Comparison of Anti-intellectual Attitudes of Undergraduate Students and Student-Athletes

by

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ABSTRACT

Anti-intellectualism was first described as a social phenomenon by Richard Hofstadter in 1963 and he defined anti-intellectualism as a negative attitude towards intellectual activities and those who engage in them. Anti-intellectualism refers to student’s lack of interest and disrespect for intellectual pursuits, critical thinking, and a preference for practical memorization style learning and has been observed at all schooling levels including higher education (Trout, 1997). There is a common perception that athletes shun academic pursuits and attend college primarily for athletic opportunities (Balough & Girvan, 2010). The purpose of this study was to investigate the extent of anti-intellectual attitudes when comparing the difference between students and student-athletes using an accurate and consistent scale (Eigenberger & Sealander, 2001). Scores on the student anti-intellectualism survey revealed no significant difference between students and student-athletes \( F(1,240)=.708, p=.401 \). The extent of this phenomenon was also measured over various strata of university student population using survey data. The findings were at odds with respect to some previous research and in strong agreement with others.
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Chapter 1

Introduction

Anti-intellectualism is a psychological variable that was first introduced and discussed as a social phenomenon by Richard Hofstadter in 1963. Hofstadter suggested that a variety of cultural trends and tendencies as well as the particular design of institutions in the United States were, in part, developed out of certain generally held attitudes and feelings toward intellectual ideas and the appropriate use of the mind. There is a body of literature that reveals a general negative attitude in the United States towards intellectual activity and those who engage in intellectual activity (Howley & Aimee 1990). In schools, it entails a disinterest and disrespect for intellectual and academic objectives of a university’s program, such as theoretical, hypothetical, and intellectual pursuits, as well as critical thinking and academic research (Shaffer, 1981).

Researchers have hinted that sports participation is a strong component of these negative attitudes. Educators argue that student-athletes create a unique culture characterized by values and practices that are not in keeping with the mission of colleges and universities (Parham, 1993; Shulman & Bowen, 2001). Collegiate athletic programs force student-athletes to sacrifice attention from academics, taking away from intellectual pursuits and the mission of higher education (Meyer, 1990). Researchers suggest that students favor sports-mindedness over effort and academic ability (Cramond & Matin, 1987).

Numerous research studies have examined what might create this trend, but limited research has investigated the presence and comparison of these tendencies among student-athletes and students regarding sport participation.
**Statement of Problem**

Students’ feelings have grown unreceptive toward intellectual thought and the academic professionals who represent it. There is a mounting preference for recipe knowledge and learning that is fact-oriented, memorized, and routine. UCLA’s Higher Education Research Institute showed that a record number of high school graduates entering college were increasingly disengaged from the academic experience (Sax et al. 1995), while 60% of college athletes view themselves more as athletes than as students (Potuto & O’Hanlon, 2007). Educational systems are attempting to understand the attitudes of students; if anti-intellectualism does affect them, then it may be an important factor in understanding how colleges and universities can better engage and serve the needs of students. Unlike previous research attempting to focus on the problem causing anti-intellectualism this study examined the extent to which student-athletes exhibit anti-intellectual attitudes as compared to their non-athlete peers.

**Purpose of the Study**

The purpose of the study was to assess the presence and difference of anti-intellectual attitudes in undergraduate college students and student-athletes at a competitive Division III rural liberal arts college located in the Northeast. This college annually finishes in the top 20 rankings for the Learfield Sports Directors’ Cup competition among 440 eligible NCAA Division III programs. Unlike previous studies that have emphasized possible reasoning behind anti-intellectualism, this study attempted to examine the extent to which anti-intellectual attitudes exist among university students while comparing students with student-athletes and across different demographics.
Hypothesis

It was hypothesized that high levels of anti-intellectual attitudes will be seen.

Hypothesis: Significantly higher levels of anti-intellectual attitudes as measured by the anti-intellectualism scale will be seen in student-athletes as compared to students.

Alternative Hypothesis: Significantly higher levels of anti-intellectual attitudes will be seen in students as compared to student-athletes.

Null Hypothesis: No significant differences will be seen in student-athletes as compared to students.

Delimitations

- Anti-intellectualism was assessed using the scale for measuring student’s anti-intellectualism created by Eigenberger & Sealander in 2001.
- Participants came from the same college. Data was not be recorded by team membership to help create an overall comparison between Division III students and student-athletes; A Division III school had yet to be researched.
- A Division III school helps examine the presence of anti-intellectual attitudes in a school which has a high percent of student-athletes in each graduating class (Bowen & Levin, 2003).

Limitations

- Data was self reported.
- This study had no knowledge of participant’s academic achievements, household environments, prior learning experiences or their level of commitment to their sport.
- Hours spent outside and inside of sports related activity was not recorded.
- Researchers surveyed a demographically limited sample.
Assumptions

Eigenberger and Sealander’s (2001) scale for measuring students’ anti-intellectual attitudes accurately and consistently measures the phenomenon. All subjects were assumed to be equally motivated to answer the questions honestly.

Definition of Terms

Anti-Intellectualism A general negative attitude toward intellectual activity and those who engage in intellectual activity.

Class Classification System of classifying students pertaining to their academic progress in a university: Freshman, Sophomore, Junior, Senior.

Collegiate Learning Assessment (CLA) A standardized testing initiative in the United States for higher education evaluation and assessment.

Division I, II, III Three levels of intercollegiate athletics sanctioned by the National Collegiate Athletic Association in the United States.

Grade Inflation The arbitrary assignment of a higher grade for work that would have received a lower grade in the past.

Grade Point Average Calculation of the average of a student’s grades for all classes in a given semester

Graduate Student A student who continues their education after receiving a bachelor’s degree from a college or university.

Intellectual elitists Those individuals who believe that academic institutions are prone to be underserved, and often target current policies and practices.

Liberal Arts/ Humanities A wide range of academic courses required by colleges and universities before a student can graduate.

Life of the mind A term for the opportunity given to students and individuals to grow intellectually through learning, thinking, researching, and theorizing.

Likert Scale A numerical scale in which respondents indicate their level of agreement with statements that expresses an attitude toward a concept being measured.
**Pro-Intellectualism**  
A positive attitude towards learning, holding intellectual pursuits in high regard.

**Standardized Tests**  
A test administered in accordance with explicit directions and scored under the same conditions for all students. Tests may produce norm-referenced or criterion-referenced information.

**Student**  
A college or university student who is not presently participating in any organized competitive sport sponsored by the educational institution in which he or she is enrolled.

