# THE RELATIONSHIP BETWEEN USE OF THE AUSTIN PEAY ON FACEBOOK APPLICATION AND THE RETENTION OF FIRST YEAR COLLEGE STUDENTS AT AUSTIN PEAY STATE UNIVERSITY

Carol D. Clark

# The Relationship Between Use of the Austin Peay on Facebook Application and the Retention of First Year College Students at Austin Peay State University

A Field Study Report

Presented to

The College of Graduate Studies

Austin Peay State University

In Partial Fulfillment

Of the Requirements for the Degree

Educational Specialist

Carol D. Clark

May, 2013

May, 2013

To the College of Graduate Studies:

We are submitting a field study report written by Carol D. Clark entitled "The Relationship Between Use of the Austin Peay on Facebook Application and the Retention of First Year College Students at Austin Peay State University." We have examined the final copy of this field study report for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Educational Specialist.

Research/Committee Advisor/Chair

Committee Member

Committee Member

Accepted for the Graduate and Research Council

Dean, College of Graduate Studies

Statement of Permission to Use

In presenting this field study report in partial fulfillment of the requirements for the Educational Specialist degree at Austin Peay State University, I agree that the library shall make it available to borrowers under the rules of the library. Brief quotations from this field study are allowable without special permission, provided that accurate acknowledgement of the source is made.

Permissions for extensive quotation or reproduction of this field study may be granted by my major professor, or in his/her absence, by the Head of the Interlibrary Services when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this field study for financial gain shall not be allowed without my written permission.

Carol D. Clark — 4/17/13

Signature — Date

Acknowledgements

Many people encouraged, advised, and nudged me toward the completion of this field study. I especially appreciate the support of my committee: Dr. Tammy Shutt (chair), Dr. Gary Stewart, and Dr. Donald Luck. Very special thanks are due to Austin Peay State University Provost Dr. Tristan Denley for helping me to conceptualize this study, Amy Deaton and Mary Clement for their diligent assistance in securing the data for the study, Dr. Roger Wiemers and Kim Denley for their assistance with the data analysis, and APSU President Tim Hall for his support and encouragement throughout this process.

Most of all, thank you to my wonderful family for their constant support every step of my educational journey.

Abstract

CAROL D. CLARK. The Relationship Between Use of the Austin Peay on Facebook Application and the Retention of First Year College Students at Austin Peay State University (Under the direction of DR. TAMMY SHUTT).

Purpose: The purpose of this study was to investigate whether there is a relationship between the use of the Austin Peay State University Facebook App (APFA) and retention to the spring semester of their freshman year by first time full time freshmen (FTFTF) students at Austin Peay State University. Existing research has supported the theory that students who are more engaged with their university and educational experience are more likely to continue their studies and successfully graduate with a college degree. A limited body of more recent research has yielded contradictory findings about the relationship between student engagement, academic success, and the use of social networking programs. This study was intended to further our understanding of the relationship between student engagement, retention, and the use of social networking programs. The population for this quantitative study consisted of the entire FTFTF cohort for the fall 2011 semester. The data for the research was generated from the Banner student management system, data about student attendance at campus events, and Facebook analytics data. The data was analyzed using StatView statistical software. The study found that students who used the APFA were retained at a higher rate, that students who were retained had higher numbers of Facebook Friends from the university than students who were not retained, and that students who used the APFA attended more campus events than students who did not use the APFA.

Table of Contents

List of Tables

# Chapter I

## Introduction

Thomas Jefferson (1816), one of America's founders, recognized the importance of education when he wrote, "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be" (p. 4). The value of a better educated citizenry is no less important today. Many of the most valuable outcomes of education are individual attributes that are difficult to measure, such as "knowledge, fulfillment, self-awareness, and broadening of horizons" (Baum, Ma, & Payea, 2010, p. 7) or greater job satisfaction. However, there are numerous measurable public and private benefits of higher education (Baum et al., 2010; National Center for Health Statistics, 2012).

Public fiscal benefits include increased payroll tax revenues, lowered incarceration costs, and less dependence on social programs such as the Supplemental Nutrition Assistance Program (previously known as Food Stamps), the National School Lunch Program, or public health insurance (Baum et al., 2010). Adults with college degrees generally maintain healthier lifestyles, are more likely to have preventive health screenings, and have longer life expectancies than high school graduates (Baum et al., 2010; National Center for Health Statistics, 2012). College educated adults are three times less likely to smoke, more likely to exercise and breast feed their babies, and both the adults and their children are less likely to be obese (Baum et al., 2010; National Center for Health Statistics, 2012). College educated adults are also more civically engaged, volunteer in higher rates and for more time than other individuals, and are more

likely to engage in activities that will help their children be better prepared for school, such as reading to them daily (Baum et al., 2010; Pascarella & Terenzini, 2005).

A four year college degree has been called "the single most important rung in the educational-attainment ladder in terms of economic benefits" (Pike & Kuh, 2005, p. 276) to individuals. College graduates are more likely to be employed than are non-graduates (Bureau of Labor Statistics, 2012; Carnevale, Smith, & Strohl, 2010; National Center for Health Statistics, 2012). In recent years, the unemployment rate for bachelor's degree holders has been about half the unemployment rate for high school graduates (Bureau of Labor Statistics, 2012; Carnevale et al., 2010). While the specific dollar amounts vary among different sources, college graduates are also more likely to have substantially higher earnings than non-graduates (Baum, et al., 2010; Bureau of Labor Statistics, 2012; Carnevale et al., 2010; Pascarella & Terenzini, 2005). Bureau of Labor Statistics (2012) findings indicate that the average weekly earnings for an adult with a bachelor's degree were nearly twice the earnings for a high school graduate during the recent economic recession. The lifetime earnings of an individual with a bachelor's degree in the United States average $1,600,000 higher than those of an individual with a high school diploma (Carnevale et al., 2010).

It is also important to note that during the past quarter-century, workers without college degrees lost significant income relative to workers with degrees (Carnevale et al., 2010). In 1970, high school graduates comprised 60% of the middle-income class households and 22% of the lower-income class households in the United States. By 2007, only 45% of workers with high school diplomas were considered middle-income class and 35% were lower-income class. During the same time period, the percentage of

college graduates in the lower- and middle-income classes declined while the percentage in the upper-income class increased from 37% to 48%. Research (Carnevale et al., 2010) also shows that college graduates are more likely to hold jobs that utilize current technology and to receive additional formal training from their employers.

## Statement of the Problem

The current and future economy requires a better educated workforce. The United States lags behind other countries and the projected need for workers in our own country in preparing young people for the workforce of the future (Carnevale et al., 2010; Lockard & Wolf, 2012; Lumina Foundation, 2012). In 2007, the United States ranked eighth in the world in the percentage of young adults (ages 25 to 34) who held a college degree (Baum et al., 2010). Between 1973 and 2007, the number of jobs in the United States that required applicants with at least some college education increased from 25 million to 91 million (Carnevale et al., 2010, p. 14). During the same time period, the share of jobs for workers with a high school diploma or less plunged from 72% to 11%. The majority of the jobs that will be created in the future will require some level of post-secondary education or specialized training as the United States recovers from "the Great Recession of 2007" (Carnevale, et al., 2010, p. 5). Technology and globalization have enabled industries to automate many lower-skilled jobs, while moving other lower-skilled jobs to countries with lower manufacturing costs (Carnevale et al., 2010). Bureau of Labor Statistics (BLS) employment projections for the decade ending in 2020 predict that a bachelors or graduate degree will be required for workers in 12 of the 30 occupations with the largest percentage of growth (Lockard & Wolf, 2012). Further, the vast majority of those jobs are will be accessible to new graduates because the jobs do not require prior

work experience (Lockard & Wolf, 2012). The situation is viewed as even more critical by researchers at The Georgetown University Center on Education and the Workforce who question the methodology behind the Bureau of Labor Statistics (BLS) projections, maintaining that the BLS projections have historically "underestimate[d] the demand for postsecondary education" (Carnevale et al., 2010, p.1) and predicting that the United States will have a shortage of 3 million college graduates for the available jobs by 2018.

