

THE RELATIONSHIP BETWEEN INVOLVEMENT IN
EXTRACURRICULAR ACTIVITIES AND
ACADEMIC PERFORMANCE

By

AVI ZACHERMAN

Bachelor of Arts in Psychology and Asian Studies

State University of New York at New Paltz

New Paltz, NY

2008

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
July, 2010

THE RELATIONSHIP BETWEEN INVOLVEMENT IN
EXTRACURRICULAR ACTIVITIES AND
ACADEMIC PERFORMANCE

Thesis Approved:

Dr. John Foubert

Thesis Adviser

Dr. Bernita Krumm

Dr. Katy Perry

Dr. A. Gordon Emslie

Dean of the Graduate College

ACKNOWLEDGMENTS

I'd first like to thank my parents, Joseph and Susan Zacherman, for always believing in me and for pushing me to get this work completed. For my father, Joseph, who taught me what it means to persevere. And for my mother, who has been willing to pick up the phone no matter what time I call. Even when it seemed that I wasn't going to finish, or I was feeling overwhelmed, they constantly encouraged me to keep moving. To my brother, Jonathan, for being willing to challenge my work and supporting me regardless. To Bubbeh Sara, to whom I shall always be her "sweet genius," and Grandma Lilly, who taught me the importance of humor. May peace be with them, always. To Grandpa Seymore, for always encouraging me to reach my potential.

To my friends back home, "The Misfits," Terence, Adam, Nick, Jo, Mike, and to those of us in exile, Max and Billy, a more tolerant and closer group of friends could not possibly exist. Thank you for always letting me be myself. To my friend Jess, for her overwhelming encouragement and enthusiasm. To my friend Brian Gold, for helping to stimulate my love of learning and intellectualism.

Also, thank you to Dr. John Foubert, for being willing to put up with my constant e-mails and allowing me to keep dropping by his office without an appointment. Without your help, I never would have come so far. Dr. Bernita Krumm for her teacher instincts and making me fix all my "its." Thank you to Dr. Perry for her overall enthusiasm and for challenging me to learn new statistics. And thank you to Dr. Fuqua for teaching me those new statistics.

I also have to thank Dr. Amber Lambert, and the Center for Postsecondary Research at Indiana University. Without her help, this research would never have come together. All National Survey for Student Engagement data is used with the permission of the Center for Postsecondary Research at Indiana University in Bloomington, IN.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Need for Study	1
Theoretical Framework	2
Purpose of Study	3
Research Questions	3
The National Survey of Student Engagement	4
Key Variables	4
II. REVIEW OF LITERATURE	7
Student Development through Involvement	7
Involvement and Psychosocial Growth	10
Cultural Identities and Involvement	14
Cognitive-Structural Theories and Involvement	17
Involvement and Leadership	22
Academic Achievement and Involvement	27
Summary	33
III. METHODOLOGY	35
National Survey of Student Engagement	35
Overview	35
Validity	36
Reliability	38
Design	38
Methods	39
Participants	39
Measures	39
Instrument	40
Procedures	41

Chapter	Page
IV. FINDINGS.....	43
Analysis of Overall Sample	43
Differences between Sexes	45
Differences between Class Standing.....	48
V. CONCLUSION.....	52
Discussion of the Analysis.....	52
Overall Sample.....	52
Differences between Sexes	55
Class Standing Differences.....	58
Implications for Practice	62
Limitations of the Analysis.....	63
Future Studies	64
REFERENCES	67

LIST OF TABLES

Table	Page
Table 1: Hours Involved vs. Mean Grades for Overall Sample.....	44
Table 2: Hours Involved vs. Mean Grades for Males	45
Table 3: Hours Involved vs. Mean Grades for Females	47
Table 4: Hours Involved vs. Mean Grades for Freshmen	49
Table 5: Hours Involved vs. Mean Grades for Seniors.....	50
Table 6: Hours Involved vs. Mean Grades for the Overall Sample (Adjusted).....	54
Table 7: Hours Involved vs. Mean Grades for Males (Adjusted).....	56
Table 8: Hours Involved vs. Mean Grades for Females (Adjusted)	57
Table 9: Hours Involved vs. Mean Grades for Freshmen (Adjusted).....	60
Table 10: Hours Involved vs. Mean Grades for Seniors (Adjusted).....	60

LIST OF FIGURES

Figure	Page
Figure 1: Overall Academic Performance vs. Extracurricular Involvement	44
Figure 2: Academic Performance vs. Extracurricular Involvement by Sexes	46
Figure 3: Male Academic Performance vs. Extracurricular Involvement	47
Figure 4: Female Academic Performance vs. Extracurricular Involvement.....	48
Figure 5: Academic Performance vs. Extracurricular Involvement by Class Rank .	49
Figure 6: Freshman Academic Performance vs. Extracurricular Involvement.....	50
Figure 7: Senior Academic Performance vs. Extracurricular Involvement	51
Figure 8: Overall Academic Performance vs. Involvement (Adjusted)	53
Figure 9: Male Academic Performance vs. Involvement (Adjusted)	56
Figure 10: Female Academic Performance vs. Involvement (Adjusted).....	58
Figure 11: Freshman Academic Performance vs. Involvement (Adjusted).....	59
Figure 12: Senior Academic Performance vs. Involvement (Adjusted)	61

CHAPTER I

INTRODUCTION

Students spend much of the time in their college experience participating in clubs and organizations. While research has been devoted to the benefits of being engaged in the college experience and participating in opportunities for involvement, there is a limited amount of information regarding the potential negative effects when students are either involved in too many organizations or spend a great deal of time in one or two clubs. This study sought to analyze the relationship between a student's grade point average and the time spent being involved in extracurricular activities. In this chapter I explain the need for this study and provide a rationale for how this research can add to knowledge of student affairs. My research questions and hypotheses were provided. Finally, I briefly explain the dataset that I analyzed and the key variables that I will utilize.

Need for Study

Astin (1984) theorized that what students gain from participation in curricular and co-curricular activities is related to the effort they put into those activities. Studies have consistently shown that involvement in extra-curricular activities can be beneficial to student development (Chickering & Reiser, 1993; Astin, 1993; Pascarella & Terenzini,

2005; Kuh, 2003). Yet, a limited number of studies have also shown that some extracurricular involvement may not be beneficial to development, or potentially be harmful (Miller & Kerr, 2002; Valentine & Taub, 1999; Furr & Elling, 2000; National Center on Postsecondary Teaching, Learning and Assessment, 1996).

There are a number of studies that show there is a relationship between academic performance and out of the classroom activities. In one study, researchers found there was a correlation between grades and hours spent working at a job (Pike, Kuh, & Mass-McKinley, 2008). Studies on scholarship athletes show that involvement in athletics correlates with a lower GPA (Purdy, Eitzen, & Hufnagel, 1982). This further expands the notion that non-academic activities have an impact on student grades. Evidence, therefore, suggests that there could be a correlation between hours spent involved in clubs and organizations on campus and grades.

Theoretical Framework

Many cognitive-structural theories, particularly Perry's Intellectual Scheme and Kitchener and King's Reflective Judgment Model theorize that learning is enhanced by new experiences (Love, & Guthrie, 1999; Perry, 1999; Kitchener & King, 1994), which can be gained through participation in clubs and organizations. Similar research on students holding jobs shows that working while in school has a curvilinear relationship with cognitive development (Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998).

Chickering and Reiser (1993) posit that a student's identity is developed from out of the classroom experiences as well as through academics. All these theories contribute to the notion that involvement in clubs and organizations can enhance student learning.

Other research by Kuh and his associates indicates that overall student engagement is related to student learning (Kuh, 2003; Center for Postsecondary Research, 2007). Astin provides research that links retention to involvement and engagement by students, further increasing the importance placed on student participation in organizations (Astin, 1993).

Purpose of Study

The purpose of this study was to explore a relationship between academic performance and involvement in extracurricular organizations. By investigating this area, student affairs professionals can investigate how to better support students academically and be aware of the challenges facing them. This can benefit advisors in that they are better able to support students to become aware of the risks of potential over involvement.

Research Questions

There were two research questions in this study. The first was to determine if there was significance in the relationship between academic performance and extracurricular involvement. The second, assuming there is a significant relationship, was to determine whether the nature of this relationship.

Research Question 1: Is there a significant relationship between time spent involved in extracurricular activities and grades?

Hypothesis: I hypothesized that there would be a significant relationship between hours spent involved in extracurricular activities and grades.

Research Question 2: What is the nature of the relationship between time spent in extracurricular activities and academic performance?

Hypothesis: I hypothesized that there would be a curvilinear relationship between time spent involved in extracurricular activities and grades.

The National Survey of Student Engagement

The National Survey of Student Engagement is a comprehensive study that examines the vast multitude of factors relating to student engagement in the university. The study is now in its 10th iteration, and consists of over 360,000 respondents. There are over 50 variables in the NSSE dataset, related to student engagement as defined by the Center for Postsecondary Research (Kuh, 2003; Center for Postsecondary Research, 2007).

This specific study made use of the data from the 2006 National Study of Student Engagement. This was the most recent study with data available to independent researchers. Data from this study was collected from both college freshman and seniors. The two variables I examined from the 2006 National Survey of Student Engagement are question #9.d and question #25, as described below. All data from the 2006 National Survey of Student Engagement was used with permission of the Center for Postsecondary Research and Indiana University.

Key Variables

Involvement in Extracurricular Activities

For the purpose of this study, Involvement in Extracurricular Activities was derived from Question #9.d on the 2006 National Survey of Student Engagement. Question #9.d reads, “About how many hours do you spend in a typical 7-day week doing each of the following?: Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or

intramural sports, etc.)” Respondents are given 8 choices on an ordinal scale representing different amounts of time spent involved in co-curricular activities: “0,” “1-5,” “6-10,” “11-15,” “16-20,” “21-25,” “26-30,” “more than 30.” (Center for Postsecondary Research, 2005).

This ordinal scale was recoded for the purpose of ease of conducting this study. “0” shall remain “0,” “1-5” became “1,” “6-10” became “2,” “11-15” became “3,” “16-20” became “4,” “21-25” became “5,” “26-30” became “6,” and “More than 30” became “7.” This is consistent with similar studies utilizing other parts of the same question (Pike, Kuh, Massa-McKinley, 2008).

Academic Performance

Academic performance is widely understood to be measurable through student grades. Question #25 reads “What have most of your grades been up to now at this institution.” Respondents are given the choices of “A,” “A-,” “B+,” “B,” “B-,” “C+,” “C,” and “C- or lower.” For the purpose of this study, these responses shall be converted into a GPA on a 4.0 scale. “A” became “4.0,” “A-” became “3.67,” “B+” became “3.33,” “B” became “3.0,” “B-” became “2.67,” “C+” became “2.33,” “C” became “2.0,” and “C- or lower,” became “1.67.” (Center for Postsecondary Research, 2005; Breland, 1975).

This was the closest conversion possible from letter grade to numeric grade with the information presented in the data set. While it was not a perfect conversion, the size and robustness of the data in the NSSE should compensate.

Demographic Variables

The NSSE includes a fairly comprehensive set of demographic identifiers in its collection. As such, this study also analyzed the impact of extracurricular involvement

across a number of demographic factors. The key demographic factors that were analyzed are sex and class standing. Sex as a variable offers options for male or female. Class standing as a variable is divided into “freshman/first year” and “senior.”

CHAPTER II

REVIEW OF LITERATURE

The underlying theories and studies related to student involvement will frame the context for this research. There was not a tremendous amount of research related to the topic of the impact of involvement in extracurricular organizations on student grades. Research has been conducted in related areas, especially with regard to involvement in Greek organizations, athletics, and employment. Kuh (2003) and Astin (1984, 1993) have published comprehensive studies of the benefits of student engagement in organizations and with faculty members. As a framework for this research, the relevant aspects of these studies were reviewed.

Further research relates the impact of relevant extracurricular involvement to psychosocial and cognitive development. This study also examined the impact of extracurricular involvement on psychological development, given that student development is considered paramount to student affairs professionals (ACPA, 1994). Finally, studies related to how involvement in various activities has an impact on student grades were introduced and reviewed.

Student Development through Involvement

Out of classroom experiences play a crucial role in the development of college students (ACPA, 1994; Pascarella & Terenzini, 2005). Astin developed a theory that a student's investment in collegiate activities, such as studying or in extracurricular clubs, was directly proportional to the outcomes they gained from these activities (Astin, 1984). These outcomes were apparent through a number of the specific skills and abilities gained through involvement in extracurricular participation.

In his student involvement theory, Astin (1984) attempted to bring together a vast number of other theories on student learning and propose that involvement in out-of-classroom experiences is beneficial to student development. Astin theorized that the amount students gained from their involvement was directly related to the amount they invested. For example, students who spent more time studying were more likely to do better academically. He believed that different developmental outcomes could be reached through different forms of involvement.

In a longitudinal study, Astin (1993) examined how different forms of involvement impact student development in college. Astin's comprehensive study examined the environmental effects on 24,847 college students. His study made use of 90 environmental variables to see what impact different factors had on college students. He also analyzed numerous standardized test scores on graduate school examinations from this sample of students.

Astin (1993) found that students who participated in clubs and organizations showed an increase in both leadership and interpersonal skills. Other research continued to examine the nature of skill building through involvement in different types of

extracurricular activities (Kuh, 1995; Kuh & Lund, 1994). This research sought to understand what skills students gained from participating in out of classroom activities. A sample consisting of 149 students from 12 institutions were interviewed about their learning experiences, development of competences and their involvement. Researchers found that participation in out-of-classroom activities helped students to develop a number of competencies. For example, participation in student government has been shown to be beneficial to students in helping them develop time management skills (Kuh & Lund, 1994). Studying led them to a higher level of academic achievement (Kuh, 1995).

Other studies have shown that interaction with other students is beneficial to adjustment to college. In one such study, the role of friendship in adjustment was examined (Swenson, Nordstrom & Hiester, 2008). The sample consisted of 271 first-year traditional-age college students, mostly white, at two institutions, collected by convenience from students in freshman composition and history classes. The instrument examined how many close friendships students had and how satisfied and adjusted to college a student was. The instrument was applied twice, once during the first two weeks and again after the twelfth week of each student's first semesters.

The study examined the quality of the relationships between college students and their best friends in college and in high school. These findings showed that having friends in college were positively correlated with adjustment to the college environment. Students who were more attached to their high school friends, however, showed more difficulty academically and adjusting to college (Swenson, Nordstrom & Hiester, 2008).

Although the students in the previous study were predominately white (Swenson, Nordstrom & Hiester, 2008), another study examined how participation in ethnic student organizations helped minority students adjust to college at a predominately white institution (Museus, 2008). In this qualitative study, the researcher interviewed 12 Asian American and 12 African Americans attending a large, predominately white institution in the mid-Atlantic region of the United States. The students he interviewed were selected by university administrators as having been enrolled for at least a year, involved in ethnic organizations and knowledgeable about the campus culture.

Researchers found that involvement in ethnic clubs and organizations was beneficial to adjustment to college at a predominately white institution for minority students. The study hypothesizes that these ethnic organizations provide a safe place for cultural expression on this specific predominately white campus. As a qualitative study, the generalizability of this research is limited. Qualitative studies are useful in that they increase the understanding of and explore phenomena in a real life setting. (Museus, 2008; Rossman & Rallis, 2003).

Student involvement in extracurricular organizations is an important part of the college experience. The overall research does show that being involved in these activities has a beneficial on the overall development of college students.