**Student-Athlete**  
A participant in an organized competitive sport sponsored by the educational institution in which he or she is enrolled.

**Undergraduate student**  
A college or university student who has not yet received a bachelor’s degree.

**Significance of the Study**

It was the goal of this study to assess the presence and difference of anti-intellectual attitudes in undergraduate students and student-athletes. If research had suggested a gap exist between students and student-athletes, then effective solutions would have been needed to help bridge the gap. Furthermore, if there was evidence that a significant share of students were found to be anti-intellectual, it could be used by university administrators to justify changes to the current education system and find ways to minimize these attitudes. This information will be useful for advisors when interacting with students of different group and educational classifications. This study will also help to propel future research in an effort to better understand anti-intellectualism.
Chapter 2

Review of Literature

Introduction

It has been said that questions about anti-intellectualism are seldom asked, and answers have been seldom attempted (Howley, 2002). Anti-intellectualism is the feeling of hostility and mistrust towards intellect, intellectuals, and intellectual pursuits. It was first studied as a social phenomenon by Richard Hofstadter in 1963, when President Dwight Eisenhower defined an intellectual as “a man who takes more words than are necessary to tell more than he knows” (Shogan, 2007). Research has illustrated possible deterrents to intellectual pursuits, but relatively little research has investigated the presence of this phenomenon in college students and across different groups of students.

One reason anti-intellectualism has received little attention in research is the inability to describe the variable itself. Many research articles attempt to describe the phenomenon as well as the variables that might help explain it, but little research has been conducted to examine the presence of these feelings. One who possesses an anti-intellectual attitude is negative and suspicious of the life of the mind, and those who represent it. A pro-intellectual bias would be described as a preference for general learning, employing theories, examining hypotheses, researching, writing, and enjoying various sources of knowledge, such as activities typically associated with traditional liberal arts curriculums in colleges and universities (Eigenberger & Sealander, 2001).

It is a schools’ job to nurture intellectual thoughts and create new ideas in the mind, as well as adjust, examine, ponder, wonder, theorize, and criticize old ideas. Universities are protectors of intellect, as they are devoted to research and academic freedom; human discourse rests upon the willingness of students to think critically and prevail in society (De
Simone, 2001). In an academic appearance an anti-intellectual would have an inclination for fact-oriented, memorized, and procedural learning that is routine, without theorizing or critical thinking. Eigenberger and Sealander (2001) found that high anti-intellectualism led students to assimilate academic information by using simple memorization techniques and surface learning, rather than using a learning style that was deep and meaning-oriented.

**Extrinsic Motivation for Education**

Educators have begun to worry about the results of freshman surveys indicating that interests of American undergraduate students have tilted away from the development of meaningful philosophies of life, and toward the pursuit of material advantages (Astin, 1987). Therefore, Bogler & Somech (2002) looked at the variables that would help explain what motivates a student to study. Four variables were hypothesized, including vocational preparation, attractive social life, release from parental control, and intellectual broadening. Intellectual broadening was found to have almost no bearing on why a student studies. The study illustrated that students today are more instrumentally oriented, motivated by extrinsic incentives, and interested in receiving their degrees with minimum effort. Students often embrace a “credentialist-collegiate orientation” that focuses on earning a degree with as little effort as possible. Their academic success is achieved through controlling college by shaping schedules, taming professors and limiting work-load (Nathan, 2006).

Furthermore, the Wasbash National Study reported that students’ academic motivation and interest in academic subject matter declined during their first year in college, leaving little hope that they would notably improve their academic skills in subsequent years (Blaich, 2007). One fifth of both seniors and freshmen have stated that they come to class
frequently unprepared and indicate that their institutions put little emphasis on academic work (Kuh, 2003).

Graduation rates have been decreasing or remaining stagnant, and the time it takes a student to complete a four-year degree has been increasing. Only 34% of students finish a bachelor’s degree in four years and only 64% finish within six years (Adelman, 2006).

Recently, a new study completed at the State University of New York at Albany noted that 70% of students reported that social learning was more important than academics (Grigsby, 2009). This is further seen as students spend the majority of their out of class room time on social and leisure activities, not studying.

Additionally, as Vail (2001) theorized, you don’t need to look far for evidence that Americans no longer place a high value on intellect and critically thinking. Today’s heroes are athletes, entertainers, and entrepreneurs, not scholars. A 1995 Public Agenda survey demonstrated American’s disinterest of scholars and in academics, as it stated that seven out of ten Americans agreed that people who are highly educated often turn out to be book smart but lack the common sense and understanding of regular folk. Seven out of ten respondents said they would be very or somewhat concerned if their child earned excellent grades but had only a few close friends and seldom participated in social activities like sports. In Piscataway, New Jersey school boards recently limited the amount of homework teachers could assign, because parents were complaining that homework was interfering with children’s extracurricular activities (Vail). Anti-intellectual attitudes possibly begin in our youth as children and their parents reject the life of the mind and chose materialistic attributes instead. When we encourage our children to do this we leave them vulnerable to
exploitation and control. Without the ability to think critically, to defend their ideas and understand the ideas of others, they cannot fully participate in our democracy (Vail).

**Diverted Attention**

Nathan (2006) illustrated how little intellectual life seemed to matter in college. He expressed that the patterns of study life, housing clubs, organizations, Greek life, and other activities embraced by students have potential implications for how and what students learn in college. It has also been observed by sociologist Steven Brint (2002) that judging from the students’ use of time, social and leisure activities appear much more important than academic pursuits. The college experience is perceived by many students to be, at its core, a social experience.

One of those possible strong components in anti-intellectual attitudes and behaviors is participation in sports. There is a common perception that athletes shun academic pursuits and attend college for the athletic opportunities (Balough & Girvan, 2010). Coleman’s (1961) early work on the attitudes of high school students found that the strongest anti-intellectual attitudes were held by the most popular students, and that these students tended to be athletic boys. If this relationship persists into college, it would be reasonable to hypothesize that a student-athlete who regards their sport as their highest priority might be disengaged from their academic work. Consequently, in a national survey of 493 student-athletes at 18 universities by Potuto and O’Hanlon in 2007, 60% of those surveyed viewed themselves more as athletes than as students.

According to researchers, the time demands of college athletic programs force student-athletes to sacrifice attention to academics (Meyer, 1990; Parham, 1993). Athletes find it significantly more difficult to find time to study and to earn good grades (Aries,
McCarhty, Salovey, & Banaji, 2004). Some educators have argued that this creates a unique culture for student-athletes, characterized by values and practices that are not in keeping with the mission of the college or university (Shulman & Bowen, 2001).

