a copy of the IRB, we can provide the data requested.

Please let me know if you have any questions, and I look forward to working with you.

Regards,  
Caroline

Caroline Mann  
Interim Director – Strategic Enrollment Reporting & Analysis  
University of Tennessee  
Enrollment Services | 218 Student Services Building  
Knoxville, TN 37996 | (865) 974-1400 [ph] | (865) 946-1841 [fax] | mmann8@utk.edu

## **Vita**

Eleanore Claire Trant was born in Opelousas, Louisiana. She spent her childhood and adolescence in Grand Coteau, Louisiana. She attended the Academy of the Sacred Heart in Grand Coteau from 1995 until her high school graduation in 2007. She obtained a B.S. in Psychology at Loyola University of New Orleans in the spring of 2011. Starting in the fall of 2011, Eleanore attended the University of Tennessee's School Psychology Ph.D. Program. In August of 2014, she received a M.S. in Applied Educational Psychology. Eleanore will receive her Ph.D. in August 2016 upon completion of a year-long pre-doctoral internship with the Tennessee Internship Consortium in Knoxville, Tn.