Involvement and Psychosocial Growth

Chickering and Reisser's *Education and Identity* (1993) is one of the seminal works in Student Development Theory. Chickering's theory was originally created as an expansion to the ideas published by Erik Erikson, Chickering and Reisser's Theory of Identity Development; it presents seven vectors of identity development specifically for

college students (Chickering & Reiser, 1993; Evans, Forney, & Guido-DiBritto, 1998). Chickering's seven vectors are: Developing Competence, Managing Emotions, Moving Through Autonomy Toward Interdependence, Developing Mature Interpersonal Relationship, Establishing Identity, Developing Purpose, and Developing Integrity. Each of these vectors represents a psychological level of development that students go through in college. These vectors are developed not only in class, but also through interactions with faculty, participating in community service or taking part in extracurricular clubs and organizations (Chickering & Reiser, 1993; Evans, Forney, & Guido-DiBritto, 1998; Foubert & Grainger, 2006; Torres, Jones & Renn, 2009).

While Chickering's theory is considered the cornerstone of identity development theory, another relevant theory to the development of psychosocial identity is Schlossberg's Transition Theory. In Transition Theory, psychosocial growth occurs as a result of how individuals approach significant changes in their lives (Evans, Forney, & Guido-DiBritto, 1998). Transition theory has been utilized to help explain how the adjustment from high school to college imparts psychosocial development on students (Marks & Jones, 2004).

Unfortunately, a limited amount of research relating identity development to participation in clubs and organizations exists. In *Education and Identity* (1993), Chickering and Reiser only briefly mentioned that involvement in extracurricular organizations helps students develop along the vector of Moving Through Autonomy Toward Interdependence. Only a small number of studies directly relating psychosocial growth to involvement in clubs and organizations exist (Cooper, Healy & Simpson, 1994; Foubert & Grainger, 2006). Similar research has been done in areas related to

extracurricular involvement, such as athletics, cultural exposure, work, community service and religion (Chickering & Reiser, 1993; Evans, Forney, & Guido-DiBrito, 1998; Pascarella & Terenzini, 2005).

In another study on identity development (Waterman, 1982), the researcher found that college freshman who reported being more involved in cultural activities were more likely to be identity achievers. Waterman defines an identity achiever as an individual who has encountered a conflict in his identity and successfully moved past it by committing to their sense of self. Cultural interests he defines as an interest in art, music, literature and foreign films.

A study on scholarship athletes (Miller & Kerr, 2002), examined the impact that devoting a large volume of time to athletics has on both their academic and social experiences. The researchers found that scholarship athletes have less developed social identities outside of their teams. This is in line with the Chickering's theory of identity development, which notes that socialization is a key to the development of a student's identity (Chickering & Reiser, 1993). It is theorized that athletes are missing a crucial part of their identity development as a result of their limited interaction with students outside of their sports.

Further research on student athletes shows similar concern with the identity development of scholarship athletes. In this study, athletes were examined across the seven vectors of identity development as established by Chickering. Researchers found that athletes are either less developed, or at most as developed, as non-athletes across all seven vectors (Valentine & Taub, 1999).

It should be noted that athletics represents a fairly specific area of research and that not all the concerns of athletes face the average college student. However, understanding the challenges of athletes is relevant when looking at the challenges related to students involved in other extracurricular activities. This is of particular note to those students who devote dozens of hours of their time to extracurricular activities, just as athletes do.

Students also go through identity development when they spend time at their jobs. One of Chickering's seven vectors, Developing Purpose, relates in part to preparing for their future career choices (Chickering & Reisser, 1993). Chickering theorized that as students prepared to graduate, they took steps which would enable them to find a career.

A study conducted on students in clubs and organizations analyzed psychosocial development along the vectors of Developing Mature Interpersonal Relationships and Developing Purpose (Cooper, Healy & Smith 1994). Students were surveyed twice over a period of three years, once when entering the university and three-years later in their junior year of college. They found that after three years, those students participating in student organizations were significantly more developed along all measures of the vector of Developing Purpose than students who did not participate in student organizations. There was, however, no significant difference along the vector of Developing Mature Interpersonal Relationships (Cooper, Healy & Smith 1994).

Furr and Elling (2000) examined the impact of work on college students. It was found that students working on campus were more likely to be engaging of faculty and participating in extracurricular activities. These are known factors to strengthen the

psychosocial development of students (Chickering & Reisser, 1993; Pascarella & Terenzini, 2005).

Growth in one's psychosocial identity has been shown to occur in those students that participate in community service (Marks & Jones, 2004). In this study, the researchers examined how participation in community service is beneficial to students who are transitioning from high school to college. They determined that students who continue to participate in community service and volunteering activities from high school into college experience better psychosocial growth. They also found that those that continue a trend of volunteering are more likely to be involved in extracurricular activities, such as being affiliated with a Greek organization or with student government (Marks & Jones, 2004). As stated in *Education and Identity* (Chickering & Reisser, 1993), involvement in extracurricular activities promotes identity development.

Cultural Identities and Involvement

A number of student development theories exist that examine the development of African American and GLBT students. Interestingly, all of these specific theories take into account the importance of interacting with student organizations made up of similar students. This type of interaction further supports the assertion that student groups play an important role in student psychosocial development (Cass, 1979; Cross, 1994; D'Augelli, 1994).

The first of these theories that shows the importance of student interaction in groups is Cross' Theory of Psychological Nigrescence. This theory posits that student interaction is an essential component of student development. This theory states that black students went through unique developmental stages as they established their own

identity. At the first stage, black students were completely unaware of racism and that their initial spark of development is caused through an encounter with racism (Cross, 1994).

Involvement in student organizations can also have an impact on students' cross-cultural development. One study analyzed how participation in student organizations have developed black student leaders. In this qualitative study, the researchers interviewed 32 African American student leaders with grades of at least a 3.0 across six campuses in the Midwest. Harper and Quaye (2007) found that members of black student organizations were willing to engage cross-culturally with members of primarily white student organizations. What these researchers found that was in line with the final stage of Cross' black identity development theory, which believed that in the sixth stage, African Americans would be willing to work outside their own racial groups. Their findings also show that involvement within black organizations helps black students develop a stronger sense of identity (Cross, 1994; Harper & Quaye, 2007).

As they move through the stages of Psychological Nigrescence, student interaction becomes necessary for advancement. Black students begin to associate more closely with other black students, joining clubs and organizations and identifying with only black culture in the middle stages. Specifically, in the third stage, these students participate heavily in extracurricular activities solely with peers that were of a similar ethnicity. Yet, by the end of the model, they emerge acceptant of all races, committed to multiculturalism. This demonstrates that their development is clearly enhanced through their participation in student groups (Cross, 1994).

Both Cass's and D'Augelli's GLBT theories put an emphasis on the fact that student organizations are integral to develop a gay identity. In her theory, Cass noted that GLBT students go through a number of stages with increasing interaction with other GLBT individuals. The first stage is sparked by the realization that they might in fact be gay. As they explore these tendencies, they interact more heavily with others in the GLBT community. Contact and communication with peers is a key component of development along Cass' stages (Cass, 1979).

Cass also believed that individuals were not certain of their homosexuality until the third or fourth stage. She found that the early stages of GLBT identity development involved exploring these new feelings both introspectively and with others that are close to them. They may even try to maintain that they are heterosexual, despite some awkward situations. Yet, by the fifth stage they are actively participating in the GLBT community, involved in GLBT organizations and are comfortable with being gay (Cass, 1979).

Unlike Cass, D'Augelli's believes that GLBT individuals go through six processes in the establishment of a GLBT identity throughout their lifetime. The very first process differs, as they immediately acknowledge their homosexuality. Through the next three processes, they explore their new identity both introspectively and with close friends and family. By the fifth process, they will have been in a GLBT relationship. The sixth and final process is to become an active member of the GLBT community. At this point, identity hinges on being involved in organizations that promote GLBT culture, societal and political views (D'Augelli, 1994).

Overall, psychosocial development is considered one of the foundational pillars of research in student affairs. Although research is limited, it is noted multiple times that

student groups and student engagement play a key role in identity development. Therefore, it stands to reason that involvement in extracurricular organizations is a key area in college student development.

Cognitive-Structural Theories and Involvement

Cognitive development theories are a subset of theories of psychological growth that state that intelligence is developed through experiences. The basic concept is that over time, individuals experience changes in their ways of thinking. By having their worldview challenged, students undergo intellectual growth (Love & Guthrie, 1999).

Research in student affairs has long sought to analyze the impact of extracurricular activities on cognitive development. Numerous studies have been conducted to analyze the relationship on how different types of involvement impacts cognitive development, such as Greek affiliation, athletics, work, student leadership roles and involvement with fine arts (Astin, Sax & Avalos, 1999; National Center on Postsecondary Teaching, Learning, and Assessment, 1996; Pascarella, Edison, Nora, Hagedorn & Terenzini, 1998; Pike, 2004).

A number of major examples of cognitive development theories applicable to college students involved in clubs and organizations are Perry's Intellectual Scheme, the Reflective Judgment Model and Epistemological Reflection. These models are predicated on the idea that challenges to an individual's viewpoints will force them to experience cognitive growth.

Perry's Intellectual Scheme breaks cognitive growth into a series of nine positions. In the earlier positions, individuals are reliant upon an absolute authority figure for answers. They believe that all knowledge is definite and all questions have a correct

answer. As individuals progress through these positions, they will develop new viewpoints related to how they intake information. By the fifth position, known as Relativism, individuals are ready to accept that there is no definite answer to a question, but rather a best possible answer. Further positions, known as a commitment to relativism, are reached by an individual being challenged intellectually and choosing to maintain a relativistic outlook (Perry, 1998).

The Reflective Judgment model is another cognitive development theory created by King and Kitchener (1994). In this theory, cognitive development is divided across seven stages set out over three levels. In the first level, similar to Perry, knowledge is considered absolute. King and Kitchener make clear that students assume that there will be an answer to any question they might have. The second level, comprising stages four and five, is known as the quasi-reflective level. In this level, students are aware that knowledge is subjective but unable to fully form their own opinions. In the final level, known as the reflective level, students are comfortable defending their own positions and are willing to utilize the information they gain from others to help form their own thoughts.

There is a major difference between the Reflective Judgment Model and Perry's Scheme. In Perry's Intellectual Scheme, when an individual reaches a stage, they generally stay there until you advance to the next stage. There is the ability to regress to previous stages, but, for the most part your current stage in the scheme is definite. However, in the Reflective Judgment Model, it is reasoned that students will have an operating range of stages they will fluctuate between based on the situation they are in. Students advance through levels by having their worldview challenged and being put in a

situation where they must approach knowledge in a new way (King & Kitchener, 1994; Perry, 1998).

A third cognitive development theory that is useful toward the field of student affairs is Epistemological Reflection, put forth by Baxter Magolda. In Epistemological Reflection, students advance through four patterns of knowing: absolute, transitional, independent and contextual. Like Perry's Scheme and Reflective Judgment, at the first level, students believe knowledge is absolute and at the final level they believe knowledge is relative. Students advance through the levels based on their experiences in courses and with the choices they make in college. Baxter-Magolda believes that freshman enter as absolute knowers and seniors generally graduate as transitional knowers. Graduate students tend to be independent knowers and contextual knowers are limited (Love & Guthrie, 1999; Baxter Magolda, 1992).

A major difference between Magolda's theory and both Perry's Scheme and Reflective Judgment is Magolda theorized that different genders approach the four ways of knowing differently. She found that males were more vocal of their ideas throughout the ways of knowing. Females began to approach their ways of knowing passively in the pattern of absolute knowing, and later through socialization. These gender patterns were not concrete though, and men and women could approach the ways of knowing in either way (Baxter Magolda, 1992).

Pascarella, on behalf of the National Center on Postsecondary Teaching, Leadership and Assessment (1996) conducted a massive study on the cognitive development of college students. The study, known as the National Study of Student Learning, assessed cognitive growth of a large sample of college students across 23

campuses over a period of three years. The results of this study have been used to analyze various aspects of the college experience. The results of this study have been widely cited, both critically and positively (National Center on Postsecondary Teaching, Learning, and Assessment, 1996; Pascarella, et. al. 1998; Pike, 2004).

In analyzing the results of the National Study of Student Learning (NSSL), Pascarella and others found that Greek affiliation is negatively correlated with cognitive development; however, men of color joining fraternities experienced an increase in cognitive development. These cognitive shifts only occur noticeably in the first year of college. If students did not join a Greek organization in their first year, no noticeable changes in cognitive development took place (National Center on Postsecondary Teaching, Learning, and Assessment, 1996).

In another study on Greek affiliation and cognitive development, Pike (2000) found that Greek students do not have a significant difference in their cognitive development when compared to non-Greeks. Pike conducted this study in response to the research that came out of the NSSL, arguing that involvement in Greek organizations should positively impact cognitive development. However, his study was only conducted at a single institution and utilized a different measure than the NSSL in Pascarella's research. As a result, it is not as generalizable as Pascarella's research (National Center on Postsecondary Teaching, Learning, and Assessment, 1996; Pike, 2000).

Time spent at a job has also been shown to have an impact on the cognitive growth of students. One study (Furr & Elling, 2000) found that having an on-campus job has a positive impact on the cognitive development of students so long as they work 15 hours or less. This is in line with later research which shows that those students working

on campus are more likely to be involved on campus and to interact with faculty. After 15 hours, the level of cognitive development was negatively impacted by work (Furr & Elling, 2000; Pascerella, et. al., 1998).

Students who worked off campus also saw an increase in cognitive development. However, as long as they worked 20 hours or less, they were more likely to have a higher level of cognitive development than the mean of all students. After 20 hours, they saw a negative impact on their level of cognitive development (Pascerella, et. al., 1998).

Skeat's (2000) study compared the level of cognitive development between students with leadership roles in clubs and organizations and those who did not hold those roles. The researcher assessed a sample of 60 students on the Measure of Epistemological Reflection and found that student leaders had a significantly higher level of cognitive development than non-leaders (Skeat, 2000).

According to her results, the mean of student leaders corresponded with Position Three on the Measure of Epistemological Reflection. At this level, students seek to "understand knowledge or to understand what is required of them for success." Consequently, the mean of non-leaders correspond with Position Two. Students at this level view knowledge as absolute and "see authorities as the sole source of truth and knowledge," (Skeat, 2000).

There are some limitations with this study. The sample of 60 divided students into two groups, organization presidents and those who were not. The concern with this is that there are many more non-presidents than there are presidents. As a result, the non-leader group may have been skewed due to being a disproportionately small sample compared to the actual population of non-leaders (Skeat, 2000).

In a longitudinal study, researchers sought to analyze the long term effects of students volunteering. In this study, students were surveyed three times over a period of thirteen years. The first time was upon their entrance into college, the second was four years later. They were surveyed a final time, nine years after the previous survey. A total of 27,064 students across 388 colleges were surveyed for the purpose of this study (Astin, Sax & Avalos, 1999).

They found that students who volunteered through their four years of college were more likely to continue their volunteerism later in life (Astin, Sax & Avalos, 1999). This is consistent with other research that shows that students who volunteered in high school were likely to continue volunteering in college (Marks & Jones 2004). It was also found that students who volunteered through college had a higher degree of cognitive development than those who did not (Astin, Sax & Avalos, 1999).

Overall, understanding factors of cognitive development is useful to individuals analyzing the impact college has on students. A change in cognitive development represents a shift in the way of thinking that students undergo throughout their experiences in a university setting. Seeing that involvement in college activities has an impact on the cognitive development of students demonstrates the need to continue to understand how the very environment of the university affects a student's manner of thought.