Potuto and O’Hanlon’s (2007) research also demonstrated that 60% of student athletes say there are campus events that they are interested in, but are unable to attend because of the time demands of athletics. Fifty three percent said that they do not spend as much time on all aspects of their academic work as they would like. Moreover, 65% stated they believe that their cumulative grade point average would have been higher if they had not participated in a varsity sport.

Student-athletes spend up to twenty hours per week in training and competition (Grant & Darley, 1993). Participants who were surveyed complained of having too little time to study, and said they were too fatigued from practices, physical conditioning and academic classes. Student-athletes stated they can quickly fall behind on school work, and as the seasons intensify they have less and less time to complete academic work (Meyer, 1990). Students who had a job and worked as many as four hours per weekday achieved GPA’s equivalent to a general student group, as well as students in the top quarter of the undergraduate population, suggesting that time demands alone may not account for the academic discord student-athletes may experience.

Student-athletes, even in Division III, are under a lot of pressure to make athletics a priority (Krebs, 2004). The role of athletics at a Division III university may be more problematic than at a large Division I university because athletes comprise a much larger proportion of the student body at smaller schools. Bowen & Leven (2003) cited that 25-40% of a graduating class consists of student-athletes at a Division III college. Thus, it is
clear that athletes have a major presence on these campuses. Many student-athletes also believe that at least some professors treat them differently, either positively or negatively, which may affect their attitudes towards academics (Meyer, 1990).

In 1985, Alder and Alder showed that basketball player’s athletic, social, and classroom experiences created an anti-intellectual environment, that over time inhibited academic success. Over the years student-athletes repeatedly lowered their education goals and changed their academic plans. They were fatigued from training, traveling, and competition. They had insufficient time to study, and were isolated from the general student population. They felt pressured from coaches and alumni who reinforced disengagement from academic matters.

**Mission of Higher Education**

Intellectual elitists are concerned with what they perceive to be extravagant expenditures on sports that may drain resources away from classrooms, libraries and laboratories. The mission of higher education is not to create athletes, but well educated citizens whose education may only be enhanced by competitive sports (Sack, 2009). Commercialism in collegiate sports undermines academic values, leads to practices that undermine academic integrity, and makes it difficult for athletes to reconcile their roles as athletes and students. Some have argued that the commercialization of high profile, men’s sports in U.S. colleges and universities has provoked the forfeiture of the student role and abandonment of education goals (Baxter et al. 1996).

One reform group that believed college sports represents an assault on academic integrity and academic standard is the Rutgers 1000. The Rutgers 1000 was formed after Rutgers University decided to move its athletic program into the Big East Conference. The
group hoped to persuade the board of governors to resign from the Big East and abolish athletic scholarships, and join a non-athletic scholarship league or conference to protect the school’s academic values and mission (Dowling, 2007).

**Academic Achievement**

Often times the education of a gifted student is met with substantial resistance and apathy. No one thinks it’s strange for an athlete to receive extra attention and assistance from members of a coaching staff or athletic trainers to further develop a special skill, but academically gifted students are met with resistance when they attempt to challenge their mental capabilities. We live in a culture that values and rewards those who can entertain us and provide some sort of a service, such as catch a touchdown pass, or develop the newest diet pill, but does not equally reward scholarly, aesthetic, or even purely scientific achievement (Plaisance, 1988). This is apparent as 60% of American parents say if forced to choose, they would prefer their sons or daughters get C grades and be active in extracurricular activities rather than get A grades and not be active (Bishop, Bishop, Gelbwasser, Green, and Zuckerman, 2003).

Bishop, Bishop, Gelbwasser, Green, and Zuckerman (2003) also illustrated that nerds and geeks represent one of the groups that are often seen as outcasts during school. This might be promoting anti-intellectual attitudes as students feel better off spending their time socializing and not studying. Athletic prowess and attractiveness is valued much more than ones interest in history, or accomplishments in science.

Because students see no reward in their social life from their academic achievements, they are often left with anti-intellectual sentiments, feeling that deepening their intellectual
pursuits yields no benefits. Being athletic, funny, friendly, outgoing, popular, and attractive is always better in the eyes of peers than being highly intelligent (Barrett, 1990).

**University Requirements**

In many universities students are required to take liberal arts courses consisting of mostly introductory courses to various disciplines. Recently, however, these courses rarely have anything to do with one another, and have little to do with student’s educational goals (Curtler, 2006). To begin, students chose from a variety of unrelated courses. Students often do not possess the knowledge to make the choice about which course will ultimately benefit them. Curtler argues that the courses are not of equal educational value and do not meet the real needs of students. In some schools the students have little room to choose electives they deem useful, while at other schools the options consists of 1,400 classes from every segment in the university. Boyer (1987) noted that most undergraduates perceive general education requirement courses as something to “get out of the way”. Many students find these courses to be burdensome and express frustration with “jumping through the hoops” of general education requirements. Incoming students are increasingly expressing interest in acquiring skills to become well off financially and decreasing interest in developing a meaningful philosophy of life that can be gained with the help of general education requirements (Astin, 1993).

In a quest for job credentials, students will desert humanity courses such as philosophy and literature in lieu of more skill developing classes, as they seek practical knowledge (Maeroff, 1977). Research conducted by Adler and Adler in 1987 reported that many student-athletes weren’t picking their classes. Coaches were primarily responsible for
choosing academic majors, and registering athletes, often without the athletes’ knowledge of explicit consent.

In a study surveying Canadian student-athletes, students began to take a greater interest in their academic progress by their senior years. Student-athletes displayed a greater enthusiasm for academics previously reserved for athletic success as they got closer to graduation. A number of factors might be responsible for this greater investment in academics, including classes that are more specialized in a student’s interest in upper years, and that participants might have started to contemplate entrance into a graduate program, therefore needing to improve grades (Miller & Kerr, 2002).

**Sports Participation Examined**

In 2010, Balough and Girvan attempted to focus on the extent to which anti-intellectual attitudes and behaviors exist among university students using a category of sports participation. The authors used Freyer’s (2005) 36 question scale. The instrument was administered during the spring of 2009 at Clarion University, a Division II school in Pennsylvania, to 350 students. Results showed that roughly 5 to 20% of students indicated some degree of anti-intellectual attitudes and behaviors. They concluded that these results indicated the existence of, but not a pervasive, problem.

Upon further analysis, sports participation was examined. Student-athletes were 3.5 times more likely to disapprove of class participation than non-athletes. Student-athletes were 1.5 times more likely to believe that high-achieving students hurt the grades of other students. Student-athletes were 2.5 times more likely to disapprove of friends that work hard academically, and 2.8 times more likely to agree that having friends and looking good
is more important that working hard. In conclusion, student-athletes were found to be more likely to display a negative attitude towards academic success then regular students.