A recent report by the Lumina Foundation (2012) also confirms the need to increase the number of college graduates each year. According to the 2010 U.S. Census (Lumina Foundation, 2012), the percentage of college graduates increased slightly in working age adults (25-64 years of age) between 2008 and 2010, from 37.9% to 38.3%, and the percentage of young adults (25-34 years of age) who held college degrees also increased from 37.8% to 39.3% during the same time period (Lumina Foundation, 2012). However, while these modest increases are encouraging, the Lumina Foundation's report projects that the United States will still be lacking 23 million degree holders to meet the job market demand by 2025.

The workforce preparation gap is even more pronounced in Tennessee. Tennessee is 42nd out of the 50 states in the percentage of adults who have a college degree (31.85%), and this percentage only changed by .6% from 2008 to 2010 while the national percentage steadily increased over the same time period, reaching 38.3% in 2010 (Lumina Foundation, 2012). The Lumina Foundation report projects that between now and 2018, approximately 516,000 job vacancies created in Tennessee by "job creation, worker retirements, and other factors" will require "postsecondary credentials" and 54% of Tennessee jobs will require a college credential by 2018 (Lumina Foundation, 2012, p.

112). A recent labor force study commissioned by the Nashville, Tennessee Chamber of Commerce (Center for Regional Economic Competitiveness, 2010) reported that in the ten county Nashville Economic Market Area (including Montgomery County, home to Austin Peay State University, and three counties adjacent to Montgomery County) "eleven of the fastest growing high wage occupations require a four-year college degree" (p. 26).

While the benefits of higher education are well established and the need for a better educated workforce is clearly documented, the solution to the problem does not lie in merely recruiting more students to attend college, as increased college enrollment rates do not always result in more college graduates (ACT, 2012; Baum et al., 2010). While specific numbers vary based upon the source and the type of school, on average, barely 70% of college freshmen at public non-selective four year institutions return for their second year of college (ACT, 2012). Since 2006, the fall-to-fall retention rates at Austin Peay State University have fallen below the national average, despite steadily improving from 65.79% retention of the first-time full-time freshmen (FTFTF) cohort in 2006 to 69.95% retention of the 2011 FTFTF cohort (Austin Peay State University, 2012b). Even when these students return for their second year, graduation is still a challenge for many of them, with fewer than 25% of the students in the U.S. earning a bachelor's degree in four years and less than 50% earning a bachelor's degree within six years (ACT, 2012). At Austin Peay State University, six-year graduation rates ranged from a low of 32.59% for the 2002 FTFTF cohort to a high of 37.44% for the 2006 FTFTF cohort, well below the national average (Austin Peay State University, 2012a). While retention rates and graduation rates at the university have improved over the past few years, the university

administration, faculty, and staff continue to research and implement initiatives and practices that are intended to improve student success as measured by increased retention and graduation rates.

## Purpose of the Study

The purpose of this study was to investigate whether there was a relationship between the use of the Austin Peay on Facebook application (APFA) and retention to the spring semester of their freshman year by FTFTF students enrolled at Austin Peay State University. This study compared the fall to spring retention rates of FTFTF who were APFA users with the fall to spring retention rates of FTFTF who were not APFA users to determine whether a relationship existed between a student's use of the APFA during the fall semester and the student's return to college in the spring 2012 semester. Further, the study attempted to identify demographic characteristics or patterns of behavior that were common to retained students and non-retained students.

## Significance of the Study

There are many reasons that it is important for university administrators to learn more about factors associated with student retention. The United States continues to lag behind other countries in the percentage of its citizens who have earned college degrees (Carnevale et al., 2010; Lockard & Wolf, 2012; Lumina Foundation, 2012). The difference is even more pronounced in Tennessee (Center for Regional Economic Competitiveness, 2010; Lumina Foundation, 2012). At the institutional level, a university experiences an immediate loss of revenue from tuition and fees when a student leaves college before graduating, in addition to losing the potential for future funding in the form of alumni contributions (DeBerard, Spielmans, & Julka, 2004). Federal and

state government agencies and policy makers have recently begun paying increased attention to student retention and graduation rates (College Board, 2009; Tinto, 2006; Wolf-Wendel, Ward, & Kinzie, 2009). Similar to other states, Tennessee lawmakers modified the funding formula for Tennessee public universities to more closely tie state funding to the progression and graduation rates of students at each institution. Parents and prospective students are also interested in retention and graduation rates. The frequently referenced and cited college guidebook *America's Best Colleges*, published annually by U.S. News & World Reports, includes first-to second-year persistence and graduation rates in its ranking of colleges and universities (College Board, 2009).

Research has repeatedly shown that students who are more engaged with their university and educational experience are more likely to continue their studies and successfully graduate with a college degree (Astin, 1984/1999; Astin, 1993; Kuh, 2009; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Pascarella & Terenzini, 2005). University administrators very deliberately design residence halls and develop programming to encourage freshmen students to get involved in campus life by participating in activities and interacting with other students, faculty, and the university community. While there is a significant body of work on the relationship between student engagement and success as measured by retention and graduation, there has been less research into the relationship between social networking, engagement, and student success.

This particular study is both important and timely because today's traditional-age college freshmen have grown up with technologies that include online gaming and social networking sites such as MySpace and Facebook. In research conducted by Noel-Levitz (2011b), 80% of the college-bound high school seniors had a Facebook account, 74%

expected universities to use social media sites, and 76% thought that universities "should create their own private social networks" (p. 9). Over the past few years, the number of colleges and universities that use social media for some purpose has increased rapidly, from 61% in 2007-2008 to 100% in one recent study (Barnes & Lescault, 2011), and the majority of institutions indicated that they would like to see social media used in a more planned manner (Council for Advancement and Support of Education, 2012). Facebook is the social networking site of choice for more than 95% of the institutions (Barnes & Lescault, 2011; CASE, 2012). However, in another study, while 63% of public four-year institutions reported using "social networking to engage students in online communities" as one of their retention strategies, less than half of those institutions rated this strategy as "very or somewhat effective" (Noel-Levitz, 2011a, p. 19). As institutions continue to devote scarce fiscal and human resources to this still emerging technology, it is important that research be completed that will increase understanding of the technology and its effectiveness as part of an institution's retention strategy.

Research into the relationship between the use of social networks, engagement and student retention is still an emerging field, and the bulk of the existing body of work on Facebook use relied almost exclusively upon self-reported data about a student's Facebook usage, campus engagement, and grades. This study extended previous research using different methodology from most of the existing work in two important ways. First, it analyzed students' usage of the Austin Peay on Facebook Application (APFA) instead of students' use of the standard Facebook online social network. Second, instead of self-reported information, this study used data collected from Facebook analytics, data generated when students "scanned" into campus events, and academic and demographic

data from Banner, APSU's student database software. Information gained from this study can be used to develop and implement more effective or efficient interventions to improve student retention and graduation rates.

## Research Questions

This study investigated the following questions:

1. Were freshmen students who used the APFA more likely to be retained to the second semester of their freshman year at APSU than were freshmen students who were not APFA users?

2. Were there differences in the ways that retained and not retained APFA users used the APFA?

3. Did APFA users participate in campus activities at a higher rate than non-APFA users?

4. Did APFA users achieve higher grade point averages during the first semester than non-APFA users?

5. In addition to whether a student used the APFA, were there demographic differences between the retained students and the non-retained students?

## Limitations

This study was subject to the following limitations:

1. The study was only be able to identify correlations between APFA usage and fall to spring retention of FTFTF and cannot establish whether use of the APFA caused a student to be retained.

2. This study was limited to evaluating retention for one semester, since the APFA was only available beginning in the summer of 2011.

3. This study did not capture any perceptions or qualitative input from the students in the studied population.

4. This study consisted of a fairly narrowly defined population, the first-time full-time freshman class at one public university in the southeastern United States. While this population was fairly large (N =1,274) and had diverse demographics, the applicability of the study findings may be limited to universities with similar student body composition and institutional characteristics.