Involvement and Leadership

Astin (1993) stated that development of leadership skills is one of the most important benefits to student involvement. His research found that the development of leadership skills are one of the most common benefits to being involved in extracurricular

activities. Leadership skills can be gained from a wide range of extracurricular activities such as athletics, student government and other clubs and organizations.

In a study on comparing student leaders to non-leaders, researchers analyzed the developmental outcomes of a sample of 875 students from 10 universities. This data was collected longitudinally by surveying the same students upon entrance and exit of the university. One of the questions on the survey was to indicate if they participated in any leadership activities, such as elected positions or service learning. In this study, 450 students were identified as non-leaders and 425 were identified as leaders (Cress, Astin, Zimmermann-Oster, & Burkhart, 2001).

The survey administered questions to determine if students possessed developmental outcomes consistent with ACPA's "Student Learning Imperative." Researchers found that student leaders ranked significantly higher than non-leaders on ten out of fourteen developmental outcomes, such as the ability to set goals, sense of ethics and willingness to take risks. The only outcomes where there was no significant difference was understanding of self, clarity of personal values, ability to deal with ambiguity, and decision making abilities (Cress, et. al., 2001).

Researchers concluded that if universities truly wish to develop lifelong skills in their students, they should make use of leadership development opportunities. Of particular note is that they included holding an elected club and organization position as an indicator of student leadership. They feel that leadership is integral to the college student experience and their study shows that leaders are more developed than non-leaders. It can, therefore, be reasoned that student affairs practitioners should encourage

students to become involved in club and organizational leadership positions (Cress, et. al, 2001).

Interestingly, in Cooper, Healey and Simpson's (1994) study on involvement in extracurricular organizations and psychosocial development, they found that student leaders develop significantly more than their non-leader peers along the vector of Developing Purpose both as freshman and as juniors. However, another study shows that any student participating in clubs and organization experiences growth along the vector of Developing Purpose. In this study, it was found that for college seniors, being a student leader did not impart a significant developmental boost to students who were leaders in an organization versus those members who were not leaders (Foubert & Grainger, 2006). Regardless, it is clear that participation in clubs and organizations prepares students for the transition to the post-college environment. Comparing these studies, one finds it apparent that student leaders develop more quickly than their peers in their earlier college career, but that non-leaders do eventually reach an equivalent level of development (Cooper, Healy & Simpson, 1994; Foubert & Grainger, 2006).

Involvement in leadership activities has also been shown to be beneficial to students making the transition from high school to college. In one study of women, a sample of 92 female students enrolled in an educational psychology class was analyzed to examine this transition. The researchers made use of Social Adjustment Scale of the Student Adaptation to College Questionnaire to determine the level of social adjustment in these women. They found that women who participated in leadership activities before entering college had a higher level of social adjustment than women who did not (Tomlinson-Clarke & Clarke, 1994).

However, there are a number of potential sources of error in this study. The first is that the women who were surveyed were members of a single class in a specific program. This reduces the level of randomization in the sample. Another source of error was the sample size, which was relatively small. Finally, because they sampled students from a variety of class standings, they may not have the most accurate results on their pre-college involvement (Tomlinson-Clarke & Clarke, 1994).

In a longitudinal study, researchers looked at various factors that had an impact on two-year college students. Data were collected in 1971 and again nine years later in 1980, to determine how different factors impacted their long term persistence in college. The sample included over 10,000 students from over 450 institutions across the United States. In the findings, researchers found that students who held leadership roles in two-year colleges were more likely to persist and complete a bachelor's degree. It should be noted that this data is almost thirty years old and may not be nearly as relevant today (Cress, et. al., 2001).

Another study sought to determine the benefits of intercultural involvement on leadership development. Antonio analyzed data longitudinally, looking at results from the Student Information Form on entering freshman in 1992, and then the follow-up data from the College Student Survey on the same students. The sample included over 8,877 students at 115 institutions. The majority of these students attended private, predominately white institutions across the United States (Antonio, 2001).

In analyzing this data set, the researcher found that interacting across race was highly beneficial to student development. Students who were more involved cross-culturally had more developed leadership skills than those that were not. Additionally,

researchers found that students who had few same-race friends and participated in cultural workshops further enhanced leadership ability. Interestingly, however, the researcher also found that students that had higher academic success and were more intercultural aware actually had less developed leadership skills than other students (Antonio, 2001).

The fact that this study was conducted at primarily at private institutions is a limitation in the generalizability of this research. This sample may be generalizable to most private institutions, but certainly not all universities across the United States. The majority of the students surveyed were white, which was beneficial to assessing how cross-cultural interaction had an impact on these students. Antonio acknowledged that he was specifically targeting white students, so for the purpose of his study this data represented the best available information (Antonio, 2001).

In a report produced by the counseling center at the University of Maryland College Park the leadership characteristics of freshman athletes were analyzed. Utilizing a sample of 73 athletes, researchers sought to determine what benefits would be gained from student athletes who reported they perceived that they were leaders. Researchers found that those athletes who reported having a higher level of leadership skills were more satisfied academically and had more altruistic educational goals than their peers. These leader athletes were also more psychologically well-adjusted than other athletes and were more satisfied by their college experience (University of Maryland, College Park, 1997).

As this study was conducted with a relatively small sample size, the data may not be generalizable. A sample of 73 participants is only generalizable to a population of

about 90 individuals, hardly the entire population of athletes at the University of Maryland College Park. As a result, it is questionable as to whether the same results would hold true with a far larger sample (University of Maryland, College Park, 1997).

Research has also been conducted to see how extracurricular involvement impacts leadership development across gender. In one study, researchers examined self-perceptions of leadership based on gender. In this study, students were surveyed longitudinally, once upon entrance and again upon exit from a university. The researchers found that men perceive larger growths in their leadership development from participation in activities than women do. Conversely, women do perceive larger growths in intellectual development in themselves than men do. This study proves that extracurricular involvement impacts students differently based on gender (Kezar & Moriarty, 2000).

From the literature, it is clear that involvement in student organizations is beneficial to leadership development. In fact, the developmental standards for students set by professional organizations in the field of student affairs make it clear that leadership experiences are important to student learning (ACPA 1994; ACPA & NASPA, 1998). Therefore, participation in extracurricular organizations can be considered an important aspect of student involvement for student affairs practitioners to study.

Academic Achievement and Involvement

Research has also been conducted to analyze the relationship between involvement in activities and how it relates to academics. Various studies have been conducted in both K-12 education and postsecondary education to measure the impact of

extracurricular involvement. These studies have looked at a wide range of topics, such as athletics, volunteering, participation in clubs and working a job.

There is evidence from Kuh and others analysis of the National Survey on Student Engagement that participation in extracurricular activities may cause a decrease in academic performance. Analyzing data from the eighteen institutions that participated in the NSSE, Kuh, Kinzie, Cruce, Shoup and Gonyea (2007) sought to see how first-year minority students responded to the different variables. They found that for these first-year students, participation in more than 5 hours in extracurricular activities was correlated with a decrease in GPA (Center for Postsecondary Research, 2007).

An early study on National Merit Scholars sought to predict their level of academic and extracurricular achievement in college. In this research, it was predicted that National Merit Scholars would have a high level of extracurricular achievement in college. This prediction was made through analyzing a sample of 1000 high achieving high school seniors (Holland & Nichols, 1964).

There are two major limitations with this study. The first is that the research was conducted in 1964, making it over 45 years old. However, this research is validated by its continuing use to predict college grades by graduating high school students (Shrauger & Osberg, 1981). The second limitation is that the sample consisted solely of those students who were already high academic achievers. As it was limited to those students that already were more likely to have high GPAs in college, it does not take into account those students who would be considered average or below average academically. This is, therefore, not generalizable to the entire population of students.

A recent review examined how various informal science learning opportunities had an impact on the science education of compulsory school students in Israel. One of the key things the research notes is that students who participate in science clubs are more interested in learning science. It was determined that students who study science out of the classroom are likely to have a higher level of scientific literacy and are more inquiry oriented. It also noted that students who participated in both informal and formal learning tended to have higher cognitive development overall (Hofstein & Rosenfield, 1996).

There are a number of potential limitations in this study. First, it was conducted in a foreign country, and there may be extraneous factors that separate Israelis from Americans. Yet, a number of cross-cultural studies show that Americans and Israelis are psychologically similar in how they respond to phenomena such as stress and test-anxiety (Keinan & Perlberg, 1987; Naveh-Benjamin, McKeachie & Lin, 1987). Therefore assuming that they would respond to learning stimuli similarly as well is reasonable.

Other potential limitations also include the fact that this study was conducted on elementary school students. K-12 students are different developmentally than college students. They may have a different level of understand for the concept of academic achievement. As a result, generalizing studies relating participation in clubs in K-12 education to college students is leaves potentially uncertainties.

In a study on high school student participation in extra-curricular activities, researchers sought to understand how minimum GPA requirements impact student motivation to succeed academically. The researcher theorized that schools used these minimum requirements as motivation for students to succeed in their coursework.

Students would not be able to participate otherwise, which meant they were missing out on activities if they did not succeed academically (Camp, 1990).

The researcher felt that this motivation was contradictory. In this research it was found that students who did participate in after-school activities performed better academically. By denying them the opportunity to participate, students were not necessarily encouraged to work harder on their coursework. Instead, they were only hurting the level of academic success of these students (Camp, 1990).

There are a number of issues with this research. The first is that it was conducted at a single high school district in Virginia. Generalizing it across all schools may be unfounded as cultural differences exist in different states. There may also be numerous other factors related to the development of college students that makes them different than high school students (Camp, 1990). However, studies do show that involvement in extracurricular activities in college leads to a higher degree of overall student success (Astin, 1993; Pascarella & Terenzini, 2005)

A recent study examined the impact of time spent working on the GPAs of first year students in a university setting. In this study, data from the National Survey on Student Engagement was analyzed for information regarding the amount of time students spent working and the impact it had on their grade point average. Students were divided into four groups: those who did not work, those who worked under 20 hours on campus, those who worked 20 hours off campus and those who worked more than 20 hours (Pike, Kuh & Massa-McKinley, 2008).

Looking at the raw means of grade point averages for these four groups, researchers found that students who worked between one and twenty hours on campus

had the best GPA amongst the four. Students who did not work at all had a mean GPA of 3.00. Students who worked off campus between 1 and 20 hours had a slightly lower mean GPA than students who worked more than 20 hours a week had a much lower GPA than the other three groups (Pike, Kuh & Massa-McKinley, 2008).

There are a number of potential explanations for this differentiation between GPAs. As noted in a previous study, those who work on campus tend to be more involved on campus (Furr & Elling, 2000). In examining background factors, the researchers also found that students who worked more than 20 hours a week were already more likely to be at risk for poor academics than their peers (Pike, Kuh & Massa-McKinley, 2008).

Interestingly, Astin found that involvement in clubs and organizations has a negative effect on scores of the MCAT. No other standardized tests, such as the GRE, GMAT or LSAT, were positive or negative impacted by involvement (Astin, 1993). It should also be noted that while Astin was in the process of conducting his research for *Four Critical Years, Revisited*, the American Association of Medical Colleges began utilizing a new exam, which first saw widespread use in 1991 (Mitchell, Haynes, & Koenig, 1994). No widespread studies have been conducted to determine if these changes have an effect on the validity of Astin's study. Regardless, this research does show that involvement in extracurricular activities can potentially be detrimental to academic performance.

Another area that has seen research on how involvement in an activity can have an impact on academic performance is athletics. In a highly cited study on Division I athletes, researchers sought to understand how these athletes performed academically. They analyzed ten years of data from the registrar's office on the Colorado State

University campus, a school in the Western Athletic Conference, and compared grades and entrance exam scores for both athletes and non-athletes. The sample included over 2,000 athletes and almost 20,000 non-athletes (Purdy, Eitzen and Hufnagel, 1982).

This study found that athletes had significantly lower GPAs and entrance exam scores than did non-athletes. It also showed that there were significant gender differences. Female athletes performed significantly better academically than male athletes. Additionally, there was no significant difference between the academic performance of female athletes and all non-athletes (Purdy, Eitzen and Hufnagel, 1982).

A more recent study corroborates this evidence by examining students at The Pennsylvania State University. The sample consisted of 19,566 students, 583 of whom were athletes in an intercollegiate varsity sport. The authors studied information from 1995 admissions records. They found that athletes had significantly lower SAT scores than non-athletes. They also found that athletes participating in revenue generating sports, such as football and basketball, had significantly lower grades than non-athletes and athletes who participated in club or non-revenue generating sports (Fizel & Smaby, 1999).

Interestingly, however, Division III athletes are found not to have a significantly different level of academic performance than non-athletes (Richards & Aries, 1999). The major difference is that unlike Division I & II athletes, Division III athletes do not receive scholarships

(http://www.ncaa.org/wps/portal/ncaahome?WCM_GLOBAL_CONTEXT=/ncaa/ncaa/about+the+ncaa/membership/div_criteria.html). This study analyzed a sample of 219 students at a single small liberal arts institution in the north east. Of the 219 students, 73

were athletes and the rest were non-athletes. The researchers found that there was no significant difference between the grades, study habits and time spent in class between the athletes and non-athletes participating in this study. This differs from studies on Division I athletes, who have been shown to perform less well academically than their non-athlete counterparts (Fizel & Smaby 1999; Purdy, Eitzen and Hufnagel, 1982).

It should be noted that this is a single study that was conducted on a single small college campus. While not generalizable to all Division III athletes, it does show that involvement in athletics does not necessarily lead to a decrease in academic performance. More interestingly, athletes in this study spent almost twice as much time involved in extracurricular activities (including athletics) than non-athletes, yet they still performed about the same (Richards & Aries, 1999).

No unified research on how involvement in extracurricular activities impacts academic performance can be determined from these studies. Research on different aspects of co-curricular involvement seems to be mixed, some studies showing that it is beneficial to grades, other that it is detrimental and others still that it may have no effect at all. However, without a single study to look at overall involvement as it relates to academic performance, it will remain unclear what effects there are, if any.

Summary

The research makes clear that involvement has both its advantages and disadvantages for student development. As Astin (1984) noted, what students gain from an experience is directly related to what they put into it. The same holds true with extracurricular involvement. Students gain a wide range of skills from their out of classroom experiences. However, as seen from numerous studies, putting too much in can

lead to a sacrifice in other opportunities (Fizel & Smaby, 1999; Pascarella & Terenzini, 2005; Pike, Kuh, & Massa-McKiney, 2008; Purdy, Eitzen and Hufnagel, 1982).

Psychological development is another area where the benefits of extracurricular engagement are apparent. Involvement in clubs and activities can lead to a higher level of psychosocial and growth than would occur normally (Chickering & Reiser, 1993; King & Kitchener, 1994; Perry, 1998). At the same time, some activities coincide with a decrease in cognitive development (Furr & Elling, 2000; Pascarella, et. al., 1998).

From the literature it becomes clear that at some point, involvement in extracurricular activities becomes more of a burden than a boon. The research does not always seem to agree what that point is, and some does not show that time is a factor at all.

CHAPTER III

METHODOLOGY

This chapter will describe the research methods used in this research study. As the dataset utilized in this study comes from the 2006 edition of National Survey of Student Engagement (NSSE), the validity of this data was explained. This chapter also outlined the overall design of the research, and the methodology that was utilized to analyze the data from the NSSE.

National Survey of Student Engagement

Overview

The National Survey on Student Engagement is divided into five scales that are utilized to understand how students behave in college. In total, there are 42 items related to these five scales on the NSSE. In addition, there are 15 demographic variables included on the NSSE.