**Examining the Presence of Anti-Intellectualism**

Without singling out student-athletes, professors across the country have been complaining about students who are not only apathetic and unmotivated but who belittle and resist efforts to be further educated (Trout, 1997). Trout stated several ways anti-intellectualism is demonstrated: by not reading the assigned work; by not contributing to class discussions; by complaining about course workloads and lobbying for fewer assignments; by skipping class; by giving low evaluations to instructors with high standards or tough requirements; by neglecting to prepare for class and tests and not bothering to do extra-credit work or take make-up exams; by not consulting material placed on reserve or picking up class handouts; by refusing to learn any more than is necessary to get a good grade; by boasting about how little time is spent studying by ridiculing high achievers; by being impatient with deliberative analysis; by condemning intellectual endeavors as boring, and by resenting academic requirements as an intrusion on freedom, to name a few. Trout explains that these feelings are not new, but what has changed is the number of students who exhibit these attitudes.

These negative attitudes are discussed and studied in the book titled, *Academically Adrift* (Arum & Roksa, 2011). Their study was conducted in the fall of 2005 by administering a short survey and the Collegiate Learning Assessment (CLA) instrument to a sample of 2,322 freshmen at four-year institutions. Schools of varying sizes, selectivity and missions were chosen. The same students were contacted and completed a sophomore-year follow-up in the spring of 2007. Results demonstrated that no statistically significant gains in critical thinking, complex reasoning, and writing skills were seen in 45% of the students
in their study. The authors illustrated that almost half of undergraduates are demonstrating no appreciable gain in these skills between the beginning of their freshman year and the end of their sophomore year.

The findings also show that academically rigorous instruction is associated with improved performance on tasks requiring critical thinking, complex reasoning, and written communication. Spending time studying, having a faculty member who holds high expectations, and offering courses that require reasonable amounts of reading and writing are associated with students’ learning during the first two years of college. The absence in growth in CLA performance is largely consistent with the accounts of many students in their study that report they spend an increasing number of hours on non-academic activities, including working, rather than studying. Students are enrolling in courses that do not require substantial reading or writing assignments; they rarely interact with their professors outside of the classrooms, if ever, and they define and understand their college experiences as being focused more on social than academic development. The results from this study show that learning is first and foremost related to academic activities, particularly to individual studying.

In 2008, Elias also studied anti-intellectual attitudes, while focusing on business students. Elias noticed the lack of research investigating the presence of this variable, citing that this was the first time business students’ attitudes were investigated. Using the survey developed by Eigenberger and Sealander (2001), Elias assessed the presence of anti-intellectual attitudes. The survey consisted of 25 questions using the 7-point Likert-type scale ranging from 1 to 7. Researchers showed students had an average anti-intellectualism score of 3.84 out of 7.00. There was no significant difference in anti-intellectualism
between male and female students. Junior and seniors had lower anti-intellectualism attitudes than did freshmen and sophomores; graduate students scores were similar to freshmen and sophomores. Undeclared majors and students with low GPAs had the highest anti-intellectual attitudes. Elias hypothesized the results for business students could be due to the economic capital benefits that business students might be close to receiving as they near graduation; as evident by the low anti-intellectualism attitudes of seniors. Freshmen and sophomores might have higher values of anti-intellectual attitudes because they have not been able to value education yet.

Elisa also hypothesized that high anti-intellectualism scores from graduate students could be due to students being exposed to more theoretical and critical thinking, and having a difficult time adjusting to this environment might have developed these attitudes. These students might believe that critical thinking and analysis has little to do with the practical work they wish to do as a career. Often times graduate students have already entered the job field and attend school part time. This enables them to see the real world and what their job consists of. They might detect that there is no practical use of what they are learning in class. This can create negative feelings towards intellectual thought. Clauseen (2004) demonstrated that the percentage of students working while attending college has climbed, and professors and administrators report less student involvement in traditional campus activities and organizations. The center of lives for students has shifted off campus, especially with graduate students, contributing to anti-intellectual attitudes.

Laverghetta, Stewart, and Weinstein (2007) attempted to study the anti-intellectualism attitudes of undergraduate and graduate students, using the same survey developed by Eigenberger and Sealander (2001). Researchers studied students from all
different majors. The results were similar to Elias, as freshmen had the highest scores. A difference exhibited from Elias’ study was that graduate students possessed the lowest anti-intellectual attitudes. Laverghetta, Stewart, & Weinstein theorized that graduate students had survived the pressures of academic life and succeeded, deciding to further their studies, tending to show at least a minimum value of intellectual inquiry. The differences between the two studies could be due to the differences in the population and further research is needed.

Hook (2004) examined the correlations of students’ anti-intellectual attitudes with four aspects of college adjustment, identified by Baker and Siryk (1999). Hook reasoned that given anti-intellectual cultural variables and objectives of higher education, it seems reasonable to expect that students with anti-intellectual attitudes might have difficulty adjusting to college. Hook used the same 25-item scale (Eigenberger & Sealed, 2001) and a 67-item self-reported particularly in the area of institutional attachment. Their findings also showed that anti-intellectual attitudes are unrelated to social adjustment and emotional adjustment in college, providing more support for the idea that anti-intellectualism is an attitude that can be developed at a younger age. If anti-intellectualism widely affects college adjustment skills and thoughts, then this attitude is an important variable in the discussion of how colleges and universities can better serve their students.

One hypnotized result of growing anti-intellectual attitudes is that students are now less likely to perceive cheating as unethical. Researchers surveyed 666 business students at three universities to examine potential determinants of cheating perceptions, investigating the likelihood that anti-intellectual students motivated by their lack of interest in intellectual pursuits would be less likely to perceive cheating as unethical. Results showed that students
who scored higher on anti-intellectualism were more likely to view cheating inside and outside the classroom as less unethical. Researchers also suggested that such students simply want to get a grade and eventually a degree, and have no interest in intellectual pursuits (Elias, 2008).