## Assumptions

Based upon the work of Astin (1984/1999; 1993) and other researchers (Kuh, 2009; Kuh et al., 2008; Pascarella & Terenzini, 2005), the following assumptions were made:

1. Student involvement and engagement are positively related to student persistence.

2. Student involvement and engagement occur in settings outside the classroom as well as in the classroom.

3. Use of the APFA is one way that students can become involved and engaged outside the classroom.

## Definitions

1. Austin Peay on Facebook application (APFA): a program within Facebook that creates a private online community of users who are affiliated with Austin Peay State University by limiting access to individuals who have a valid university email; the APFA was implemented at Austin Peay State University in the summer of 2011

2. Facebook: an online social network that individuals can join and use to communicate with other Facebook users by posting information on their own or others' walls, making and accepting Facebook friend requests, posting photos, and creating events

3. Facebook Friend: an individual who has been added to another Facebook user's Friends List based upon a "Friend Request" that was submitted to and accepted by the other Facebook user

4. First time full time freshmen (FTFTF): students who are enrolled full time and graduated from high school in the current year or are enrolling at any postsecondary institution for the first time

5. Retention (to Spring 2012): whether a student was enrolled in at least one course on the 14th day of the spring 2012 semester

6. Student engagement: the number of APSU campus events that the student attended during fall 2011 semester when the student's ID card was scanned

## Chapter II

## Review of Literature

This literature review will provide a brief review of the body of work related to the research question: Is there a relationship between use of the Austin Peay on Facebook App (APFA) and the retention of first year college students at Austin Peay State University? The major theoretical and foundational research into the broad topic of student retention will first be presented. The review will conclude with more contemporary research in the still emerging field of the relationship between online social networking and student retention.

### Theoretical and Foundational Research

The earliest work on college student retention, nearly fifty years ago, focused on student characteristics such as "individual attributes, skills, and motivation," and student attrition was often blamed on students' lacking the ability, skills, or motivation to persist (Tinto, 2006, p. 2). In the 1970's, researchers expanded the study of student retention to include variables from the institutional environment and began to look at "the importance of student contact or involvement to a range of student outcomes not the least of which was student retention" (Tinto, 2006, p. 3). Involvement, engagement, and integration are terms that are often associated with theories about and research into student retention and persistence. While these terms are often used interchangeably, each term had a specific meaning when it was first used by early researchers.

#### Theory of Student Involvement

Many of the early pedagogical theories related to student retention focused on the resources provided by universities to educate students, such as knowledgeable professors,

facilities, and financial resources. Students were viewed passively as blank chalkboards or empty vessels to be filled with knowledge by their professors (Astin, 1984/1999). After more than 20 years of research into student development, Astin (1984/1999) brought forth his theory of student involvement, arguing that student learning is based in large part on the student becoming invested in the learning process. Astin defined student involvement as "the quantity and quality of the physical and psychological energy that students invest in the college experience" (1984/1999, pp. 528-529). Over the course of his work, Astin (1984/1999) found that student learning and retention were positively associated with both academic involvement and many other forms of student involvement, such as living in a residence hall, joining campus organizations, participating in extracurricular activities, participating in research projects, and working on campus at a part-time job (Wolf-Wendel et al., 2009). In a study of over 11,000 students, Astin (1993) found positive associations between retention and student interactions or connections with faculty members, other individual students, or campus groups in academic, social, athletic, or other activities (Fischer, 2007).

**Student Engagement**

Astin's (1984/1999) theory of student involvement was the basis for many other studies about student retention, including a substantial body of research by Kuh (2009), alone and with other researchers, into the relationship between student retention and student engagement. The concept of student engagement "is about two elements: what the student does and what the institution does" (Wolf-Wendel et al., 2009, p. 413) and came from the National Survey of Student Engagement (hereafter referred to as "NSSE") a large scale research project established by Kuh and developed by a team of retention

scholars and practitioners. Beginning in 2000, NSSE conducted annual surveys of more than three million students at over 1,500 colleges and universities to provide data about student engagement as measured by the students' participation in campus activities (NSSE, n.d.). The NSSE survey is still used by hundreds of colleges and universities today (NSSE, n.d.).

In one large study of 18 colleges and universities, Kuh et al., (2008) analyzed NSSE data along with student high school GPA, ACT/SAT score reports, and student data from college registrars, financial aid offices, and admissions offices. They found a positive relationship between student engagement and student success as measured by students' GPA and retention to the second year of college. Especially noteworthy was their finding that student engagement could diminish "the effects of pre-college characteristics and experiences" (Kuh et al., 2008, p. 555) and that the positive relationship between student engagement and success was consistent regardless of the student's race or ethnicity. They also found that the effects of engagement were more pronounced for students of color and for lower ability students (Kuh et al., 2008). As outlined in the NSSE benchmarks, student engagement can manifest in many forms, including participation in academically challenging programs and projects, interaction between students and faculty, and "participating in co-curricular activities (organizations, publications, student government, sports, etc.)" (Kuh, 2009, p. 701).

In interviews conducted a few years ago, both Astin and Kuh allowed that for the purposes of contemporary student retention research, it is no longer necessary to distinguish between involvement and engagement (Wolf-Wendel et al., 2009). In the same interview, Pascarella also noted that the two terms were often used interchangeably

in Pascarella and Terenzini's (2005) second published review of multiple student retention studies (Wolf-Wendel et al., 2009). The third retention concept addressed in this literature review, student integration, was perceived by the same experts to be "a theory separate and distinct from engagement and involvement" (Wolf-Wendel et al., 2009, p. 418).

**Student Integration Model**

One of the earliest models of student retention was Tinto's Student Integration Model (Broome, Croke, Staton, & Zachritz, n.d.; Cabrera, Castaneda, Nora, & Hengstler, 1992; Fischer, 2007; Tinto, 2006; Wolf-Wendel et al., 2009). Tinto's model, widely cited in college retention research, held that a student's "perceived level of integration" with an educational institution has a strong influence on student retention (Wolf-Wendel, et al., 2009, p. 415). While the term integration may have originally been "used to explain the extent to which students come to share the attitudes and beliefs of their peers and faculty and the extent to which students adhere to the structural rules and requirements of the institution" (Wolf-Wendel et al., 2009, p. 414), more recently it has been used to refer to students' perceptions of social and academic interactions with other students, faculty and staff (Wolf-Wendel et al., 2009).

Early research using the student integration model has been criticized for its focus on traditional-age, residential, majority students and its assumption that integration could only occur if students broke away from their life before college and participated in narrowly defined campus activities that were often not practical for adult, commuter, and/or minority students (Tinto, 2006; Wolf-Wendel et al., 2009). More recently, Tinto (2006) noted that additional research with a more diverse body of students has broadened

the base of knowledge about the different factors that can impact student integration and ultimately, retention. For example, for some students, "the ability to remain connected to their past communities, family, church, or tribe is essential to their persistence" (Tinto, 2006, p. 4). For commuter students, classroom involvement may be the most crucial component of integration, since that may be the commuter students' only opportunity to interact with other students and faculty (Tinto, nd; Tinto, 2006). In a recent interview, Tinto upheld the value of the integration theory as a predictor of retention, and addressed some of the prior criticism of the approach when he noted that "I don't use the word integration anymore – haven't used it in decades" (Wolf-Wendel et al., 2009, p. 423) and explained that his original use of the term integration was meant to "be the opposite of exclusion or segregation" (Wolf-Wendel et al., 2009, p. 424) and was not intended to mean that all students had to adopt the beliefs and ideas of the majority students or faculty at the university in order to achieve integration.

The important role of peers and close relationships in student success has been addressed by several researchers (Astin, 1993; Fischer, 2007; Pascarella & Terenzini, 1991) who confirmed the influence that a student's peer group has on the student's decision to stay in school. Astin (1993) even said that "the most important environmental influence on student development is the peer group" (p. xiv). While Pascarella and Terenzini's (2005) original 1991 intensive review of other research did not reveal a clear connection between peer interactions and retention, their 2005 study of more current research found that peer influence was a statistically significant factor in a student's retention.

## Students' Use of Online Social Networks

While traditional forms of engagement or involvement were based upon contacts that occurred in actual physical spaces, it is now possible for students to connect with other students and their institution without actual face-to-face interaction, as students use online social networks in increasing numbers (Lenhart, Purcell, Smith, & Zickuhr, 2010; Madden & Zickuhr, 2011; Pryor, DeAngelo, Palucki, Hurtado, & Tran, 2011).