Level of Academic Challenge consists of eleven-items that measure time spent preparing for class, amount of reading and writing, deep learning, and institutional expectations for academic performance. The seven item *Active and Collaborative Learning* scale measures extent of class participation, working collaboratively with other

students inside and outside of class, tutoring and involvement with a community-based project. The *Student-Faculty Interaction* scale consists of six items and measures the extent of interaction with faculty members and advisors, discussing ideas from classes with faculty members outside of class, getting prompt feedback on academic performance, and working with faculty on a research project. The twelve item *Enriching Educational Experiences* scale examines the extent of interaction with students of different racial or ethnic backgrounds or with different values or political opinions, using information technology, and participating in activities such as internships, community service, study abroad, and co-curricular activities. Finally, *Supportive Campus Environment* consists of six items which examines the extent to which students perceive the campus helps them succeed academically and socially, assists them in coping with nonacademic responsibilities, and promotes supportive relations among students and their peers, faculty members, and administrative personnel and offices (Center for Postsecondary Research, 2006).

The National Survey of Student Engagement was first administered in 1999. It is conducted at colleges across the United States and Canada through paper and online surveys. This data is collected and analyzed by the Center for Postsecondary Research at Indiana University in Bloomington, IN (<http://nsse.iub.edu/>). This data is made available to researchers for a fee.

Validity

In a study on determining the applicability of the National Survey of Student Engagement, the results of the NSSE were compared to the Wabash National Study of Liberal Arts Education (Pascarella, Seifart & Blaich, 2010). The Wabash study

specifically looked at how liberal arts education impacted college students longitudinally at 19 different institutions. The Wabash study examined student development along five different scales as well: *Effective Reasoning and Problem Solving*, *Moral Character*, *Inclination to Inquire and Lifelong Learning*, *Intercultural Effectiveness*, and *Personal Well-Being*. In this study, Pascarella, Seifart and Blaich (2010) found partial significant correlations between a number of the NSSE scales and the Wabash scales.

This study shows that the NSSE data does predict student development and learning. Pascarella, Seifart and Blaich show that not all the Wabash scales translate directly to the NSSE ones, which may be why not all the scales correlate significantly. Additionally, the Wabash data comes from nineteen institutions. The NSSE data on the other hand, comes from over 1,000 institutions (Pascarella, Seifart & Blaich, 2010).

It should be noted that the *Enriching Educational Experiences* scale of the NSSE data correlated significantly with the *Effective Reasoning and Problem Solving* ($r = .44$), *Moral Character* ($r = .44$) and *Intercultural Effectiveness* (Miville-Guzman University-Diversity scale at $r = .57$ and Openness to Diversity/Challenge scale at $r = .41$) scales of the Wabash study (Pascarella, Seifart & Blaich, 2010). *The Enriching Educational Experiences* scale is the one which contains one of the variables being utilized in this research. This is notable, as no other scale correlated significantly with as many Wabash scales.

The sample of the NSSE data set utilized in this research study was found to be representative of the total NSSE dataset from 2006. The 2006 NSSE data set is 50% freshman and 50% senior. The sample of the data set utilized in this study is 50.5% freshman and 49.5% senior. Additionally, respondents for the whole 2006 NSSE data set

are 36% male and 64% female. The respondents in the sample of the data set utilized in this study 35.9% male and 64.1% female. These percentages show that the sample of the 2006 NSSE data set utilized can be considered generalizable to the whole data set. (Center for Postsecondary Research, 2006). As previously stated, the NSSE data is considered valid and generalizable to the population which it represents (Pascarella, Seifart & Blaich, 2010).

Reliability

A Cronbach alpha was run on the NSSE data set provided by the Center for Postsecondary Research for this study. The researcher found that the Cronbach's alpha for all self-reported and institutional reported variables on the dataset was .905. This shows a high degree of internal consistency for the NSSE dataset.

Design

This thesis is a quantitative study by design. The researcher searched for a statistically significant relationship between academic performance and time spent involved in extracurricular activities. In order to accomplish this, the researcher will made use of a one-way analysis of variance. This was utilized to determine the significance of the overall sample.

In order to determine the linearity of this relationship, the researcher graphed academic performance against hours spent in extracurricular activities. By looking at the shape of the graph, the researcher was able to determine if the relationship is linear or non-linear. Specifically, the researcher looked to see if the graph shows curvilinearity.

The demographic groups will also be compared with one another to determine if there are significant differences between those groups. A factorial analysis of variance

shall be utilized to compare the differences in the means plots between different demographic groups.

Methods

Participants

Participants in this study consisted of a random sample of 20% of respondents from the 2006 National Survey of Student Engagement. This sample consisted of 51,874 students from institutions throughout the United States. The Center of Postsecondary Research provides this data for use by researchers for a fee. No identifying information is attached to this data that can link the researcher to either the individual or the institution they attend. Respondents are all first-year students or seniors in college. Of this sample, 43.1% were aged 19 or younger, 38.7% were 20-23 years old, 8.6% were 24-29 and 9.6% of students were 30 and over. Additionally, 75.2% of this sample was Caucasian, 7% were African-American, 4.3% Asian/Pacific Islander, 5.2% Hispanic and the 8.3% from other and unknown backgrounds.

Measures

Involvement in Extracurricular Activities

For the purpose of this study, Involvement in Extracurricular Activities will be derived from Question #9.d on the 2006 National Survey of Student Engagement. Question #9.d reads “About how many hours do you spend in a typical 7-day week doing each of the following?: Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)” Respondents are given 8 choices on an ordinal scale representing different

amounts of time spent involved in co-curricular activities: “0,” “1-5,” “6-10,” “11-15,” “16-20,” “21-25,” “26-30,” “more than 30” (Center for Postsecondary Research, 2005).

This ordinal scale was recoded for the purpose of ease of conducting this study. “0” shall remain “0,” “1-5” became “1,” “6-10” became “2,” “11-15” became “3,” “16-20” became “4,” “21-25” became “5,” “26-30” became “6,” and “More than 30” became “7.” This is consistent with similar studies utilizing other parts of the same question (Pike, Kuh, Massa-McKinley, 2008).

Academic Performance

Academic performance is widely understood to be measurable through student grades. Question #25 reads “What have most of your grades been up to now at this institution.” Respondents are given the choices of “A,” “A-,” “B+,” “B,” “B-,” “C+,” “C,” and “C- or lower.” For the purpose of this study, these responses shall be converted into a GPA on a 4.0 scale. “A” became “4.0,” “A-” became “3.67,” “B+” became “3.33,” “B” became “3.0,” “B-” became “2.67,” “C+” became “2.33,” “C” became “2.0,” and “C- or lower,” became “1.67” (Center for Postsecondary Research, 2005; Breland, 1975).

Demographic Variables

The NSSE includes a fairly comprehensive set of demographic identifiers in its collection. As such, this study will also analyze the impact of extracurricular involvement across a number of demographic factors. The key demographic factors that were analyzed are sex, and class standing. Sex as a variable offers options for male or female. Class standing as a variable is divided into “freshman/first year” and “senior.”

Instrument

The instrument in this study is the 2006 National Study of Student Engagement, administered by the Center for Postsecondary Research at the University of Indiana Bloomington. The validity and key aspects of this instrument are described above.

Procedure

In this study, the researcher analyzed a preexisting dataset, specifically a sample of the results from the 2006 National Survey of Student Engagement. This procedure is how the researcher analyzed the data that was provided by the Center for Postsecondary Research.

First the research grouped all the responses to question #25, “What has most of your grades been up to now at this institution?” of the NSSE by how those same respondents answered question #9.d “About how many hours in a typical 7-day week doing each of the following?: participating in co-curricular activities (organizations, publications, student government, fraternity or sorority, intercollegiate or intramural sports).” The researcher then calculated the means for the response to question #25 for each level of the response to question #9.d. Then the researcher ran an ANOVA of these two variables. The researcher looked for statistical significance.

After determining statistical significance, the researcher created a graph of the means of the responses to question #25, “What have most of your grades been up to now at this institution?” versus the responses to question #9.d, “About how many hours in a typical 7-day week doing each of the following?: participating in co-curricular activities.” This graph was used to determine the nature of the relationship.

This entire procedure was repeated for different demographics to determine if there were any demographics that respond differently to extracurricular involvement. The

demographics being analyzed were sex and race/ethnicity. These demographic variables are described in more detail in the above measures subsection. Additionally, the relationships between the academic performance variable and the extracurricular involvement variable were compared across these demographic variables through use of a factorial ANOVA.

CHAPTER IV

FINDINGS

This chapter presents an analysis of a sample of the 2006 National Survey for Student Engagement data provided by the Center for Postsecondary Research at Indiana University. The data was analyzed according to the two research questions: “Is there a significant relationship between time spent involved in extracurricular activities and grades?” and “What is the nature of the relationship between time spent in extracurricular activities and academic performance?”

This chapter is divided into three sections. The first is an analysis of the overall data. The second section is an analysis of the data as divided into institutionally reported gender. The third section is an analysis of the data as divided into institutionally reported class standing.

Analysis of Overall Sample

The entire sample ($N = 46,282$) was analyzed utilizing a one way analysis of variance. The two variables being analyzed were hours involved in extracurricular activities and academic performance. There was found to be a statistically significant relationship between these two variables ($F(7, 46,274) = 31.286, p < .001$).

When comparing the means values of academic performance to each level of hours spent involved in extracurricular activities of the entire sample, a non-linear relationship emerges (Table 1;Figure 1).

Figure 1: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Overall Sample

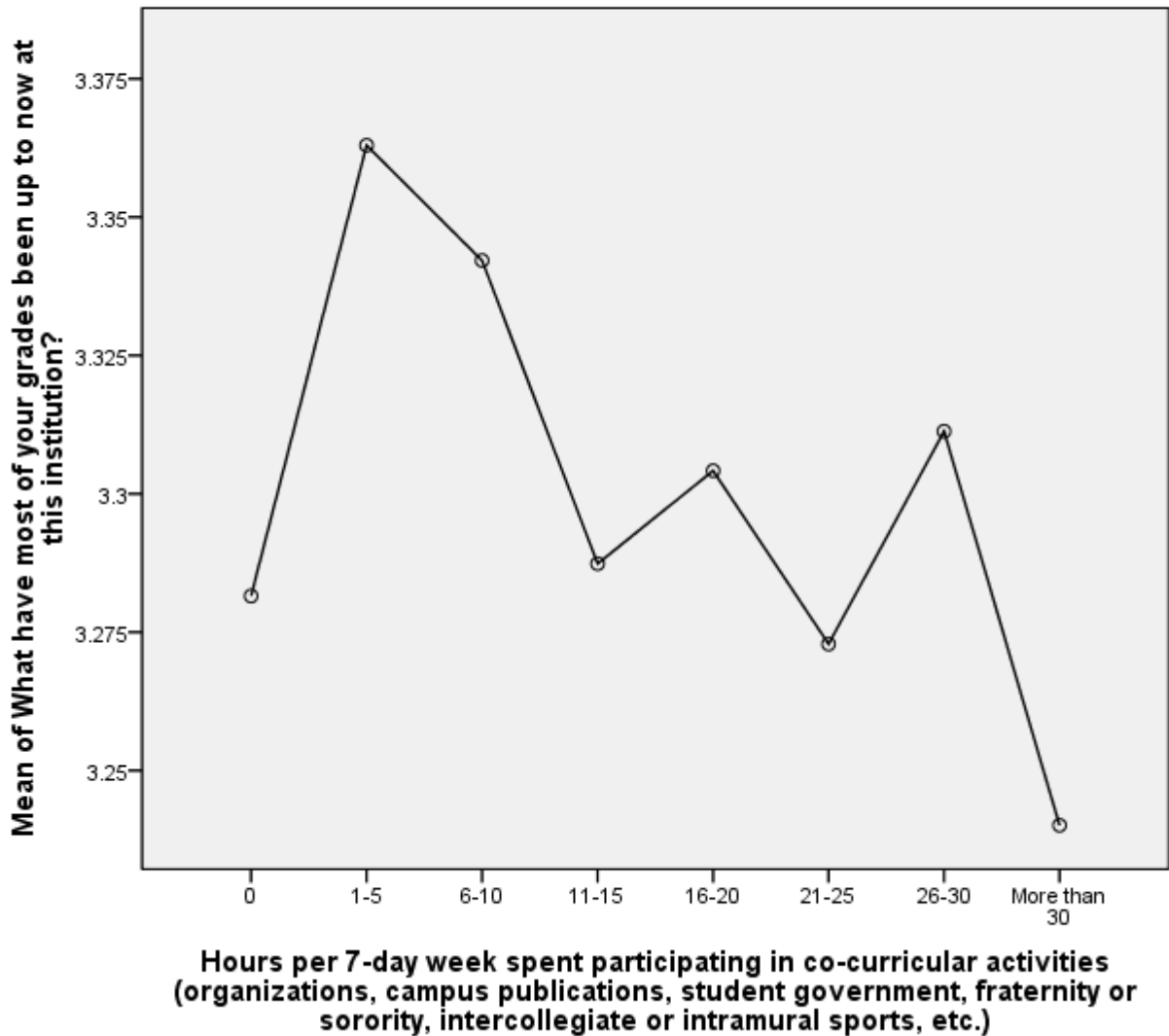


Table 1: Hours Involved vs. Mean Grades

Hours Involved	0	1 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	30+
Mean Grades	3.28	3.36	3.34	3.29	3.30	3.27	3.31	3.24

Differences between Sexes

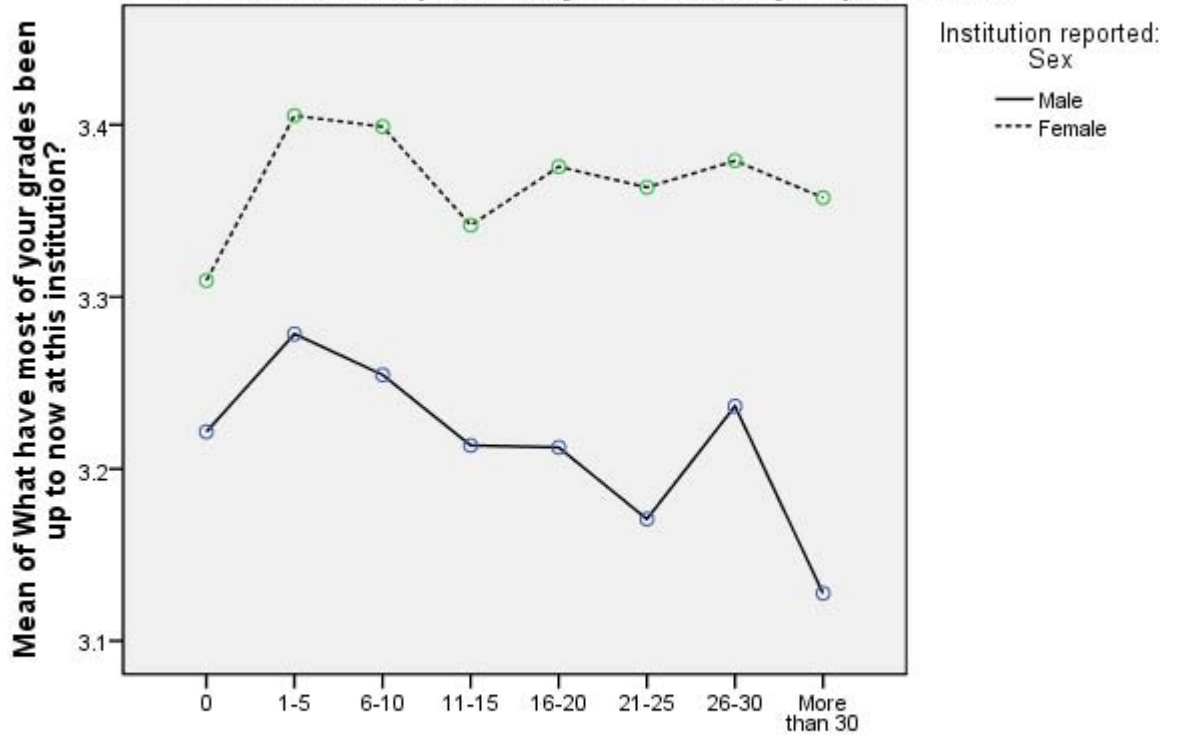
The sample was further divided into two demographics based on institutionally reported sex. Of the respondents to the 2006 National Survey for Student Engagement, 16,407 were reported as male and 29,875 reported as female. The differences in men and women for the impact of extracurricular involvement on mean values of academic performance were analyzed utilizing a factorial ANOVA. These differences are statistically significant ($F(7, 46,266) = 4.758, p < .001$).