**Summary**

Anti-intellectualism is a new phenomenon for empirical study. Since Hofstadter’s analysis in 1963, researchers have attempted to gain a better understanding of the variable. Future investigations need to be conducted in order to further investigate this variable across different measures. It has been noted that more research is needed regarding the significant findings of anti-intellectual attitudes and behaviors regarding the comparison of students and student-athletes (Balough & Girvan, 2010). If there is evidence that a significant market share of the students enrolled in higher education were found to be anti-intellectual, it could be used by university administrators to justify the pairing down or softening of liberal arts requirements as part of retention and lean production strategies. In this event, university curricula and pedagogy could find ways to minimize these attitudes and help students value intellect, or make changes to the current education system. Faculty could entertain changing course content to become more useful to students. This study attempted to examine anti-intellectual attitudes in a comparison between students and student-athletes while also receiving information on the demographics of the subjects for further analysis.
Chapter 3

Methodology

Introduction

The purpose of this study was to assess anti-intellectual attitudes of undergraduate students as well as compare those attitudes between students and student-athletes. The methodology explained in this chapter covers specifics pertaining to the study’s participants, the instruments that were used, and the design and procedure for the study. In addition, the participants, instruments, design, procedures, and results of the pilot study conducted prior to this study are reviewed.

Participants

Participants were undergraduate male and female students and student-athletes at a competitive Division III rural liberal arts college located in the Northeast. All participants completed the college-approved consent form (see Appendix B).

Instruments

A survey developed by Eigenberger and Sealander (2001) to assess the anti-intellectual attitudes of students was administered in paper form to all participants. They presented evidence of survey validity by illustrating positive correlations between measures of theory, openness to ideas, experience, authoritarianism, dogmatism, and the desire to adopt surface-level learning styles. When developing the survey Eigenberger and Sealander conducted two studies. The first study analyzed an initial 25-item scale to assess internal consistency and factorial structure. The second study examined the final version of the scale to test reliability, factorial structure and validity. The studies indicated the scale had a fundamentally one-dimensional structure and considerable internal consistency and also provided support for the validity of the anti-intellectualism construct. Reliability of the
scale was reported as .91. The survey consists of 25 statements. Each respondent records one’s agreement with each statement on a seven point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Each question then received a point ranging from 1 to 7; scores were divided by the 25 statements to gain an overall average. A higher score indicated stronger anti-intellectual attitudes. Examples of statements are the following “I see college as a necessary evil—it is the price I have to pay to find a good job”, and “A big reason I am in college is that I value learning for its own sake” (refer to Appendix B). The survey also contained a demographic questionnaire that consisted of asking the participant to identify their gender, ethnicity, age, college major, region, and their class classification.

**Design and Procedures**

Both students and student-athletes were recruited to participate at the beginning of a class. Classes were chosen by stratified sampling choosing classes that come from all three schools of the college and at all different academic levels in an effort to recruit students from different class classifications. Emails were sent to professors of chosen classes and times scheduled. Backup classes that are comparable to the first sampling of classes were also chosen for preventative measures and those professors were also contacted. Institutional Review Board approval was attained before data collection began. The data collection sessions were arranged ahead of time with the professors. In each instance, after explaining that the survey contained questions regarding their feelings towards intellectual pursuits and those who pursue it, a consent form and copy of the survey was passed out to each participant. The consent form explained the purpose of the study, gave a description of the less than minimal risk associated with the study, stated an agreement of confidentiality, offered the opportunity to withdraw at any point, and listed contact information for the
primary researcher and faculty sponsor (refer to Appendix A). The questionnaires were then scored and the data was tallied after all data collecting sessions had been completed.

**Pilot Study**

During the spring of 2010, a pilot study was conducted as a precursor to this study. The pilot study also used the Student Anti-Intellectual Scale (Eigenberger & Sealander, 2001) as well as several demographic questions. The purpose of the study was to assess the presence and difference of anti-intellectual attitudes in undergraduate college students in Physical Education and Kinesiology majors at a competitive Division III rural liberal arts college located in the Northeast.

**Participants.** Participants included 76 undergraduate students, and of these 47% were seniors, while 53% were juniors. Ages of the participants ranged from 19 to 44, with a majority (94%) of the students ranging from 20 to 22 years of age. There were 51 (67%) males and 25 females (33%). Of these subjects, 91% were Caucasian, 2% were Native American, 1% was African American, 1% was Asian, 1% was Hispanic, 1% was mixed, and 3% were unknown. Kinesiology majors composed 36% (29) of the sample, while the remaining 64% (47) were Physical Education majors.

**Design and Procedures.** Surveys were distributed to four different lab sections of a Professional Studies course that was required for students with physical education and kinesiology majors during the spring 2010 semester. Participants completed the surveys voluntarily.

**Results.** Scores on the student anti-intellectualism survey revealed no significant difference between Physical Education students and Kinesiology students, \( F(1,72)=.000, p=.997 \). There was also no significance difference found between the groups on class
classification $F(1,72)=.314, p=.577$, or by sex $F(1,76)=.320, p=.573$. Further analysis did illustrate a difference between the juniors and seniors overall means.

**Discussion.** The pilot study investigated the presence of anti-intellectual attitudes of Kinesiology and Physical Education students. It also explored the effects of demographic factors on the variable. The findings of the study supported the null hypothesis, that anti-intellectual attitudes would not be significantly different between the two majors. Mean values were almost exactly the same. This could be due to the fact that subjects were in the same educational system. Some of the classes that Kinesiology majors are required to take to graduate are the same classes Physical Education majors have to take to graduate. Both majors also have to choose from the same pool of humanities courses, and can sometimes have the same professors.

Overall differences were seen between juniors ($M=4.4824$) and seniors ($M=4.3882$). These results are in agreement with Elias (2008), and with Laverghetta, Stewart, and Weinstein (2007), showing that undergraduate students anti-intellectual attitudes decrease as they move closer to graduation. Researchers suggest that this may be due to the fact that dropout rates decrease as students get older, and students tend to value at least minimum intellectual inquiry as they age. Results also concur with Perry (1970) who suggests that older more mature students display a greater apperception of intellectual activities than younger, less experienced college students.

Despite non-significant differences between Physical Education and Kinesiology students, an aspect of anti-intellectualism appears to exist in both groups. The study supported the need for further research on students’ anti-intellectual attitudes. If research continues to grow and shows a strong presence of these feelings across campuses, then
instructors and administrators should focus their attention on understanding this phenomenon and the potential remedies available to minimize them. Therefore, the findings of this purposed survey could have important implications for faculty and administrators at colleges and universities as they begin an active search for alternatives to improve conclusions.
Chapter 4
Results and Discussion

Participants

Participants included 240 undergraduate (100%) students attending a rural liberal arts college located in the Northeast, a competitive member of the Division III National Collegiate Athlete Association. Two-hundred and three (85%) were students and 37 (15%) of subjects were student-athletes.