### Frequency of Use

In 2007, the Cooperative Institutional Research Program (CIRP) survey of college freshman found that 86.3% of the students surveyed spent some time each week on social networking sites (Pryor et al., 2011). In the 2011 CIRP survey, that percentage had increased to 94.6% (Pryor et al., 2011). Studies conducted in 2010 and 2011 by the Pew Research Center of 18-29 year old internet users showed a 9% increase, to 83%, in the number that used social networking sites, with daily usage of social networking sites reported at 61% in 2011 (Lenhart et al., 2010; Madden & Zickuhr, 2011). Social networking site usage by women internet users ages 18-29 is even more common, with 89% reporting social networking site usage and 69% reporting daily usage (Madden & Zickuhr, 2011).

The image of a lonely student hidden away in the student's residence hall room and only connecting with others through online social networks may no longer be the norm, as students are accessing online social networks using multiple forms of technology. In a recent study of 168 undergraduates at a large comprehensive public university in Pennsylvania, only 2% of the students reported that they accessed the Internet exclusively through a desktop computer, while 47% of students reported using

handheld devices to access the Internet and 65% reported using a laptop and/or a handheld device for internet access (O'Brien, 2011).

Facebook has overwhelmingly been reported as the most commonly used social networking site among young adults and college students in recent studies, with reported Facebook use among social networking site users ranging from 78.8% in 2007 (Hargittai & Hsieh, 2010) to 92% in 2011 (Hampton, Goulet, Rainie, & Purcell, 2011). As students prepared to transition from high school to college, they often joined Facebook even if they were not members prior (Madge, Meek, Wellens, & Hooley, 2009).

Most students who used Facebook reported that they logged in at least once each day (Dahlstrom, de Boor, Grunwald, & Vockley, 2011; Hampton et al., 2011; O'Brien, 2011). More than half reported that they logged into Facebook several times a day, with some checking Facebook 13 times a day (Dahlstrom et al., 2011). The 2011 CIRP Freshman Survey found that 53.1% of incoming freshmen reported spending more than three hours a week as high school seniors on social networking sites (Pryor et al., 2011). Students also reported feeling "out of touch" when they went for periods of time without accessing Facebook (Madge et al., 2009, p. 147).

**Why and How Students use Facebook or Other Social Networking Sites**

While almost half of the students in one study reported using Facebook to discuss homework with friends (Madge et al., 2009), students primarily used Facebook and other social networking sites for social purposes (Pempek, Yermolayeva, & Calvert, 2009; Subrahmanyam, Reich, Waechter, & Espinoza, 2008). Some students reported using Facebook to "friend" new classmates prior to or upon arrival at college (Madge et al., 2009). However, a large majority of students reported that none of their friendships

originated online, and they rarely used Facebook or social networking sites to interact with or get information about someone they had never met (Madge et al., 2009; Pempek et al., 2009; Subrahmanyam, et al., 2008). Instead, students used social networking sites to learn more about people they had met and to stay in touch with friends (Madge et al., 2009). First year students were almost twice as likely to use Facebook to stay in touch with friends they had before they came to the university than their more experienced classmates (Pempek et al., 2009). As noted earlier, while some early researchers argued that students must break away from past communities in order to develop a sufficient attachment to their new college community that would support retention, more recent research acknowledges that maintaining a connection to those individuals and organizations may be critical to some students' successful adjustment to college life (Tinto, 2006). In addition to staying in touch with friends and getting to know others better, new university students also used Facebook to learn more about activities and events happening at the university (Madge et al., 2009).

Researchers (Hampton et al., 2011; Hargittai & Hsieh, 2010) have reported a wide range of Facebook usage levels among all users, with frequency of access and the types of activities engaged in varying by both age and gender. Facebook users age 18-22 were almost twice as likely as any other age group to update their Facebook status at least once per day, and women were far more likely to update their status than were men (Hampton et al., 2011). Female students were more likely than male students to look at friends' photo albums, stay in touch with friends, post photos, send messages, make plans with friends, or join interest groups, all considered stronger social tie activities (Hargittai & Hsieh, 2010). When using Facebook, students were far more likely to engage in passive

type activities, such as reading posts or viewing photos, than they were to create written posts or actually post photos (Pempek et al., 2009). Even when students joined a group, most did not report being actively involved with the group through online discussions or other activities commonly associated with actual groups (Pempek et al., 2009).

Students' perceptions of the influence of Facebook are worth noting. Most students viewed Facebook as having a somewhat or very positive impact on their social lives (Pempek et al., 2009). Conversely, less than 40% of students surveyed said that Facebook had a positive impact on their academic lives and the majority of students in at least three different studies felt that Facebook was not valuable for their academic life, with many reporting that they perceived that it had a negative effect on their studies (Dahlstrom et al., 2011; Madge et al., 2009; Pempek et al., 2009).

## Online Social Networking and Factors that Contribute to Student Success

### Online Social Networking and Student Retention

Most published research about students' use of online social networking has been based on self-reported data collected through online or print surveys. However, one recent study into the relationship between student retention and Facebook use actually utilized information from the Facebook profiles of 375 first year students along with a Peer Group Interaction Scale to measure the students' social integration (Morris, Reese, Beck, & Mattis, 2010). This study revealed that students who were retained to their sophomore year had more Facebook friends from the university network and more postings on their Facebook wall than students who did not return to school in the fall.

## Online Social Networking, Student Engagement, and Co-curricular Participation

The research on the use of online social networking sites by students has produced mixed findings about the relationship between social networking sites, student engagement, and participation in co-curricular activities. At least one study conducted in 2007 showed positive relationships between the use of Facebook and other online social networking sites and student engagement as measured by the student's reported interactions with and connections to friends, involvement in student organizations, and level of perceived connection to the university (Heiberger & Harper, 2008). However, another study the same year found that Facebook was negatively associated with educational involvement (Lloyd, Dean, & Cooper, 2007). A relatively small study of undergraduate and graduate students in 2009 reported that "students who were more involved in co-curricular activities at school were more likely to be Facebook users" (Karpinski & Duberstein, 2009, poster). A much larger study by Junco (2012) identified negative correlations between Facebook use and student engagement scale scores and a positive correlation between Facebook use and student involvement in co-curricular activities.

In addition to measuring the frequency of Facebook use, Junco's (2012) work also looked at student participation in various Facebook activities. Junco found that specific Facebook activities were stronger predictors of student behaviors than the amount of time spent on Facebook. Activities "such as playing games, checking up on friends, and posting photos, were negatively predictive of time spent in co-curricular activities while commenting on content, creating or RSVP'ing to events and viewing photos were positively predictive" (Junco, 2012, p. 168). Facebook activities where students invested

energy were more likely to be associated with real-world action than were more passive events.

**Online Social Networking and Peer Groups**

The role of students' peer groups in student retention has also been addressed in the research on students' use of technologies such as online social networking. One of the earliest studies found that "peer relationship scores [were] negatively correlated with the amount of time a student uses the Facebook" (Lloyd et al., 2007, p. 487). Another study (Madge et al., 2009) of students surveyed after their second semester at school reported that "97% . . . said they had more friends on Facebook at the time of the survey than they did before coming to university" (p. 145) and 73% of the students "felt Facebook had been important in helping them to form friendships" at the university (p. 147).

More recently, a Pew Internet and American Life Project study reported that individuals who are frequent Facebook users average "9% more close, core ties in their overall social network compared with other internet users" (Hampton et al., 2011, p. 4). The Pew study also reported that "Facebook users get more social support than other people," with Facebook users scoring higher than the average American on scales measuring total support, emotional support, and companionship (Hampton et al., 2011, p. 4). "For Facebook users, the additional boost is equivalent to about half the total support that the average American receives as a result of being married or cohabitating with a partner" (Hampton et al., 2011, p. 4).