These differences can be seen graphically in figure 2 below. For males, when comparing the mean values of academic performance to hours involved in extracurricular activities, a non-linear relationship emerges (Table 2; Figure 3). For females, the comparison of mean values of academic performance to time spent involved in extracurricular activities also produced a nonlinear relationship (Table 3; Figure 4).

Table 2: Hours Involved vs. Mean Grades for Instructionally Reported Males

Hours Involved	0	1 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	30+
Mean Grades	3.22	3.28	3.25	3.21	3.21	3.17	3.24	3.13

Figure 2: Hours Spent Involved in Extracurricular Activities vs. Academic Performance Separated by Institutionally Reported Sex



Hours per 7-day week spent participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

Figure 3: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Males

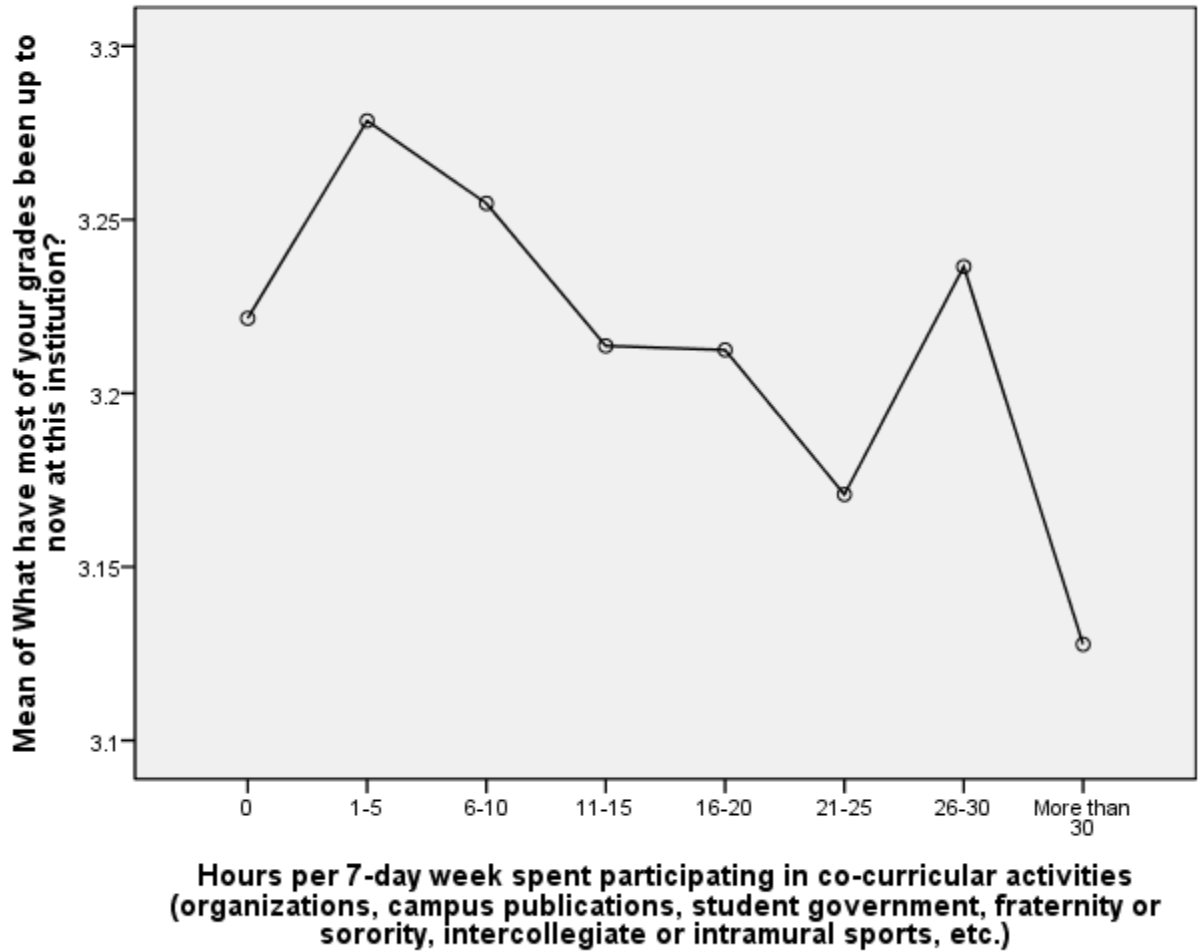
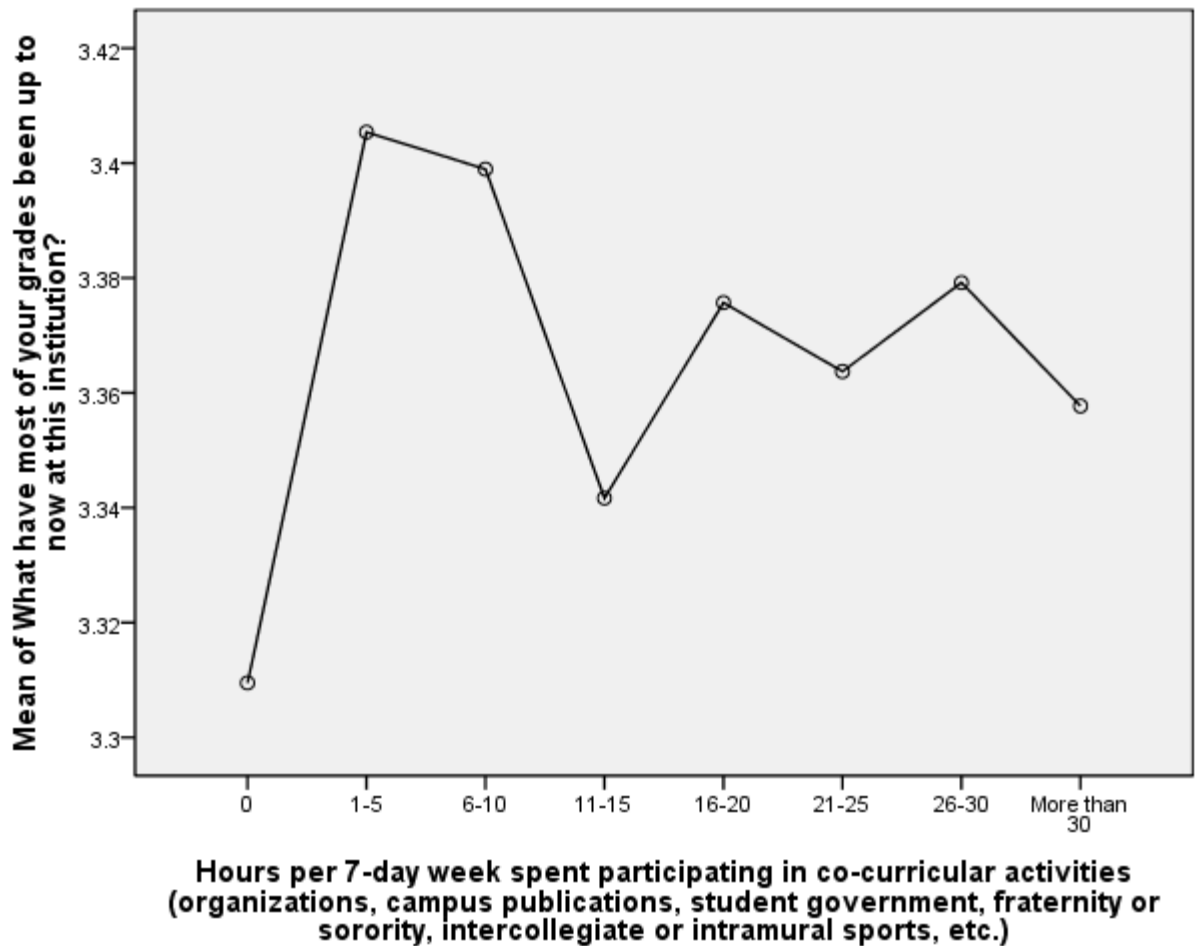


Table 3: Hours Involved vs. Mean Grades for Institutionally Reported Females

Hours Involved	0	1 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	30+
Mean Grades	3.31	3.41	3.40	3.34	3.34	3.34	3.38	3.36

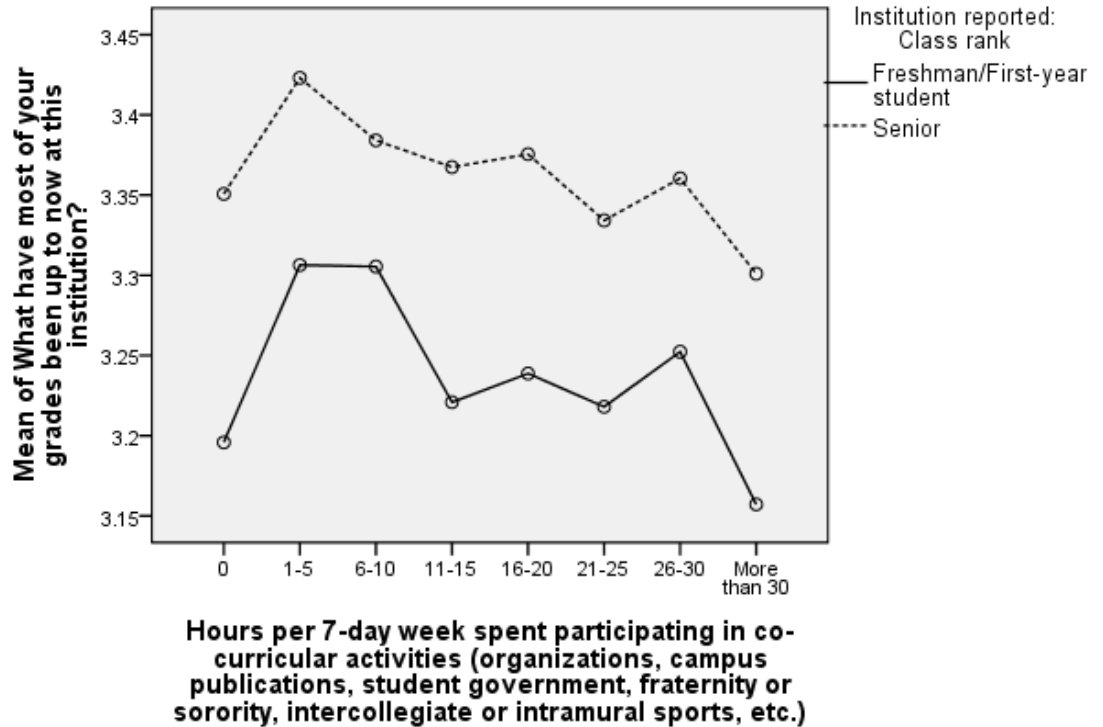
Figure 4: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Females



Differences between Class Standing

The sample was further divided into two demographics based on institutionally reported class standing. Of the respondents to the 2006 National Survey for Student Engagement, 22,734 were reported as freshman and 23,548 reported as seniors. The differences in freshman and seniors for the impact of extracurricular involvement on academic performance were analyzed utilizing a factorial ANOVA. It was found that these differences were statistically significant ($F(7, 46,266) = 3.584, p < .01$).

Figure 5: Hours Spent Involved in Extracurricular Activities vs. Academic Performance Separated by Institutionally Reported Class Standing



The differences between class standing can be seen graphically in figure 5 below. When comparing the academic performance to hours involved in extracurricular activities for freshman, a non-linear relationship emerges (Table 4; Figure 6). For seniors, the comparison of mean values of academic performance to time spent involved in extracurricular activities also produced a nonlinear relationship (Table 5; Figure 7)

Table 4: Hours Involved vs. Mean Grades for Institutionally Reported Freshman

Hours Involved	0	1 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	30+
Mean Grades	3.20	3.31	3.31	3.22	3.24	3.22	3.26	3.16