The study was conducted during the spring semester of 2012 using a survey developed by Eigenberger and Sealander (2001) to assess the anti-intellectual attitudes of students. The survey was administered in paper form to all participants that included demographic questions. Researchers surveyed students across the three schools of the college, collecting data from a total of eight different classes. A full description of the subject’s demographics is presented in Appendix D (Table 3.1, 3.2, 3.3).

Analysis

Data from the surveys were entered into SPSS, version 20.0 for analysis. A series of one-way analyses of variance were generated using scores on the student anti-intellectualism survey as the dependent measure and athlete participation, class classification, sex, region, race, major, and GPA as the factors. Post hoc comparisons using the Scheffe test were also used to extract further data to explore possible pair-wise comparisons in factor groups.
Results

Group means and standard deviations are reported in Table 1.

Table 1

**Anti-Intellectualism Group Means and Standard Deviations (Students and Student-Athletes).**

<table>
<thead>
<tr>
<th></th>
<th>Student-Athlete</th>
<th>Student</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.9092</td>
<td>4.0315</td>
<td>4.0126</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.61396</td>
<td>0.84389</td>
<td>0.81289</td>
</tr>
<tr>
<td>n</td>
<td>37</td>
<td>203</td>
<td>240</td>
</tr>
</tbody>
</table>

High scores reflect strong anti-intellectual attitudes, 7 being the most anti-intellectual and 1 being pro-intellect. Scores on the student anti-intellectualism survey revealed no significant differences between students and student-athletes $F(1,240)=.708$, $p=.40$. Therefore, the findings support the null hypothesis that there are no significant differences seen in students compared to student-athletes. Distributions of total scores are represented below in Figure 1.

There was also no significance differences found between class classification (Freshmen, Sophomore, Junior, Senior) $F(3,239)=.446$, $p=.706$, sex (Male, Female) $F(1,240)=2.027$, $p=.156$, region (West, Central, North, East, South, Out of NY State) $F(5,239)=.545$, $p=.742$, or race (White, Hispanic, Black, Asian American, Multiracial, Native American) $F(5,234)=.481$, $p=.791$. Further analysis did illustrate a significant difference between students in the School of Professional Studies compared to those in the School of Arts & Sciences: $F(4,237)=3.001$, $p<.05$, $n^2=.049$; those with a GPA ranging within 2.00-2.49 compared to those with a GPA ranging within 3.50-4.00 $F(3,233)=3.886$,
$p < .05$, $n^2 = 0.48$; and individuals ranging in age 18-20 and 21-24, compared with 25 years of age and older individuals $F(2,240) = 3.055$ $p < .05$, $n^2 = 0.025$.

Further analysis demonstrated similar results when removing all subjects aged 25 and older from previous results as similar scores were seen between students and student-athletes $F(1,223) = 1.315$, $p = .253$. Also when all subjects aged 25 and older were removed no significant interactions were seen between age (18-20, 21-24), major (School Education, Professional Studies & Arts and Sciences) and GPA (1.50-1.99, 2.00-2.49, 2.50-2.99, 3.00-3.49, 3.50-4.00), $p > .05$.

*Figure 1.* Distribution of Anti-Intellectualism Mean Scores.

**Discussion**

The results of the present study revealed there was no significant difference in anti-intellectualism scores between students and student-athletes. A central assumption that student-athletes tend to shun academic pursuits and attend college primarily for athletic opportunities may not be a true tendency at Division III institutions, like the one studied. The lack of commercialism and scholarships that are notorious with DI student-athletes may
not have the same hypothesized effect on a Division III student-athlete as shown by their similar scores on the anti-intellectualism survey with their counterpart general student.

It is still possible, that as stated by Krebs (2004), Division III student-athletes are under pressure to make athletics a priority but they may have a better understanding of what is to come after college without the anticipation of gaining recognition at the professional or amateur level after college ends, as some Division I athletics might expect. This would need to be studied further to be better understood.

It should be noted that an increased population of student-athletes on a given campus would create an overall similar composition of the student body and student culture of a school, which may have led to similar scores on the anti-intellectualism survey between groups (Aries, et al, 2004). Also, researchers saw no differences between the academic achievement of intercollegiate athletes and non-athletes when pre-college differences were considered (Hood, et al. 1992).

Potuto and O’Hanlon (2007) suggest that the significant time demand placed on student-athletes creates the tendency of one to think more of themselves as an athlete rather than a student. A comparison of time spent in sports related activities at a Division III school compared to Division I was not available, but could shed light on the current results on the basis that the demand of university athletics might not dramatically differ from the experiences of students in general. It would be interesting to pursue this variable in an attempt to demonstrate what particular behavior might be contributing to these perceptions.

Ericson and Svare (2006) hinted that highly commercialized athletics have a negative effect on American higher education. This is exacerbated by network television contracts, corporate sponsors and extravagant expenditures on sports, which is certainly seen at a much
decreased level in Division III. Division III schools also do not offer athletic scholarships that many Division I or Division II students might receive. One could argue that awarding financial aid on the basis of athletic performance attracts students whose top priority is sports rather than traditional academic values, unlike a Division III institution (Sack, 2009).

Other results found no significant differences between sex, class standing, or region. Scores on the anti-intellectualism survey did decrease as one’s recorded GPA increased, though not significantly. Hence, it can be hypothesized that an individual who holds a more positive attitude toward intellectual activities than another does better and/or puts forth more effort in their studies. Anti-intellectualism is defined in part as a rejection of the intellect dimension of human and educational experience, therefore, it makes sense that an individual possessing a strong anti-intellectual attitude would have a lower GPA, resulting in validity for the instrument used.

Minimal differences were found between class standings but further analysis using age appropriate means demonstrated a significant difference between age groups as seen in Table 2. These results are in agreement with Elias (2008), and Laverghetta, Stewart, and Weinstein (2007), showing that anti-intellectual attitudes in undergraduate students decrease as they move closer to graduation. Researchers suggest that this may be due to the fact that dropout rates decrease as students get older, and students tend to value at least minimum intellectual inquiry as they age. Results also concur with Perry (1970), who suggests that older more mature students display a greater appreciation of intellectual activities than younger, less experienced college students.
Table 2

Group means and standard deviations are reported in Table 2.