## Online Social Networking and Social Capital

Social capital refers to the value created by social networks that bring similar and diverse people together in ways that are mutually beneficial (Claridge, 2004). Social capital can provide individuals with emotional support and access to information known by other individuals within the social network (Ellison, Steinfield, & Lampe, 2011). Bridging social capital refers to the benefits that can come from weak links within a social network, such as unique information and perspectives provided by individuals who are not well known to each other (Ellison et al, 2011). In addition to maintaining their established social capital networks at their high schools and in their home towns, new college students must develop new social capital networks at the university.

The relationship between Facebook use by college students and social capital has been studied in at least two separate surveys of undergraduate students (Ellison, Steinfield, & Lampe 2007, 2011; Steinfield, Ellison, & Lampe, 2008). In their earlier study, Ellison et al., (2007) studied the relationship between Facebook and the "formation and maintenance of social capital" (p. 1143). The study utilized the Facebook Intensity scale measurement that included questions about the student's number of Facebook friends, amount of time spent on Facebook, the student's perceived strength of his or her connection to Facebook, and the student's perceived value of Facebook along with questions intended to measure the student's self-esteem and perceived level of social capital at the university. The results of the study showed "a positive relationship between certain kinds of Facebook use and the maintenance and creation of social capital" (Ellison et al., 2007, p. 1161), especially among students with low self-esteem. It is noteworthy that this survey was completed at a time when Facebook usage was limited to

individuals with an official university email account, while most other research occurred after Facebook was opened to additional users. The same researchers repeated the study one year later, when they administered the same survey to the prior respondents and to a new random sample of undergraduate students, and interviewed 18 students from the first sample (Steinfield et al., 2008). In that study, they found that "Facebook Intensity in year 1 was a highly significant predictor of bridging social capital in year 2" (Steinfield et al., 2008).

Ellison et al., (2011) conducted a separate survey in 2008 that revealed that "only social information-seeking behaviors contribute to perceptions of social capital" (p. 1). This finding led them to suggest that "Facebook use can act as a catalyst of, rather than a replacement for, offline interaction" (p. 14). The structure of Facebook allows users to interact with other many other individuals and the information content in Facebook provides users with information about other users that can help them identify common interests and friends (Ellison et al., 2011).

**Online Social Networking and Academic Performance**

There have been inconsistent results reported from studies analyzing the relationship between social networking site use and academic performance (Hargittai & Hsieh, 2007; Karpinski & Duberstein, 2009; Madge et al., 2009; Pasek, Moro, & Hargittai, 2009). Hargittai and Hsieh (2007) found no significant differences in self-reported GPA of first year students based upon level of social networking site use or types of activities. Most students in a different study reported feeling that their academic work was affected by their level of Facebook usage (Madge et al., 2009). The media widely publicized Karpinski and Duberstein's (2009) poster presentation at a national

conference where they stated that "FB users have lower GPAs and spend less time studying" (np). The validity of their results were questioned by other researchers (Pasek et al., 2009) due to the small sample size (n = 219), the inclusion of more than 50% graduate students, other sampling concerns, and an opinion that the results of the Karpinski and Duberstien study were exaggerated. Pasek et al. (2009) conducted three studies with different datasets and did not find a significant relationship between Facebook use and lower grades. O'Brien's (2011) more recent research reported findings that were consistent with Paskek's studies. Hyatt (2011) found negative correlations between grade point average and hours spent by students in online social networking as well as in co-curricular activities, and work for pay off-campus. However, Hyatt's sample also included graduate students, and when they were removed from the sample, the correlation between grade point average and co-curricular activities and social networking was less negative than in the original analysis.

## Chapter III

## Methodology

This chapter discusses the research methods used for this study. Research design, participant information, data collection procedures, data analysis procedures, and null hypotheses are included. The purpose of the study was to investigate whether there was a relationship between the use of the APSU Facebook App and retention to the spring semester of their freshman year by first time full time freshmen (FTFTF) students at Austin Peay State University. Additional factors such as involvement in campus activities, earned grade point averages, and demographic variables of the students, including high school GPA, age, Pell Grant receipt status, gender, and ethnicity were also considered.

The following research questions were analyzed:

1. Were freshmen students who used the APFA more likely to be retained to the second semester of their freshman year at APSU than were freshmen students who were not APFA users?

2. Were there differences in the ways that retained and not retained APFA users used the APFA?

3. Did APFA users participate in campus activities at a higher rate than non-APFA users?

4. Did APFA users achieve higher grade point averages during the first semester than non-APFA users?

5. In addition to whether a student used the APFA, were there demographic differences between the retained students and the non-retained students?

## Research Design

This study utilized quantitative research to compare the fall to spring retention rates of FTFTF who were APFA users with the fall to spring retention rates of FTFTF who were not APFA users. Further, the study analyzed additional variables and attempted to identify demographic characteristics or patterns of behavior that were common to retained students and non-retained students.

## Participants

The population for this study was all FTFTF enrolled for classes at Austin Peay State University for the fall 2011 semester (N = 1,274). The archival data was provided by authorized university personnel in a format where the students remained anonymous via a unique identifier assigned to the students by authorized university personnel prior to the data being released to the researcher. Further, no participants were approached in the process of this study.

## Data Collection Procedures

Prior to the collection of data, permission was sought from Austin Peay State University Provost Tristan Denley to conduct the proposed study and to be provided the student data that would be needed for the study. Provost Denley's permission was granted on March 13, 2012 (see Appendix A). An Application for Project Approval was then submitted to the APSU Institutional Review Board in accordance with the APSU Manual for the Preparation of Theses and Field Study Reports and approval was granted on April 12, 2012 (see Appendix B). Copies of both approvals are included as appendices to this field study report.

The data for this study was provided by authorized APSU personnel from three different sources. Basic student data from the Banner student information system included, but was not limited to: whether the student was retained to the spring 2012 semester, on/off campus residency, financial aid status, high school attended, gender, race/ethnicity, retention status to spring semester, high school GPA, and GPA for the first semester of attendance at APSU. Data about each student's campus engagement during their first semester at APSU, as measured by the student's attendance at a variety of campus events, was provided from records generated when students scanned their student identification card when the students attended selected campus events. The final source of data was the Facebook Analytics data for the FTFTF students who used the APFA during the fall 2011 semester. These data included, but were not limited to: the student's number of Facebook friends, the number of friends who are at Austin Peay, the number of communities in APFA joined by the student, and the type of Facebook activity (such as number of Facebook logins and posts) initiated by the student.

Each of the three data files had at least one common variable with the other data files and this common variable was used by the authorized APSU personnel to combine the three data files into one database. Before releasing the data for this research, the authorized APSU personnel assigned each student in the population a unique identifier to prevent any unnecessary release of individually identifiable personal information. The demographic and social variables selected for inclusion in the database and the research have been used in other studies of student retention (DeBerard et al., 2004; Fischer, 2007; Ishitani, 2006; St. John & Wilkerson, 2006) where differences, although often inconsistent, among and between the different demographic groups were identified.

## Data Analysis Procedures

The analysis of the data was conducted using StatView software. The analysis began with calculating the fall-to-spring retention rates for FTFTF who were APFA users and for FTFTF who were not APFA users. When the calculations identified differences in the retention rates for the two groups, a chi-square analysis was calculated to determine whether the differences in retention rates were statistically significant. Additional data analyses using *t*-test calculations and chi square calculations were conducted using different variables to identify relationships between APFA usage and student retention, student engagement, and other demographic and social variables. Hypotheses were tested and analyzed at the .01 level of significance.

## Null Hypotheses

The null hypotheses for this study were:

1. There will be no statistically significant difference in the fall to spring retention of FTFTF students who used the APFA and FTFTF students who did not use the APFA.

2. There will be no statistically significant difference in the ways that retained and not retained APFA users used the APFA.

3. There will be no statistically significant difference in the campus engagement of FTFTF students who used the APFA and FTFTF students who did not use the APFA.

4. There will be no statistically significant difference in the grade point average of FTFTF students who used the APFA and FTFTF students who did not use the APFA.

5. There will be no statistically significant demographic differences between the retained and non-retained FTFTF.

# Chapter IV

## Findings

This study investigated whether there was a relationship between the use of the APSU Facebook App (APFA) and retention to the spring semester of their freshman year by 1,274 first time full time freshmen (FTFTF) students at Austin Peay State University. Additional factors such as involvement in campus activities, earned grade point averages, and demographic variables such as high school GPA, age, receipt of Pell Grant, gender, and ethnicity were also considered. The study investigated five research questions:

1. Were freshmen students who used the APFA more likely to be retained to the second semester of their freshman year at APSU than were freshmen students who were not APFA users?