Figure 6: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Freshman

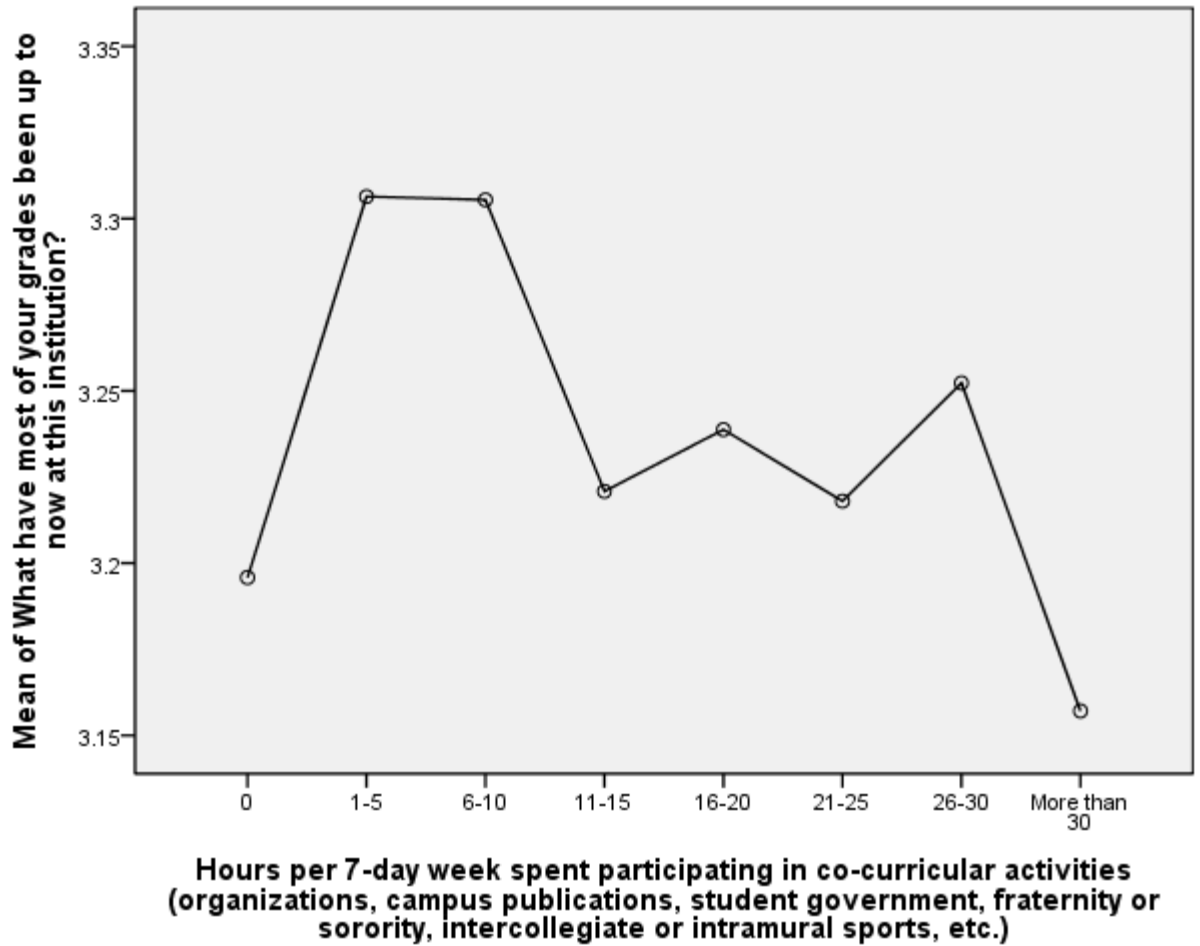
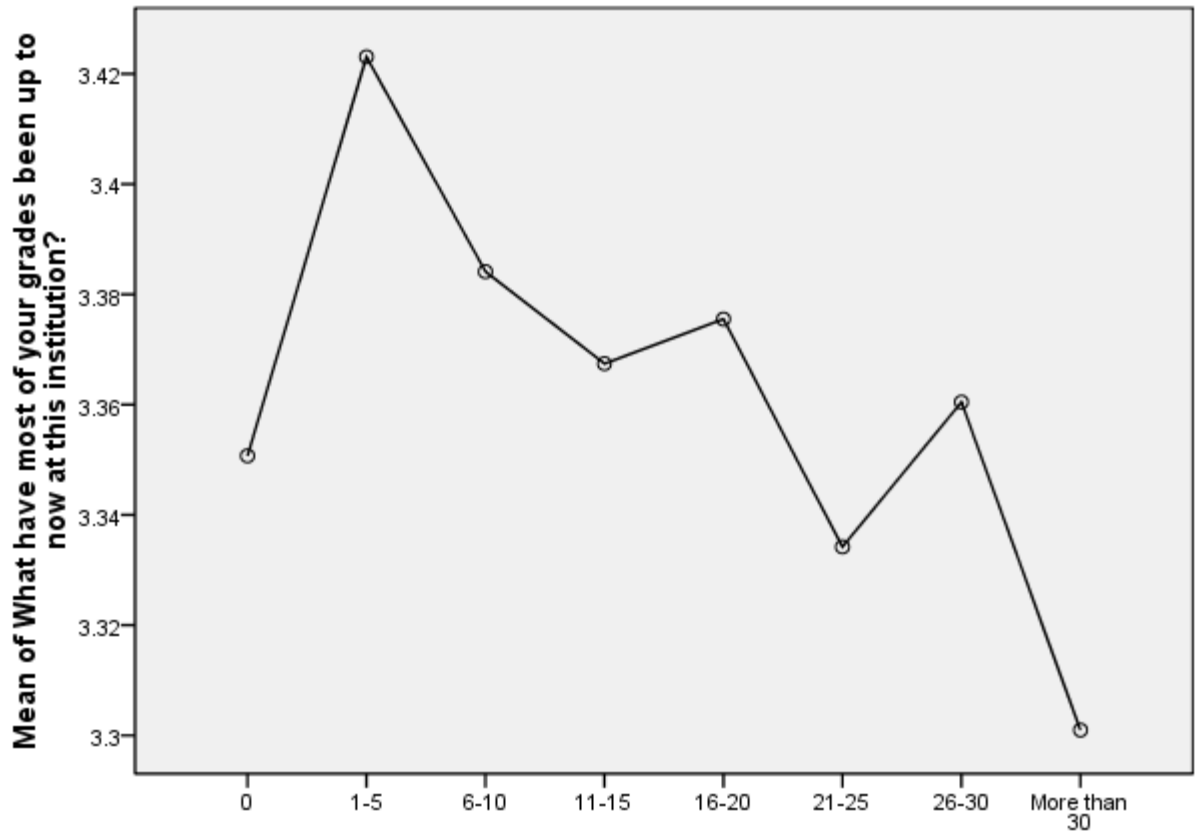


Table 5: Hours Involved vs. Mean Grades for Intuitionally Reported Seniors

Hours Involved	0	1 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	30+
Mean Grades	3.35	3.42	3.38	3.37	3.38	3.33	3.36	3.3

Figure 7: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Seniors



Hours per 7-day week spent participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

CHAPTER V

CONCLUSIONS

This chapter draws conclusions from the analysis of the sample of the 2006 National Survey for Student Engagement utilized in this study as it relates to the research questions and literature reviewed. It shall also present potential limitations in the study and opportunities for further research. It is separated into three main sections: discussion of the analysis, limitations of the analysis and future studies.

Discussion of the Analysis

Overall Sample

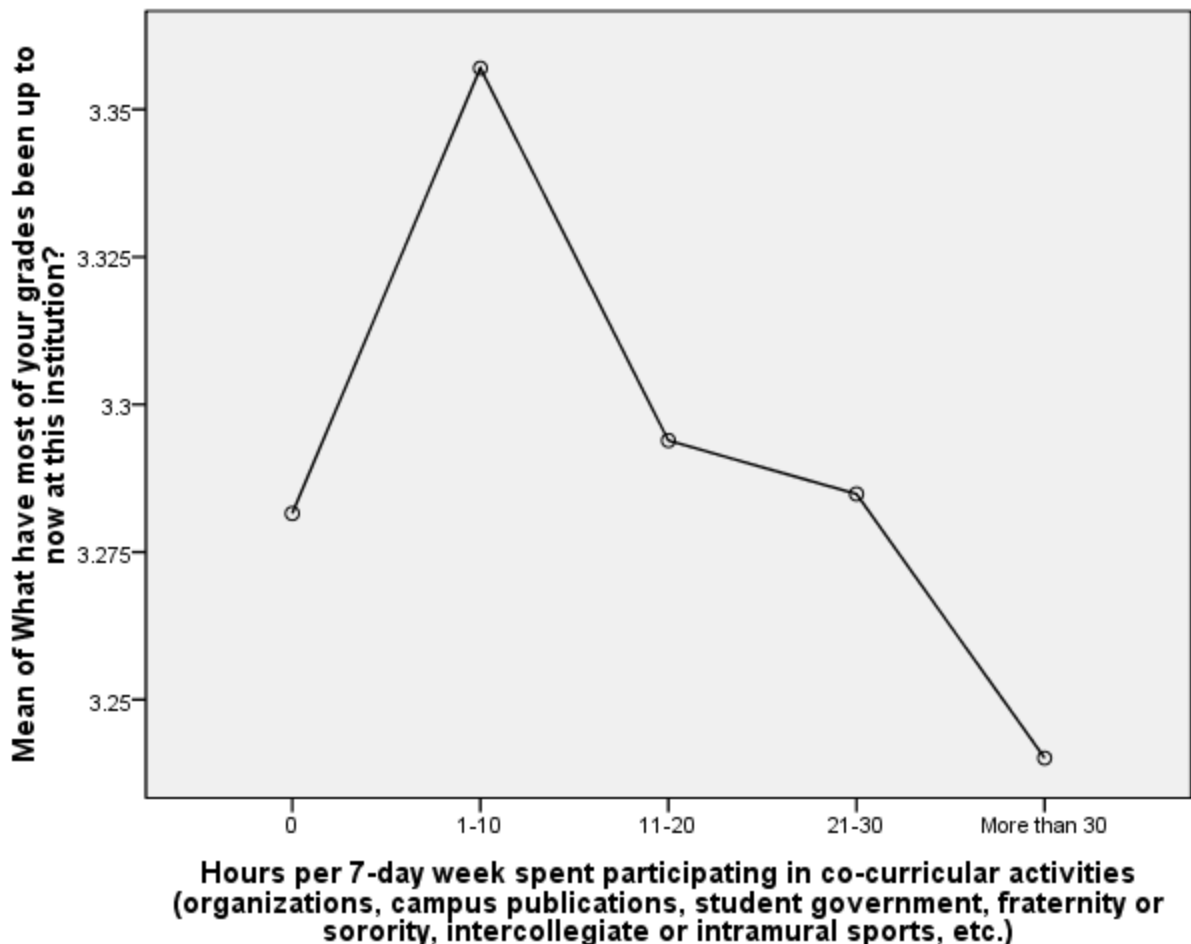
The first research question of this study was “Is there a significant relationship between time spent involved in extracurricular activities and grades?” According to the analysis of the data, the relationship between extracurricular involvement and academic performance was in fact significant. Thus, data from this study support the conclusion that student grades are impacted by the activities they participate in outside of the classroom.

The second research question of this study was “What is the nature of the relationship between time spent in extracurricular activities and academic performance?”

From the initial analysis of the means plot for the overall sample, there appears to be a non-linear relationship between extracurricular involvement and academic performance.

Upon further examination however, the trends in this relationship can be seen to be curvilinear with a single peak. The overall trends of this graph only go in two directions. There was an initial increase from the “0 hour” point to the “1 – 5 hour” point. After this point, the trend is negative. By adjusting the scale, the means plot resembles more closely a curvilinear relationship with a single peak. The scales were adjusted into five levels: “0 hours,” or none; “1-10 hours,” or light; “11-20 hours,” or moderate; “21-30 hours,” or heavy; “30 or more hours,” or excessive. With this adjustment, we can see a clear single curve in the relationship (Figure 8). The optimal amount of involvement appears to be between one and five hours of activities. The next best level of involvement

Figure 8: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Overall Sample (Adjusted)



is between six and ten hours of activities. As the two highest levels of involvement are between one and ten hours, this justifies the use of the adjusted scale (Figure 8), which provides a much clearer view of the relationship.

This relationship shows that some participation in extracurricular activities is beneficial to academic performance. As the number of hours students spend participating in activities moves from past 10, their academic performance returns to non participatory levels. Students whose level of involvement exceeds 30 hours per week experience a detrimental effect with their grades. It should be noted that these differences are relatively small in magnitude. While the change in grades may seem small, the difference between a 3.2 and a 3.3 can mean the difference between being on the Dean’s List or graduating with honors at some institutions

http://www.newpaltz.edu/ugc/policies_deans.html).

What is interesting is that from analyzing the adjusted scale, no level of academic performance comes close to the initial increase that occurs from participating in one to ten hours of extracurricular activities. In fact, participating in no activities is nearly the same as participating in eleven to thirty hours of extracurricular activities (Table 6). Participating in more than thirty hours of extracurricular activities is detrimental to student academic performance.

Table 6: Hours Involved vs. Mean Grades (Adjusted)

	More than				
Hours Involved	0	1 - 10	11 - 20	20 - 30	30
Mean Grades	3.28	3.36	3.29	3.28	3.24

This relationship is similar in nature to the relationship found by Pike, Kuh and Massa-McKinley (2008) in their study on how working on and off campus impacts academic performance. The researchers in this study also found a curvilinear relationship with academic performance depending upon time spent working a job. Students who worked between one and twenty hours performed better academically than students who worked zero hours or more than twenty hours.

Differences between Sexes

According to the analysis, how of extracurricular involvement impacts academic performance is significantly different for men and women. The relationship of how extracurricular involvement impacts their academic performance is nonlinear for both these demographics. Further, when the scale for hours involved is adjusted as in the previous section, the relationship for men is curvilinear in nature, with a single peak (Figure 9).

Like the overall sample, this peak occurs at the “1 – 5 hour” point on the unadjusted scale, and the “1 – 10 hour” point on the adjusted scale (Figure 2; Figure 9). The major difference between men and the overall sample can be seen in the degree of fluctuations at different points. For men, the increase that occurs on the adjusted scale for men is smaller than the increase that occurs in the overall sample. The decrease for men is also larger than it is for the overall sample (Table 7). Also, unlike the overall sample, men continue to decrease at each point after the “1-10 hour” point (Figure 9), where the overall sample is relatively static from the “11-20 hour” point and “21-30” hour point (Figure 8).

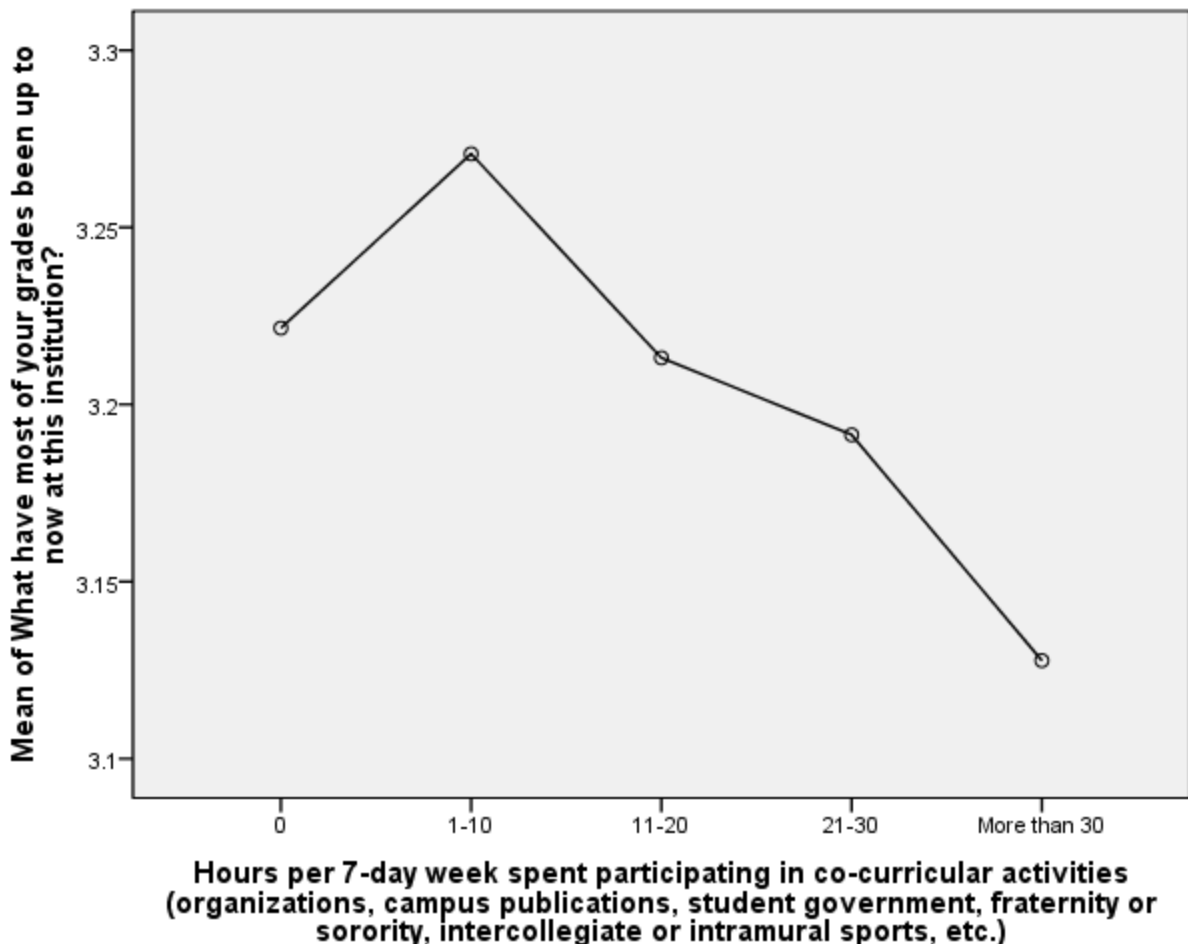
Table 7: Male Hours Involved vs. Mean Grades (Adjusted)

	0	1 - 10	11 - 20	20 - 30	More than 30
Hours Involved	0	1 - 10	11 - 20	20 - 30	30
Mean Grades	3.22	3.27	3.21	3.19	3.13

This leads to an interesting observation of how extracurricular involvement impacts men. While men do increase similar to the overall sample, it is their decrease that student affairs practitioners must be aware of. From this study, it seems that men are much more susceptible than women to become overwhelmed by their extracurricular involvement. Unfortunately, there is no study to corroborate this finding.