*Anti-Intellectualism Mean Scores (Age).*

<table>
<thead>
<tr>
<th>Age group</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>3.9979</td>
<td>0.71372</td>
</tr>
<tr>
<td>21-24</td>
<td>4.0956</td>
<td>0.84817</td>
</tr>
<tr>
<td>25+</td>
<td>3.5650</td>
<td>1.11292</td>
</tr>
<tr>
<td>All ages</td>
<td>4.0126</td>
<td>0.81280</td>
</tr>
</tbody>
</table>

A significant difference was seen between students from the School of Professional Studies and students from the School of Arts & Sciences which is plotted for viewing in Figure 3. This difference is further supported when considering the pilot study offered an overall average mean of 4.42 for 76 Professional Studies students. This seems to be in agreement with Laverghetta and Nash’s (2010) study that illustrated higher levels of anti-intellectualism in students majoring in subjects containing practical knowledge over those with theoretical knowledge. This observation raises questions about why a greater source of anti-intellectualism is concentrated in a single discipline.

*Figure 2. Anti-Intellectualism Mean Scores (Major).*
Summary

The present findings demonstrated that there was no significant difference between undergraduate students and student-athletes on the anti-intellectualism scale created by Eigenberger and Sealander in 2001. The argument that athletes create a unique culture characterized by values and practices not in keeping with the mission of a university and separate from the remaining student body (Shulman & Bowen, 2001) may not be a true tendency at a Division III institution. The data instead revealed a unified culture of similar students. Given the lack of differences found, the proportion of athletes at a school could have an effect on the overall composition of the student body and student culture of a school. It could also be argued the student body has an effect on the proportion of student-athletes. This is the first study of its kind completed at a Division III institution, hence caution should be taken when generalizing the results beyond a comparable school. More research is needed regarding sports participation and other factors that may interact regarding anti-intellectualism.
Chapter 5

Recommendations and Conclusions

Summary

The purpose of the study was to assess the presence and difference of anti-intellectual attitudes in undergraduate college students and student-athletes at a competitive Division III rural liberal arts college located in the Northeast. This study was limited by the fact that all of the data collected was self-reported by students and therefore dependent upon the truthfulness of the subjects. The sample size was large and diverse in age, class classification, gender, major and region but lacked a culturally diverse population, as 86% of the subjects were of the Caucasian race. Most importantly was the fact that only 15% of the subjects were student-athletes, which deviated from the anticipated norm that Division III schools have such a higher amount of student-athletes than Division I or Division II schools (Shulman & Bowen, 2001). This study had no knowledge of participant’s household environments, prior learning experiences or their level of commitment to their sport. Hours spent outside and inside of sports related activity were not recorded.

Implications

The results of this study demonstrated no significance difference in anti-intellectual attitudes of undergraduate students and student-athletes. This was the first study of its kind focusing on students and student-athletes at a Division III institution. These results will push forth further research in an effort to gain a better understanding of anti-intellectualism across all schooling levels and demographics’.

Though concern over undergraduate learning and students’ feelings towards intellectual activities has longstanding roots, this variable has just begun to receive increased
attention throughout the past few years. As the cost of education continues to rise, negative attitudes have grown. Attitudes often stem from the worry over the value and returns to the investment of higher education (Arum & Roksa, 2011). Not only should colleges be challenging students to think critically, but the students must in return be receptive to the process and knowledge. If students are able to receive high grades and make progress towards their college degrees without putting forth much effort in the process, then their attitude towards academic work will continue to decrease. Schools must take a responsibility to encourage both students and student-athletes to approach their studies with maximum effort. If research continues to grow and yield results that shed further light on anti-intellectualism it may force policy makers to take a long hard look at the current education system, from the early standardized testing involved at all schooling levels to the current college curriculum requirements.

**Recommendations**

This study supports the need for further research on students’ anti-intellectual attitudes. Research has illustrated possible determents to intellectual pursuits, but limited research has been done to assess the presence of these feelings in college students and across different majors. Researchers should continue to investigate the difference of these feelings across a variety of demographics. Future researchers should attempt to examine further determents to intellectual thought and further investigate subjects’ individual backgrounds which might help explain and make known anti-intellectualism on a deeper level. It would be valuable for future studies to attempt to investigate a possible link between divisions in the National Collegiate Athlete Association and the attitudes of student-athletes by surveying a wide variety of schools. Researchers would also benefit weighing out the
possible determents to academics or academic attitudes from athletes being in season and out of season. Another line of research would be to examine whether athletes in major revenue sports are being educated or merely being kept eligible (Sack, 2009).

**Conclusion**

In conclusion, these findings revealed no significant difference in anti-intellectual attitude between students and student-athletes at a competitive Division III institution. Suggesting the idea that athletes shun academic pursuits and attend college primarily for athletic opportunities may be inaccurate and student-athletes may share more in common with their Division III counterparts than previously thought.

Despite this, an aspect of anti-intellectualism does appear to exist in students. It seems that at all levels of post secondary education some students are more averse to acquiring an academic education than others. The current study highlighted several areas of concern, including differences in age, major and academic performance. If research continues to grow and shows a strong presence of these feelings across campuses, then instructors and administrators should focus their attention on understanding this phenomenon and the potential remedies available to minimize it. Anti-intellectualism may be an essential topic in the discussion of how colleges and universities can better engage and serve the needs of the students.
References


*Psychological Reports, 94*, 909-914.


Appendix A.

General Information:

Please indicate your current age...

_____ Years Old

Please indicate your sex...

___ Male  ___ Female

Please indicate your major...

________________

Please indicate your race...

_________________

Please indicate your current college standing...

___Freshman

___Sophomore

___Junior

___Senior

___Graduate Student

___Continuing Education

Please indicate your most recent GPA...

___<1.50

___1.50-1.99

___2.00-2.49

___2.50-2.99

___3.00-3.49

___3.50-4.00

Are you currently a Collegiate Varsity Student-Athlete (Yes) (No) If Yes, what sport?

_____

Please indicate the region you are from...

___West

___Central

___North

___East

___South

___Outside of NY State
Directions: This questionnaire was designed to discover your attitude and feelings regarding your college experience. There are no right or wrong answers to these questions. What is important is your opinion. Please answer the following questions according to the following scale (adapted from Eigenberger & Sealander, 2001).