2. Were there differences in the ways that retained and not retained APFA users used the APFA?

3. Did APFA users participate in campus activities at a higher rate than non-APFA users?

4. Did APFA users achieve higher grade point averages during the first semester than non-APFA users?

5. In addition to whether a student used the APFA, were there demographic differences between the retained students and the non-retained students?

### Research Question One

Were freshmen students who used the APFA more likely to be retained to the second semester of their freshman year at APSU than were freshmen students who were

not APFA users? A chi-square test was calculated to answer this question. Table 1 provides details of the calculations.

Table 1

*APFA Use and Retention*

| Variable | Not Retained | | Retained | | | |
|---|---|---|---|---|---|---|
| | N | % | N | % | $x^2$ | *p* |
| APFA Users | 76 | 11.160 | 605 | 88.840 | 11.145 | .0008 |
| Non-users | 105 | 17.707 | 488 | 82.293 | | |

Hypothesis One

The null hypothesis stated that there will be no statistically significant difference in the fall to spring retention of FTFTF students who used the APFA and FTFTF students who did not use the APFA. The p-value of .0008 for the chi-square test indicates that there was a statistically significant difference in the rates that APFA users were retained and the rates that non-users were retained. The null hypothesis is therefore rejected, and for the purpose of this study, it can be stated that FTFTF who were APFA users were retained at a higher rate than FTFTF who did not use the APFA.

**Research Question Two**

Were there differences in the ways that retained and not retained APFA users used the APFA? Data analysis completed for this question included only the APFA users and sought to identify differences and similarities in APFA usage between the students who were retained to the spring semester and students who were not retained to the spring semester. This analysis looked at five different factors: Facebook Friends at

Austin Peay State University, Facebook communities joined, outbound Friend requests sent, Facebook status and reach-out posts, and Facebook conversations started or joined. Five separate unpaired t-tests were calculated to compare not-retained and retained students' usage of each of the Facebook activities. Table 2 provides the details of the comparisons.

Table 2

*APFA Usage by Not-retained and Retained Students*

| Variable | *N* | *M* | *SD* | t | *df* | *p* |
|---|---|---|---|---|---|---|
| NR - Friends at APSU | 76 | 33.632 | 25.735 | -3.073 | 679 | .0022 |
| Ret - Friends at APSU | 605 | 47.912 | 39.453 | | | |
| NR – Communities Joined | 76 | 49.224 | 87.797 | .794 | 679 | .4277 |
| Ret – Communities Joined | 605 | 42.321 | 69.184 | | | |
| NR – Outbound Friend Requests | 76 | 6.618 | 14.728 | .237 | 679 | .8127 |
| Ret - Outbound Friend Requests | 605 | 6.026 | 21.130 | | | |
| NR - Status and Reach-out Posts | 76 | 4.855 | 11.238 | 1.111 | 679 | .2668 |
| Ret - Status and Reach-out Posts | 605 | 3.734 | 7.849 | | | |
| NR - Conversations Started or Joined | 76 | 6.605 | 16.834 | .341 | 679 | .7330 |
| Ret - Conversations Started or Joined | 605 | 6.040 | 13.165 | | | |

*Note*. NR = Not retained to spring semester; Ret = Retained to spring semester

Hypothesis Two

The null hypothesis stated that there will be no statistically significant difference in the ways that retained and not retained APFA users used the APFA. Among APFA users, there was statistical difference in the number of Facebook Friends at APSU of the

students who were retained from fall to spring and the students who were not retained. Retained students had more Facebook Friends at APSU with a mean of 47.912 Friends at APSU and non-retained students had fewer Facebook Friends at APSU with a mean of 33.632 Friends at APSU. This finding is based upon a t-test calculation with a p-value of .0022.

However, measures of the other four variables did not find statistical difference. There was no statistical difference in the number of Facebook communities joined by students who were retained from fall to spring and students who were not retained, based upon a t-test calculation with a p-value of .4277. There was no statistical difference in the number of outbound Friend requests sent by students who were retained from fall to spring and students who were not retained, based upon a t-test calculation with a p-value of .8127. There was no statistical difference in the number of Facebook status and reach-out posts by students who were retained from fall to spring and students who were not retained, based upon a t-test calculation with a p-value of .2868. Finally, there was no statistical difference in the number of Facebook conversations started or joined by students who were retained from fall to spring and students who were not retained, based upon a t-test calculation with a p-value of .7330.

Based upon the finding of significant difference in the number of Facebook Friends at APSU by retained and not-retained students, the null hypothesis is therefore rejected, and for the purpose of this study, it can be stated that there is statistically significant difference in at least one way that retained and not retained students use the APFA.

## Research Question Three

Did APFA users participate in campus activities at a higher rate than non-APFA users? An unpaired t-test was calculated to compare APFA users and non-users participation in campus activities. Table 3 provides the details of the comparisons.

Table 3

*Participation in Campus Activities*

| Variable | *N* | *M* | *SD* | *t* | *df* | *p* |
|---|---|---|---|---|---|---|
| APFA Users – Campus Activities | 681 | 3.272 | 3.511 | 8.107 | 1272 | <.0001 |
| Non-users – Campus Activities | 583 | 1.840 | 2.662 | | | |

Hypothesis Three

The null hypothesis stated that there will be no statistically significant difference in the campus engagement of FTFTF students who used the APFA and FTFTF students who did not use the APFA. The p-value of <.0001 indicates that there was statistical significance in the level of participation in campus activities by APFA users and non-users. The null hypothesis is therefore rejected, and for the purpose of this study, it can be stated that FTFTF who used the APFA users participated in campus activities at a higher rate than FTFTF who did not use the APFA.

## Research Question Four

Did APFA users achieve higher grade point averages during the first semester than non-APFA users? An unpaired t-test was calculated to compare the GPAs of APFA users and non-users. Table 4 provides the details of the comparisons.

Table 4

*First Semester Grade Point Average*

| Variable | *N** | *M* | *SD* | *t* | *df* | *p* |
|---|---|---|---|---|---|---|
| APFA Users - GPA | 677 | 2.679 | 1.054 | | | |
| Non-users - GPA | 588 | 2.382 | 1.517 | 4.625 | 1263 | <.0001 |

***Note*. 28 cases were omitted in the analysis of fall semester GPA due to missing values

Hypothesis Four

The null hypothesis stated that there will be no statistically significant difference in the grade point average of FTFTF students who used the APFA and FTFTF students who did not use the APFA. The p-value of <.0001 indicates that there was statistical significance in the first semester grade point average (GPA) of APFA users and non-users. The null hypothesis is therefore rejected, and for the purpose of this study, it can be stated that FTFTF students who used the APFA earned a higher GPA than FTFTF students who did not use the APFA.

**Research Question Five**

In addition to whether a student used the APFA, are there demographic differences between the retained students and the non-retained students? Data analysis completed for this question included only the APFA users and sought to identify demographic similarities and differences between the students who were retained to the spring semester and students who were not retained to the spring semester. Specifically, this analysis looked at the students' high school grade point average, age, Pell Grant receipt status, gender, and ethnicity. Unpaired t-tests were calculated to compare retained and non-retained APFA users high school GPA and age. Table 5 provides the details of

these comparisons. Chi-square tests were calculated to compare retained and non-retained APFA users' Pell receipt status, gender, and ethnicity. Table 6 provides the details of these comparisons.