Women, on the other hand, exhibit a different relationship than men. While the trends of this relationship are similar to the trends of the overall sample, a single increase, followed by a decrease there are some other differences. One of the first is that for the

Figure 9: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Males (Adjusted)



adjusted scale, women don't decrease to the same degree as men or the overall sample (Figure 10). In fact, for women, their lowest level of academic performance is at zero hours of involvement. They perform better academically at any other point, though their highest degree of academic performance occurs at the "1 – 5 hours" point on the unadjusted scale and "1 – 10 hours" point on the adjusted scale. (Figure 4; Figure 10; Table 8).

Table 8: Female Hours Involved vs. Mean Grades (Adjusted)

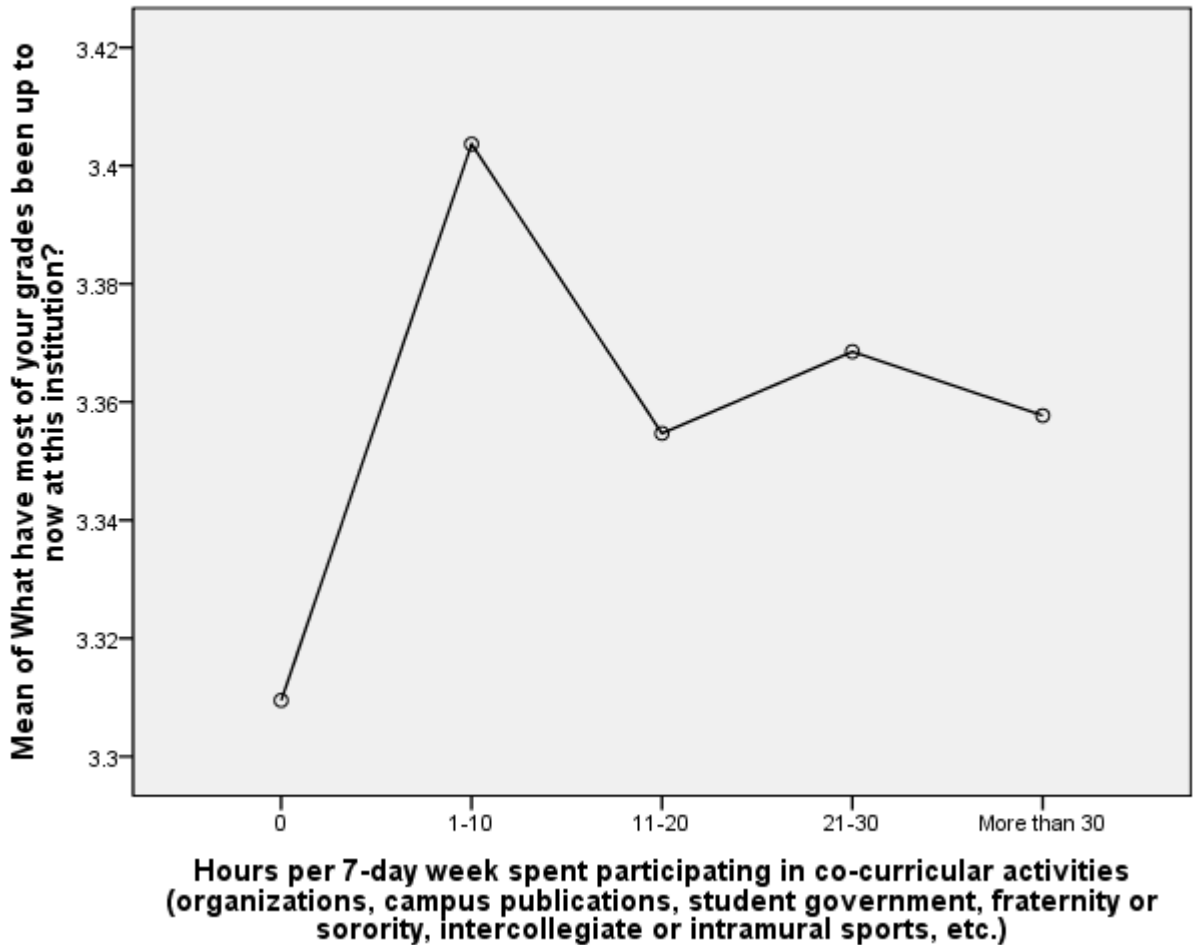
	More than				
Hours Involved	0	1 - 10	11 - 20	20 - 30	30
Mean Grades	3.31	3.4	3.35	3.37	3.36

What can be surmised from this is that women always seem to perform better academically when they are involved extracurricular activities than when they are not. This is different than any other demographic or the overall sample, in which after the initial increase, academic performance continues to decrease to a level below what it was at the "0 hours" point. Women do however decrease after their initial increase, just not to the same degree. Therefore, they do retain the same level of optimal involvement as any other demographic and the overall sample (Table 8).

While both exhibit a curvilinear relationship, there are two important differences between the two sexes. The first is the overall level of academic performance. Women perform better than men academically overall. The mean academic performance for all women was a 3.36, whereas men had a mean academic performance was 3.25.

The second difference is the degree of decrease of academic performance. While men continue to decrease after the “1-5 hour” point, the academic performance of women levels out and doesn’t decrease past what it was at “0 hours.” This disparity shows that student affairs practitioners must be cognizant of how hours spent in student

Figure 10: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Females (Adjusted)



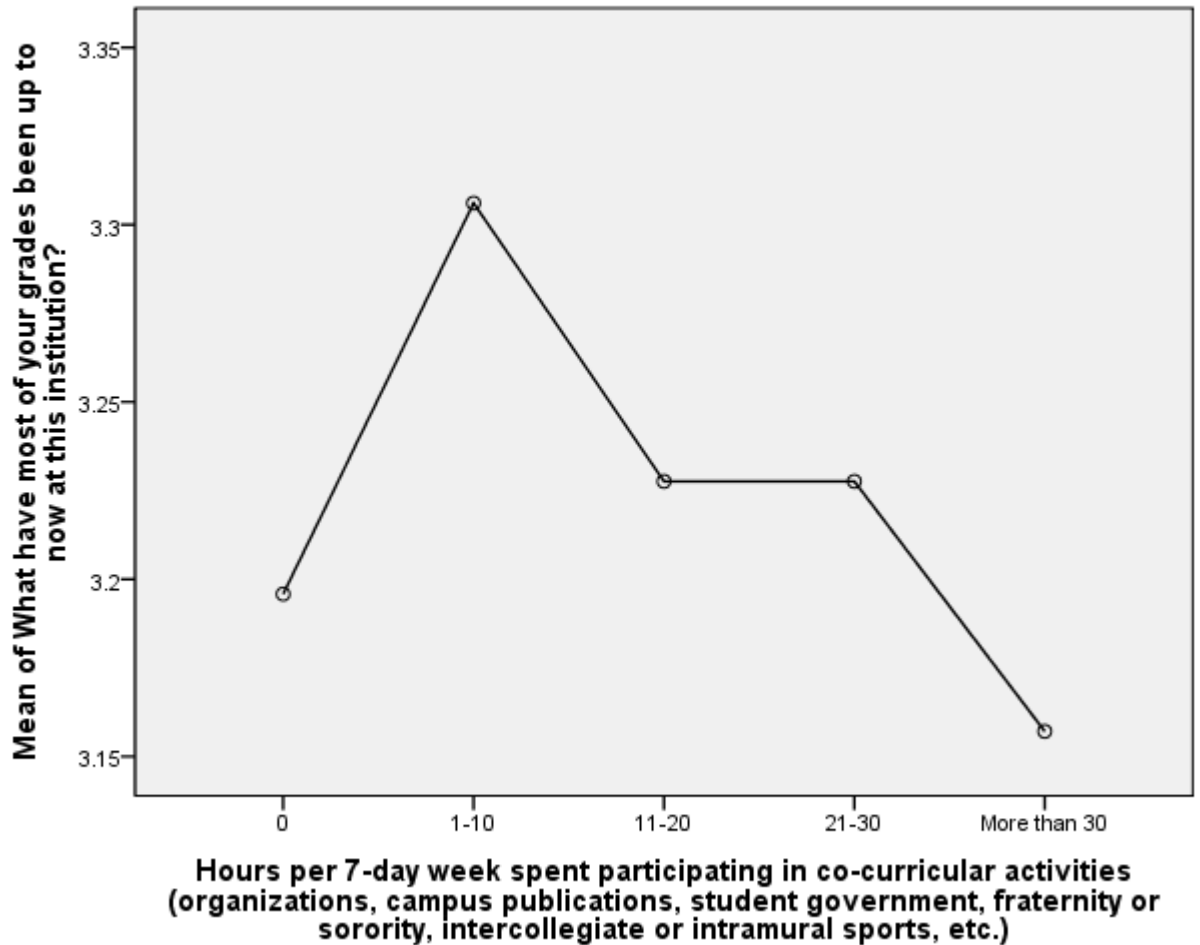
organizations impacts the development of men and women differently.

Class Standing Differences

The impact of extracurricular involvement on academic performance is significantly different for freshmen and seniors. Both these demographics exhibit

nonlinear relationships as well. Adjusting the scale as previously described shows curvilinear relationships with a single peak for both freshmen and seniors (Figure 11; Figure 12).

Figure 11: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Freshmen (Adjusted)



The adjusted means plot for freshman appears to be very similar to the adjusted means plot for the overall sample. There is an initial increase at the “1 – 10 hour” point. The “11 – 20 hour” and “21 – 30 hour” points are the same, and are lower than the initial increase (Table 9). This is similar to the relationship seen in the overall sample, where the

“11 – 20 hour” and “21 – 30 hour” points are almost the same (Table 6). Finally, like the overall sample, freshmen continue to decrease at the “30+ hour” point.

Table 9: Freshmen Hours Involved vs. Mean Grades (Adjusted)

	More than				
Hours Involved	0	1 - 10	11 - 20	20 - 30	30
Mean Grades	3.2	3.31	3.23	3.23	3.16

Additionally, freshmen see the largest gain in academic performance as a result of extracurricular involvement. Freshman academic performance increases by 0.11. The research therefore shows that extracurricular involvement is very beneficial to the first year experience. Freshman perform much better academically when they are involved in a light amount of extracurricular activities than when they are involved in none at all.

The adjusted means plot for seniors is also curvilinear with a single point. Like every other demographic and the overall sample, the largest increase occurs at the “1 -5 hour” point on the unadjusted scale (Figure 7) or the “1 – 10 hour” point on the adjusted scale. However, unlike freshman and the overall sample, seniors show a decrease at each level of involvement past the “1 – 10 hour” point on the adjusted scale (Figure 12). Their

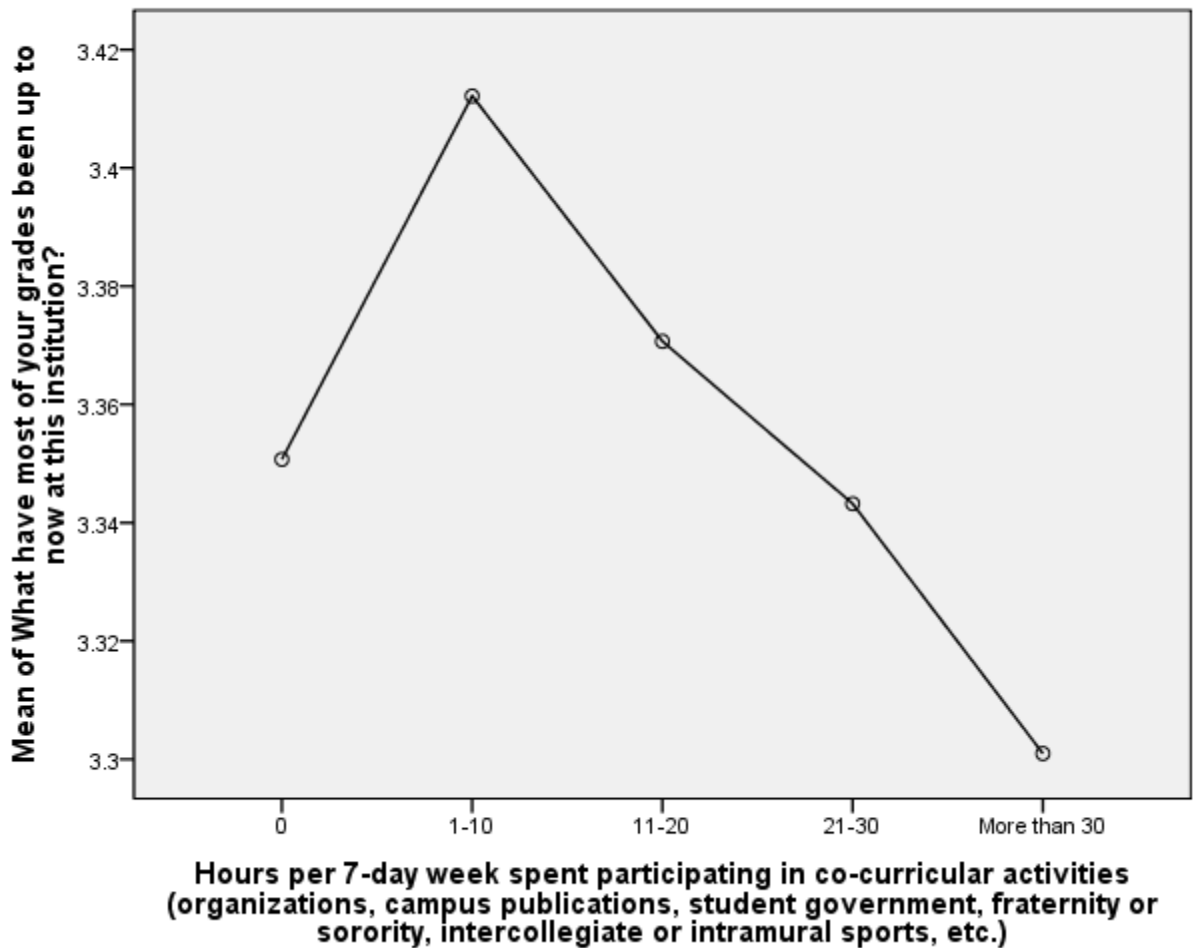
Table 10: Senior Hours Involved vs. Mean Grades (Adjusted)

Hours Involved	0	1 - 10	11 - 20	20 - 30	More than 30
Mean Grades	3.35	3.41	3.37	3.34	3.3

initial increase is also smaller than freshmen (Table 10).

What this shows is that seniors are already more inclined to perform well academically than freshman. But just like the overall sample, seniors see an increase in academic performance with light involvement, and a decrease following that level of involvement.