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Slightly disagree</td>
<td>Neural</td>
<td>Slightly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

I see college as a necessary evil – it is the price I have to pay to find a good job.
Requirements to take humanities and liberal arts courses should be reduced or eliminated.
I would like to deepen my intellectual pursuits after graduation.
I don’t like taking courses that are not directly related to my goals after college.
I enjoy researching new topics and solving intellectual problems.
I prefer courses offering practical skills over liberal arts kinds of courses.
I would rather just pay for a diploma than have to take so many useless courses.
It is always worthwhile to study subjects like philosophy, history, and educational theory.
A big reason I am in college is that I value learning for its own sake.
Some college professors are alright, but as a whole I don’t care much for them.
I enjoy courses that require research, writing and critical evaluation.
Learning a lot of theories is fine for some people, but I would rather go out and do things.
Some professors are too intellectual and often bore me with their abstractions.
The main problems in life require clear and direct answers, not intellectual theorizing.
Many of my college courses are a waste of time for me.
Generally speaking, professors need to be more interesting.
I prefer classes where thought-provoking issues are discussed with the professor.
I prefer classes without a lot of critical thinking or analytic activities.
I become bored in my classes when discussions seem to get too abstract and hypothetical.
Overall, I find my college courses stimulating and rewarding.
I pay tuition and feel it is my professor’s job to give me what I need to graduate.
I often feel angry toward many of my professors.
I appreciate a teacher’s depth of knowledge more than how entertaining they are.
I am not interested in hearing students and the professor discuss philosophical issues.
I am in a hurry to get my education over with.
Appendix B.

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Study Title: Comparison of Anti-intellectual Attitudes of Undergraduate Students and Student-Athletes
PI: David Haas

Dear Respondent:

I am inviting you to participate in a research project attempting to assess anti-intellectual attitudes in undergraduate students and student-athletes. Along with this letter is a short questionnaire that asks you a variety of questions regarding your education, teachers, courses, research, writing, critical thinking, and intellectual pursuits. I am asking you to look over the questionnaire and, if you choose to do so, complete it and give it back to me. It should take you about 10 minutes to complete. You must be 18 years of age to participate.

The results of this project will allow for a better understanding of anti-intellectualism and demonstrate any differences seen between students and student-athletes. I hope the results of the survey will be useful for instructors and administrators when interacting with students of different groups and educational classifications. This information could also be used to justify changes to the current educational system and help propel future research in this area. I hope to share my results by publishing them in a scientific journal and presenting them to the university.

I do not know of any risks if you decide to participate in this survey and you should not put your name on the questionnaire. Your identity will not be recognized or identified with your responses.

I hope you will take the time to complete this questionnaire and return it. Your participation is voluntary and there is no plenty if you do not participate and no reward if you do.

If you have any questions or about completing the questionnaire or about being in this study, you may contact me at (315) 256-8220. You may also contact my research advisor at (607) 753-4300. This project has been approved by the Institutional Review Board (IRB) at the State University of New York at Cortland.

If you have any questions about your rights as a research study participant, you may contact the chair of the IRB through the Compliance Office at (607) 753-2207 or irb@cortland.edu.

If you agree to participate you may keep this form and complete the survey. If you wish, you may withdraw yourself from the study at any time while filling out the survey.

Sincerely,

David Haas
Appendix C.

To: David Haas
    Susan Rayl

From: Irena Vincent, Primary Reviewer on behalf of
      Institutional Review Board

Date: 12-5-11

RE: Institutional Review Board Approval

In accordance with SUNY Cortland’s procedures for human research participant protections, the protocol reference below has been approved for a person of one year.

Title of study: Comparison of Anti-intellectual Attitudes of Undergraduate Students and Student-Athletes

Level of review: Exempt               Protocol number: 111214

Project start date: Upon IRB approval   Approval expiration date*: Note Exempt research

*Note: exempt research does not require continuation requests; the SUNY Cortland IRB only requests annual email notification (to irb@cortland.edu) indicating that research continues. The purpose of the continuation notification is to alert the IRB Administrator that the records of the original IRB approval must remain available. Unlimited continuations can be registered for exempt research under federal and SUNY Cortland IRB guidelines.

The federal office for Research Protections (OHRP) emphasizes that investigators play a crucial role in protecting the rights and welfare of human subjects and are responsible for carrying out sound ethical research consistent with research plans approved by an IRB. Along with meeting the specific requirements of a particular research study, investigators are responsible for ongoing requirements in the conduct of approved research that include in summary:

- obtaining and documenting informed consent from the participants and/or from a legally authorized representative prior to the individuals’ participation in the research, unless these requirements have been waived by the IRB;
- obtaining prior approval from the IRB for any modifications of (or additions to) the previously approved research; this includes modifications to advertisements and other recruitment materials, changes to the informed consent or child assent, the student design and procedures, addition of research staff or student assistants, etc. (except those alterations necessary to eliminate apparent immediate hazards to subjects, which are then to be reported by email to irb@cortland.edu within three days);
- providing the IRB prompt reports of any unanticipated problems involving risks to subjects or others;
following the principles outlined in the Belmont Report, OHRP Policies and Procedures (Title 45, part 46, Protection of Human Subjects), the SUNY Cortland College Handbook, and SUNY Cortland’s IRB Policies and Procedures Manual;
notifying the IRB of continued research under the approved protocol to keep the records active; and,
maintaining records as required by the HHS regulations and NY State law, for at least three years after completion of the study.

In the event that questions or concerns arise about research at SUNY Cortland, please contact the IRB by email irb@cortland.edu or by telephone at (607) 753-2511. You may also contact a member of the IRB who possess expertise in your disciple or methodology, visit http://www.cortland.edu/irb/members.html to obtain a current list of IRB members.

Sincerely,

[Signature]

Primary Reviewer on behalf of
Institutional Review Board

SUNY Cortland
Appendix D.

DEMOGRAPHICS AND CHARACTERISTICS OF SUBJECTS

Table 3.1

Number of Participants Classified by Sex, Age, and Class (N = 240)

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age (yrs)</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>18-20</td>
<td>21-24</td>
</tr>
<tr>
<td></td>
<td>131</td>
<td>117</td>
</tr>
<tr>
<td>Females</td>
<td>109</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2

Number of Participants Classified by School with the College and Hometown NY Region

<table>
<thead>
<tr>
<th>School*</th>
<th>NY Region**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Pr. St.</td>
</tr>
<tr>
<td></td>
<td>72</td>
</tr>
</tbody>
</table>

* n = 239

** n = 236
Table 3.3

*missing = 6; **missing = 3

*a represents Asian Americans

*b represents Multiracial

*c represents Native Americans

Number of Participants Classified by Race and Overall GPA

<table>
<thead>
<tr>
<th>Race*</th>
<th>GPA**</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>1.50-1.99</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2.00-2.49</td>
</tr>
<tr>
<td>Black AA</td>
<td>2.50-2.99</td>
</tr>
<tr>
<td>MR</td>
<td>3.00-3.49</td>
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<tr>
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<td>3.50-4.00</td>
</tr>
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<td>207</td>
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<td>62</td>
<td>107</td>
</tr>
<tr>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

*a represents Asian Americans

*b represents Multiracial

*c represents Native Americans