Table 5

*Characteristics of APFA Users*

| Variable | *N* | *M* | *SD* | *t* | *df* | *p* |
|---|---|---|---|---|---|---|
| NR – High School GPA | 74 | 3.049 | .483 | -4.473 | 664 | <.0001 |
| Ret – High School GPA | 592 | 3.317 | .486 | | | |
| NR – Age | 76 | 18.553 | .681 | -.725 | 679 | .4685 |
| Ret – Age | 605 | 18.757 | 2.443 | | | |

Table 6

*Characteristics of APFA Users*

| | Not Retained | Retained | $x^2$ | *p* |
|---|---|---|---|---|
| No Pell | 35 | 261 | .233 | .6293 |
| Pell Recipient | 41 | 344 | | |
| Female | 46 | 408 | 1.451 | .2283 |
| Male | 30 | 197 | | |
| White | 53 | 410 | 3.663 | .8862 |
| Other ethnicities | 23 | 195 | | |

The null hypothesis stated that there will be no statistically significant demographic differences between the retained and non-retained FTFTF. There was no

statistical difference in the age, Pell receipt status, gender, or ethnicity of retained and not-retained students who were APFA users. However, the p-value of <.0001 indicates that there was statistical significance in the high school GPAs of APFA users who were retained and not-retained. The null hypothesis is therefore rejected, and for the purpose of this study, it can be stated that there was statistically significant differences in the high school GPAs of the APFA users who were not retained.

# Chapter V

## Conclusions

The purpose of this study was to investigate whether there is a relationship between the use of the APSU Facebook App and retention to the spring semester of their freshman year by first time full time freshmen (FTFTF) students at Austin Peay State University. Additional factors such as involvement in campus activities, earned grade point averages, and demographic variables such as high school GPA, residency status, Pell Grant receipt, gender, and ethnicity, were also considered. This study investigated five research questions:

1. Were freshmen students who used the APFA more likely to be retained to the second semester of their freshman year at APSU than were freshmen students who were not APFA users?

2. Were there differences in the ways that retained and not retained APFA users used the APFA?

3. Did APFA users participate in campus activities at a higher rate than non-APFA users?

4. Did APFA users achieve higher grade point averages during the first semester than non-APFA users?

5. In addition to whether a student used the APFA, were there demographic differences between the retained students and the non-retained students?

Data analysis using t-test and chi-square calculations identified statistical significance in the relationship between use of the APFA and three other variables: retention to the spring semester, participation in campus events, and first semester GPA.

The analysis also identified statistical significance in the relationship between retention to the spring semester and the number of a student's Facebook Friends who are connected to APSU. The analysis of demographic factors of APFA users identified statistical significance in the relationship between high school GPA and retention to the spring semester, with retained students high school GPA surpassing non-retained students' mean average GPA by .268. These findings are consistent with the existing body of work that maintains that students are more likely to be retained when they are engaged and connected to the university and appropriately prepared for university level work.

The same analysis did not identify statistical significance in the relationship between retention and four specific Facebook activities: number of communities joined, outbound friend requests, status and reach-out posts, and conversations started or joined. This finding might warrant additional study since all four of these activities are active, rather than passive, use of Facebook and prior research seemed to indicate that active Facebook users were more engaged with the Facebook community. The analysis of demographic factors of APFA users did not identify statistical significance in the relationship between retention and age, receipt of a Pell grant, gender, or ethnicity. This information would be more useful in a comparison of this analysis with an identical analysis of non APFA users.

## Implications for Further Research

The research conducted in this field study only tapped a small amount of the data that was available in the database developed for this study. Because the database is rich in data from three different sources, it provides many opportunities for additional research. Additional research could include, but is not limited to, further analysis of

students' demographic characteristics, to include the relationship between retention status and multiple variables such as residency status, gender, and ethnicity. More detailed analysis of student participation in campus events could yield information about whether there were one or more key events that were correlated with retention or whether the relationship between attending campus events and retention varied at different points along a scale showing the number of events attended. The wealth of Facebook analytics data could also be mined to identify whether retention was more strongly related to additional specific Facebook factors such as the date that a student joined Facebook, student membership in one or more specific Facebook communities, or friendship status with other specific Facebook users. The database also provides a foundation of data that can be updated on an annual basis and used for longitudinal studies of this cohort of students to determine whether their level or type of Facebook use or campus engagement varies over time, whether the relationship between Facebook use and campus engagement change over time, and how the students are retained and progress toward graduation.

The information obtained from this additional research can be used to continue to design and implement appropriate institutional student retention and graduation programs and interventions, to include tools and techniques that will utilize Facebook and social media to better engage students based upon the ways that students actually use social media.

## References


ACT. (2012). *National collegiate retention and persistence to degree rates.* ACT. Retrieved from http://www.act.org/research/policymakers/pdf/retain_2012.pdf

Astin, A. W. (1984/1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 518 – 529.

Astin, A. W. (1993). What matters in college? Four critical years revisited. San Francisco: Jossey-Bass.

Austin Peay State University (2012a). APSU First-Time Full-Time Freshmen six-Year Graduation Rate. Retrieved from http://www.apsu.edu/sites/apsu.edu/files/ire/APSU_Graduation_Rate_Report_2012.pdf

Austin Peay State University (2012b). APSU Retention Report – Fall 2012. Retrieved from http://www.apsu.edu/sites/apsu.edu/files/ire/APSU_Retention_Report_Fall_2012.pdf

Barnes, N. G., & Lescault, A. L. (2011) *Social media adoption soars as higher-ed experiments and reevaluates its use of new communications tools*. Center for Marketing Research. University of Massachusetts Dartmouth, North Dartmouth, MA. Retrieved from http://www.umassd.edu/cmr/studiesandresearch/socialmediaadoptionsoars/

Baum, S., Ma, J., & Payea, K. (2010). *Education pays 2010: The benefits of higher education for individuals and society*. The College Board. Retrieved from http://trends.collegeboard.org/downloads/Education_Pays_2010.pdf

Broome, R., Croke, B., Staton, M., & Zachritz, H. (n.d.). Inigral Insights: The social side of student retention. Inigral. Retrieved from http://www.inigral.com/research/social-side-of-student-retention/

Bureau of Labor Statistics. (2012). *Education pays*. Retrieved from http://www.bls.gov/emp/ep_chart_001.htm

Cabrera, A. F., Castaneda, M. B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *The Journal of Higher Education, 63*(2), 143 – 164.

Carnevale, A. P., Smith, N., & Strohl, J. (2010). Help wanted: Projections of jobs and education requirements through 2018. The Georgetown University Center on Education and the Workforce. Washington. Retrieved from http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/FullReport.pdf

Center for Regional Economic Competitiveness (2010). *Leveraging the labor force for economic growth: Assessing the Nashville Economic Market Area's readiness for work after the recession.* Nashville, Tennessee: Center for Regional Economic Competitiveness. Retrieved from http://www.nashvillechamber.com/Homepage/WorkNashville/WorkforceStudy.aspx

Claridge, T. (2004). Definitions of social capital. Retrieved from Social Capital Research website http://www.socialcapitalresearch.com/definition.html

College Board. (2009). *How colleges organize themselves to increase student persistence: Four-year institutions*. Retrieved from www.collegeboard.com/retention

Council for Advancement and Support of Education [CASE], Slover Linett Strategies Incl, & mStoner. (2012) Best practices in social media: Summary of findings from the third comprehensive study of social media use by schools, colleges and universities. Retrieved from http://www.sloverlinett.com/files/2012%20CASE%20Social%20Media%20Survey%20Topline%20Summary_Final.pdf

Dahlstrom, E., de Boor, T., Grunwald, P., & Vockley, M. with a foreword by Oblinger, D. (2011). *The ECAR National Study of Undergraduate Students and Information Technology, 2011*. Retrieved from EDUCAUSE Center for Applied Research website: http://www.educause.edu/ecar

DeBerard, M. S., Spielmans, G. I., & Julka, D. L. (2004). Predictors of academic achievement and retention among college freshmen: a longitudinal study. *College Student Journal 38*(1), 66. Retrieved from http://www.lmc.edu/facsen/Benchmark%20Data%20from%20Curriculum%20Committee/General%20Data/MSDeBerard%20Predictors%20of%20Academic%20Achievement.pdf

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "Friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143–1168. doi: 10.1111/j.1083-6101.207.00367.x

Ellison, N. B., Steinfield, C., & Lampe, C. (2011). Connection strategies: Social capital implications of Facebook-enabled communication practices. *New Media & Society*. doi: 10.1177/1461444810385389

Fischer, M. J. (2007). Settling into campus life: Differences by race/ethnicity in college involvement and outcomes. *The Journal of Higher Education, 78*(2), 125-161. Retrieved from http://www.jstor.org/stable/4501200