Figure 12: Hours Spent Involved in Extracurricular Activities vs. Academic Performance for Institutionally Reported Seniors (Adjusted)



There are two major differences between the freshmen and senior demographics. Freshmen begin at a slightly lower level of academic performance than seniors. Freshmen

also have a lower mean level of academic performance (3.25) than seniors (3.38). What this shows is that freshmen have room for growth academically. As they continue their college career, their grades should increase over time.

Implications for Practice

From the data it is clear that the time spent involved in extracurricular activities has an impact on how students perform academically. Participating in a light amount of activities (1 – 10 hours) produces a small increase in academic performance. Participating in a moderate to heavy amount (11-30 hours) might not be too detrimental to academic performance, but is also not as beneficial. Participation in an excessive amount of activities (more than 30 hours) and grades show decline. All the demographics exhibit this pattern to a degree. The only difference is that women never seem to decline below what they show with no involvement.

This research provides support for the importance of student clubs and organizations on college campuses. According to ACPA's Student Learning Imperative (1994), the student affairs mission must compliment the academic mission of the university. From the data, it is clear that student involvement plays a role in the academic mission of the university.

Advisors should also be aware of the time their students spend involved in extracurricular activities. Too much time in extracurricular activities might hurt the grades of those students. Student affairs practitioners can help students navigate these choices and determine what the proper level of involvement should be.

This research shows that extracurricular activities do have a place in academia. At a time when student affairs divisions are being asked to cut back, it's important to note

that students involved in a light amount of activities perform better than students involved in no activities at all. This justifies the importance of funding these activities at a university.

Limitations of the Analysis

One of the major limitations of the analysis of this sample of the 2006 National Survey for Student Engagement is the size of the sample. Because of the large sample being used in this study, significance can be expected from the analysis. As such, the fact that there was statistical significance may not be entirely relevant.

Another limitation is that the type of involvement is not clear. This study only looks at overall involvement, not how different types of involvement impact students differently. For example, from the literature, it is clear that involvement in intercollegiate sports have a different impact on students than involvement in Greek Life (National Center on Postsecondary Teaching, Learning, and Assessment, 1996; Pike, 2000; Purdy, Eitzen and Hufnagel, 1982; Fazel & Smaby, 1999; Richards & Aries, 1999). This study does not take that into account these differences and treats them all the same. This leads to the potential for a large degree of variance of academic performance within the different levels of hours of involvement. However, this is unknown currently, without further research.

Another limitation with the variables is the measurement of academic performance. The question on the NSSE that relates to academic performance is worded “What have most of your grades been at this institution up till now?” This only allows for an estimation of academic performance, as it does not ask directly for GPA.

For example, a senior might report most of their grades as being “B+s,” but they received a number of “Fs” as a freshman. In this study, they would be treated as a 3.33, even though their actual GPA might be lower than this. As a result, the academic performance variable may be slightly inaccurate. However, previous studies have utilized this variable as a determination for academic performance (Pike, Kuh, Massa-McKinley, 2008).

This study is a generalization of how the average student might perform at different levels of extracurricular involvement. Student affairs practitioners must be aware that every student is different, and that individual students may respond differently to extracurricular involvement. There are also other factors that may impact academic performance, such as time spent studying, time spent working or time spent socializing that are not accounted for in this study.

Future Studies

As mentioned in the previous section, further studies are necessary to determine how different organizations and activities impact students differently. From the literature, it is clear that participation in different types of organizations has differing impacts on students. How this translates to academic performance is not clear however.

Another potential for future research is to further analyze how the different sexes are impacted by extracurricular involvement. Only one study was found investigating how sex differences impact gains from participation in student involvement. In this study, researchers found that men and women differ they develop as leaders from participation in extracurricular involvements (Kezar & Moriarty, 2000). That study, combined with the research conducted on the 2006 National Survey for Student Engagement data in this

study show that extracurricular involvement has a different impact on men and women. Further analyzing this phenomena is necessary, to see if there are differences in psychological development between gender through participation in extracurricular involvement.

The difference between freshmen and seniors also provides shows the potential for further research. Freshman and seniors show a difference in their overall level of academic performance. Interestingly, different levels of class standing show differences in their psychosocial development (Foubert & Grainger, 2006; Cooper, Healy & Simpson, 1994). This may lead to the possibility of there being a link between psychosocial development and academic performance. More research should be done on this topic.

It would also be interesting to see how sophomores and juniors perform by comparison. There is a large gap between freshmen and seniors. Whether or not sophomores and juniors would fill in that gap could make for an additional study.

Another potential area of research is to separate athletes out from non-athletes. Much of the literature makes it clear that participation in Division I athletics can have a negative impact on student development (Miller & Kerr, 2002; Purdy, Eitzen and Hufnagel, 1982). By comparing athletes to non-athletes, it is possible to see if athletics has the same impact as non-athletic activities.

Time spent in actual class might also provide some further insight on this impact. This study does not consider credit-hours per semester as a variable. By considering how many classes a student is taking, it may be possible to see if students spending more time

in class are impacted differently by extracurricular activities than those spending less time in classes.

Overall, this study shows that there is a relationship between involvement in extracurricular activities and academic performance in college students. Student affairs practitioners should therefore be aware that the time students spend participating in clubs and organizations may have a positive or negative impact on their grades, and be willing to help them make the right choices. This study should also lay the groundwork for further research on this subject.

REFERENCES

- American College Personnel Association (1994). The student learning imperative.
- American College Personnel Association & National Association of Student Personnel Administrators (1998). Principals of good practice in student affairs.
- Antonio, A. L. (2001). The role of interracial interaction in the development of leadership skills and cultural knowledge and understanding. *Research in Higher Education*, 42 (5), 2001
- Astin, A., (1993). *What matters in college: Four critical years revisited*. San Francisco: Jossey-Bass
- Astin, A., (1984) Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.
- Astin, A., Sax, L. J., & Avalos, J. (1999). Long-term effects of volunteerism during the undergraduate years. *Review of Higher Education*, 22 (2), 187-202.
- Baxter Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development*. San Francisco: Jossey-Bass.
- Breland, H. M. (1975). Grade conversion: A table for transforming grades reported with different grading systems. *The Journal of Educational Research*, 68 (6), 211-215
- Camp, W. G. (1990). Participation in student activities and achievement: A covariance structural analysis. *The Journal of Educational Research*, 83 (5), 272-278.
- Cass, V. C. (1979). Homosexual identity formation: A theoretical model. *Journal of*

Homosexuality, 4, 219-235.

Center for Postsecondary Research. (2006). NSSE 2006 overview. Bloomington, IN.

Center for Postsecondary Research. (2007). Connecting the dots:

multi-faceted analyses of the relationships between student engagement results from the NSSE, and the institutional practices and conditions that foster student success. Bloomington, IN: Kuh, G. D., Kinzie, J., Cruce, T., Shoup, R., Gonyea, R. M.

Center for Postsecondary Research. (2006). The college student report: 2006 codebook.

Chickering, A. W., & Reiser, L. (1993) *Education and identity*. San Francisco: Jossey-

Bass. Cress, C. M., Astin, H. S., Zimmermann-Oster, K., Burkhart, J. C. (2001).

Developmental outcomes of college students' involvement in leadership

activities. *Journal of College Student Development*, 42(1), 15-27.

Cross, W. E., Jr. (1995). The psychology of Nigrescence: Revising the Cross model. In

Ponterotto, J. G., Casas, J. M., Suzuki, L. A. & Alexander, C. M. (Eds.),

Handbook of multicultural counseling. Thousand Oaks, CA: Sage.

Cooper, D. L., Healey, M. A., & Simpson, J. (1994). Student development through

involvement: Specific changes over time. *Journal of College Student*

Development, 35 (2), 98-102.

D'Augelli, A. R. (1994). Identity development and sexual orientation: Toward a model of

lesbian, gay, and bisexual development. In E. J. Trickett, R. J. Watts, & Birman, D

(Eds.), *Human diversity: Perspectives on people in context*. San Francisco, CA:

Jossey-Bass.

Evans, N. J., Forney, D. S., & Guido-DiBrito, F. (1999) *Student development in college:*

Theory, research and practice. San Francisco: Jossey-Bass.

Fizel, J., & Smaby, T. (1999). Participation in college athletics and academic performance. In Fizel, J., Gustafson, E., & Hadley, L. (Eds.), *Sports economics: Current research.* Westport, CN: Praegar.

Foubert, J. D., & Grainger, L. U. (2006). Effects of involvement in clubs and organizations on The psychosocial development of first-year and senior college students. *NASPA Journal*, 43(1), 166-182

Furr, S. R., & Elling, T. W., (2000). The influence of work on college student development. *NASPA Journal*, 37 (2), 454-470.

Harper, S. R., & Quaye, S. J. (2007). Student organizations as venues for black identity expression and development among African American male student leaders. *Journal of College Student Development*, 48 (2), 127-144.

Hofstein, A., & Rosenfield, S., (1996). Bridging the gap between formal and informal science learning. *Studies in Science Education*, 28, 87-112.

Holland, J. L., & Nichols, R. C., (1964). Prediction of academic and extra-curricular achievement in college. *Journal of Educational Psychology*, 55 (1), 55-65.

Keinan, G., & Perlberg, A. (1987). Stress in academe: A cross-cultural comparison between Israeli and American academicians. *Journal of Cross Cultural Psychology*, 18 (2), 193-207.

Kennedy, J. J., & Bush, A. J. (1985). *An introduction to the design and analysis of experiments in behavioral research.* Lanham, MD: University Press of America

Kezar, A., & Moriarty, D. (2000). Expanding our understanding of student leadership development: A study exploring gender and ethnic identity. *Journal of College*

Student Development, 41 (1), 55-69.

King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment*. San Francisco: Jossey-Bass.

Kuh, G. D. (1995). The other curriculum: Out-of-classroom experiences associated with student learning and personal development. *Journal of Higher Education*, 66 (2), 123-155.

Kuh, G. D. (2003). What we're learning about student engagement from the NSSE: Benchmarks for effective educational practices. *Change*, 35 (2), 24-32.

Kuh, G. D., & Lund J. P. (1994). What students gain from participating in student government. In Terrell, M. C., & Cuyjet, M. J. (Eds.) *Developing student government leadership*. San Francisco: Jossey-Bass.

Love, P. G., & Guthrie, V. L. (1999). *Understanding and applying cognitive development theory*. San Francisco: Jossey-Bass.

Marks, H. M., & Jones S. R. (2004), Community service in transition. *Journal of Higher Education*, 75 (3), 307-339.

Miller, P. S., & Kerr, G. (2002). The athletic, academic and social experiences of intercollegiate student-athletes. *Journal of Sports Behavior*, 25 (4) 346-367.

Mitchell, K., Haynes, R., & Koenig, J. (1994). Assessing the validity of the updated Medical College Admissions Test. *Journal of the Association of American Medical Colleges*, 69 (5), 394-401.

Museus, S. D. (2008). The role of ethnic student organizations in fostering African

American and Asian American students' cultural adjustment and membership at predominately white institutions. *Journal of College Student Development*, 49, (6) 568-586.

National Center on Postsecondary Teaching, Learning, and Assessment, (1996). *What have we learned from the first year of the national study of student learning?* University Park, PA: Pascarella, E. T., Whitt, E. J., Nora, A., Edison, M., Hagedorn, L. S., Terenzini, P. T.

Naveh-Benjamin, M., McKeachie, W. J., & Lin, Y. (1987). Two types of test-anxious students: support for an information processing model. *Journal of Educational Psychology*, 79, (2) 131-136.

Pascarella, E. T., Edison, M. I., Nora, A., Hagedorn, L. S., & Terenzini, P. T. (1998). Does work inhibit cognitive development during college? *Educational Evaluation and Policy Analysis*, 20 (2), 75-93.

Pascarella, E. T., Seifert, T. A., & Blaich, C. (2010). How effective are the NSSE benchmarks in predicting important educational outcomes? *Change*, 42 (1), 16-22.

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

Perry, W. G. (1998) *Forms of ethical and intellectual development in the college years: A scheme*. San Francisco: Jossey-Bass.

Pike, G. R., (2004). The influence of fraternity or sorority membership on students' college experiences and cognitive development. *Research in Higher Education*, 41 (1), 117-139.

- Pike, G. R., Kuh, G. D., & Massa-McKinley, R. (2008). First-year student employment, engagement and academic achievement: Untangling the relationship between work and grades. *NASPA Journal*, 45 (4), 560-582.
- Purdy, D. A., Eitzen, D. S., & Hufnagel, R., (1982). Are athletes also students? The educational attainment of college athletes. *Social Problems*, 29 (4), 439-448.
- Richards, S., & Aries, E. (1999). The Division-III student athlete: Academic performance, campus, involvement and growth. *Journal of College Student Development*, 40 (3), 211-218.
- Shrauger, J. S., & Osberg, T. M., (1981) Relative accuracy of self-predictions and judgments by others in psychological assessment. *Psychological Bulletin*, 90 (2), 322-351.
- Skeat, L. C., (2000). Cognitive development in student leaders and non-leaders. (Master's thesis, Virginia Polytechnic Institute and State University, 2000).
- Swenson, L. M., Nordstorm, A., & Hiester, M. (2008). The role of peer relationships in adjustment to college. *Journal of College Student Development*, 49 (6), 551-567.
- Tomlinson-Clarke, S., & Clarke, D. (1994). Predicting social adjustment and academic achievement for college women with and without precollege leadership. *Journal of College Student Development*, 35 (2), 120-124.
- Torres, V., Jones, S. R., Renn, K. A. (2009). Identity theories in student affairs: Origins, current status, and new approaches. *Journal of College Student Development*, 50 (6) 577-596.
- University of Maryland, College Park (1997) An exploration of leadership

characteristics in college athletes. College Park, MD: Eiche, K., Sedlacek, W. E., Adams-Gaston, J.

Valentine, J. J., & Taub, D. J. (1999). Responding to the developmental needs of student athletes. *Journal of College Counseling*, 2, Fall 99, 164-179.

Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology*, 18 (3), 341-358.

VITA

Avi Zacherman

Candidate for the Degree of

Master of Science

Thesis: THE RELATIONSHIP BETWEEN INVOLVEMENT IN
EXTRACURRICULAR ACTIVITIES AND ACADEMIC PERFORMANCE

Major Field: Educational Leadership

Biographical:

Personal Data:

Education:

Completed the requirements for the Master of Science in Educational Leadership at Oklahoma State University, Stillwater, Oklahoma in July, 2010.

Completed the requirements for the Bachelor of Arts in Psychology and Asian Studies at State University of New York at New Paltz, New Paltz, New York in 2008.

Experience:

Graduate Assistant, Oklahoma State University Student Union Activities Board

Professional Memberships:

American College Personnel Association

National Association of Student Personnel Administrators

Name: Avi Zacherman

Date of Degree: July, 2010

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE RELATIONSHIP BETWEEN INVOLVEMENT IN
EXTRACURRICULAR ACTIVITIES AND ACADEMIC
PERFORMANCE

Pages in Study: 80

Candidate for the Degree of Master of Science

Major Field: Educational Leadership

Scope and Method of Study:

This study made use of a sample of the 2006 National Survey for Student Engagement dataset. The variables being examined were time spent involved in extracurricular activities and academic performance. The data was analyzed using a one-way ANOVA and factorial ANOVA. Additionally, the means for the variables were plotted against each other and the shape of these relationships were analyzed.

Findings and Conclusions:

In this study it was found that there was a curvilinear relationship between the time spent involved in extracurricular activities and academic performance. It was found that a light amount of extracurricular involvement is beneficial to grades, while too much involvement can potentially hurt academic performance in college students.

ADVISER'S APPROVAL: Dr. John Foubert