Hampton, K., Goulet, L., Rainie, L., & Purcell, K. (2011). *Social networking sites and our lives*. (Pew Internet and American Life Project). Retrieved from Pew Research Center website: http://pewinternet.org/Reports/2011/Technology-and-social-networks.aspx

Hargittai, E. & Hsieh, Y. P. (2010). Predictors and consequences of differentiated practices on social network sites. *Information, Communication & Society, 13*, 515-536. doi:10.1080/13691181003639866

Heiberger, G., & Harper, R. (2008). Have you Facebooked Astin lately? Using technology to increase student involvement. In R. Junco & D. M. Timm (Eds.), *Using emerging technologies to enhance student engagement. New Directions for Student Services, 124* (19–35). San Francisco, CA: Jossey-Bass. doi:10.1002/ss.293

Hyatt, R. Y. (2011). *The influence of time spent by students engaged in co-curricular involvement, online social networking, and studying and doing coursework on their academic achievement* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3465635)

Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher Education, 77*(5), 861-885. Retrieved from http://www.jstor.org/stable/3838790

Jefferson, T. (1816, January 6). *Thomas Jefferson to Charles Yancey*. The Thomas Jefferson Papers Series 1. General Correspondence. (1651-1827). The Library of Congress, Washington. Retrieved from: http://hdl.loc.gov/loc.mss/mtj.mtjbib022264

Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, *58*(2012), 162-171. doi: 10.1016/j.compedu.2011.08.004

Karpinksi, A. C. & Duberstein, M. A. (2009). A description of Facebook use and academic performance among undergraduate and graduate students. *Research News. POSTER* Retrieved from http://researchnews.osu.edu/archive/facebookusers.htm

Kuh, G. D. (2009). What student affairs professionals need to know about student engagement. Journal of College Student Development, *50*(6), 683-706.

Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. The Journal of Higher Education, *79*(5), 540-563.

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media & mobile internet use among teens and young adults* (Pew Internet and American Life Project). Retrieved from Pew Research Center website: http://pewresearch.org/pubs/1484/social-media-mobile-internet-use-teens-millennials-fewer-blog

Lloyd, J. M., Dean, L. A., & Cooper, D. L. (2007). Students' technology use and its effects on peer relationships, academic involvement, and healthy lifestyles.

*NASPA Journal, 44*(3), 695-709. Retrieved from http://journals.naspa.org/jsarp/vol44/iss3/art6/

Lockard, C. B., & Wolf, M. (2012). Employment outlook: 2010-2020 - Occupational employment projections to 2020. *Monthly Labor Review*, January 2012, 84-108.

Lumina Foundation. (2012) A stronger nation through higher education. Lumina Foundation. Indianapolis. Retrieved from http://www.luminafoundation.org/publications/A_Stronger_Nation-2012.pdf

Madden, M., & Zickuhr, K. (2011). *65% of online adults use social networking sites* (Pew Internet and American Life Project). Retrieved from http://pewinternet.org/~/media/files/reports/2011/pip-sns-update-2011.pdf

Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university: 'It is more for socializing and talking to friends about work than for actually doing work'. Learning, Media and Technology, *34*(2), 141-155. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/17439880902923606#

Morris, J., Reese, J., Beck, R., & Mattis, C. (2010). Facebook usage as a predictor of retention at a private 4-year institution. *Journal of College Student Retention, 11*(3), 311-322. doi: 10.2190/CS.11.3.a

National Center for Health Statistics. (2012). *Health, United States 2011: With special feature on socioeconomic status and health.* Hyattsville, Maryland: National Center for Health Statistics. Retrieved from http://www.cdc.gov/NCHS/DATA/HUS/HUS11.PDF#HIGHLIGHTS

National Survey of Student Engagement. (n.d.) *About NSSE*. Retrieved from http://nsse.iub.edu/html/about.cfm

Noel-Levitz. (2011a). *2011 student retention practices at four-year and two-year institutions*. Coralville, IA: Noel-Levitz. Retrieved from https://www.noellevitz.com/papers-research-higher-education/2011/2011-student-retention-practices-report

Noel-Levitz. (2011b). *The online expectations of prospective college students and their parents*. Coralville, IA: Noel-Levitz. Retrieved from https://www.noellevitz.com/papers-research-higher-education/2011/2011-e-expectations-report

O'Brien, S.J. (2011). *Facebook and other Internet use and the academic performance of college students* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (AAT No. 3457926)

Pascarella, E.T., & Terenzini, P. T. (2005). How college affects students: A third decade of research. San Francisco: Jossey-Bass.

Pasek, J., Moro, E., & Hargittai, E. (2009). Facebook and academic performance: Reconciling a media sensation with data. *First Monday*, *14*(5), 1-17. Retrieved from http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2498/2181

Pempek, T. A., Yermolayeva, Y. A., & Calvert, S. L. (2009). College students' social networking experiences on Facebook. *Journal of Applied Developmental Psychology, 30*(3), 227–238. doi: 10.1016/j.appdev.2008.12.010

Pike, G. R., & Kuh, G. D. (2005). First- and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education, 76*(3), 276-300

Pryor, J. H., DeAngelo, L., Palucki, B. L., Hurtado, S., & Tran, S. (2011). *The American freshman: National norms fall 2011*. Los Angeles: Higher Education Research Institute, UCLA.

St. John, E. P., & Wilkerson, M. (Eds.) (2006). Reframing persistence research to improve academic success. *New Directions for Institutional Research*, Number 130. San Francisco: Jossey-Bass.

Steinfield, C., Ellison, N. B., Lampe, C. (2008). Social capital, self-esteem, and the use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology, 29*, 434-445. doi: 10.1016/j.appdev.2008.07.002

Subrahmanyam, K., Reich, S. M., Waechter, N., & Espinoza, G. (2008). Online and offline social networks: Use of social networking sites by emerging adults. *Journal of Applied Developmental Psychology, 29*, 420-433. doi: 10.1016/j.appdev.2008.07.003

Tinto, V. (nd). Taking student retention seriously: Rethinking the first year of college. Pell Institute for the Study of Opportunity in Higher Education. Syracuse University. Retrieved from http://faculty.soe.syr.edu/vtinto/Files/Taking%20Student%20Retention%20Seriously.pdf

Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention, 8*(1), 1-19.

Wolf-Wendel, L., Ward, K., & Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development, 50*(4), 407-428.

**Austin Peay**
State University

**Provost and Vice President for Academic Affairs**

March 13, 2012

Ms. Carol Clark
1854 Patricia Drive
Clarksville, TN 37040

Dear Ms. Clark,

Your request to conduct research entitled *The Relationship Between Use of the APSU Facebook App and the Retention of First Year College Students at Austin Peay State University* is approved subject to review and approval by the university Institutional Review Board.

Sincerely,

Tristan Denley, Provost and Vice President
for Academic Affairs

April 12, 2012

RE: Your application regarding study number 12-022: The Relationship between Use of the APSU Facebook App and the Retention of First Year College Students at Austin Peay State University

Dear Ms. Clark,

Thank you for your recent submission. We appreciate your cooperation with the human research review process. This type of study qualifies for expedited review under FDA and NIH (Office for Protection from Research Risks) regulations.

Congratulations! This is to confirm that your application has been approved through one calendar year. This approval is subject to APSU Policies and Procedures governing human subject research. The full IRB may still review this protocol and reserves the right to withdraw expedited approval if unresolved issues are raised during their review.

You are granted permission to conduct your study as described in your application effective immediately. The study is subject to continuing review on or before April 12, 2013, unless closed before that date. The forms to report when your study has been completed or the form to request an annual review of a continuing study are on the IRB website. Please submit the appropriate form prior to April 12, 2013.

Please note that any changes to the study must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, you can contact me by phone (931-221-7467) or email (davenportd@apsu.edu).

Again, thank you for your cooperation with the APSU IRB and the human research review process. Best wishes for a successful study!

Sincerely,

Doris Davenport

Doris Davenport, Chair
Austin Peay Institutional Review Board

Cc: Dr. Tammy Shutt, Faculty Supervisor