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The Relationship between Character Traits and  
Academic Performance of AFJROTC High School Students

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### **Abstract**

The purpose of this study was to examine the relationship between character traits and academic performance, as measured by grade point average of AFJROTC cadets. The sample consisted of 20 randomly selected male cadets and 20 female cadets enrolled in AFJROTC classes at Sullivan South High School. Data were collected using a questionnaire modified from the "What Do You Really Believe" survey. Data were analyzed using Pearson Product-Moment Correlation, *t* test for independent samples, ANOVA, and Multiple Regression. The results indicated a significant relationship between character traits and academic performance. No significant difference was found in gender on character traits and academic performance. Also no significant difference was found on character traits and number of semesters completed. A significant multiple correlation was found on all four subcategories of the composite character traits with moral behavior indicating the greatest influence. This study suggests that cadets' behavior and academic performance are positively influenced by strong character education programs.

### Review of the Literature

Local communities expect teachers to model positive character traits and teach values in the classroom. High schools utilize JROTC programs to teach character education and discipline. In 1992, the Department of Defense requested additional funds to increase the number of JROTC units in high schools across the country (Lutz & Bartlett, 1995). Universities and the Department of Defense fund research studies to examine the effectiveness of schools at teaching academic content and community values. Researchers are constantly evaluating new instruments to measure positive character traits. Are JROTC programs effective at teaching values and are values positively related to other important outcomes, such as attendance, discipline, leadership, and self-esteem? The research studies described in this review examined the relationship between character education programs and JROTC programs in high schools.

### **Character Education and Character Traits**

Whenever school districts discuss whether to implement character education programs, questions arise. Should schools teach character and values, and are these programs effective? Researchers Demmon, Rice, and Warble (1996) surveyed educators, students, and employees outside the field of education. The researchers distributed approximately 300 surveys and 271 were returned. The researchers did not use the results of 71 surveys because the information was incomplete or late. Below are some of the survey results of 200 respondents:

- 93.5% agreed that "The school's moral culture is important in building and contributing to a child's value system."
- 79.5% agreed that "There is a correlation between moral/character education and academic achievement."
- 84% agreed that "Moral and character development should be taught by both the school and parents."
- 64.5% agreed that "If taught in school, these traits should be taught by modeling and as part of the curriculum."
- The top five ranked traits were: Respect for Others (93%); Responsibility (86%); Honesty (80%); Respect for Self (76%); and Integrity (57%). (p. 14-18)

The results of the survey indicate strong support by the community for character education programs in the schools. The community would like teachers to model character traits and teach these character traits as part of the curriculum. Some of the aspects how character traits tend to foster self esteem of the students (Demmon, 1996).

Self-esteem is an abstract concept that many middle and high school students have difficulty relating. Hamilton and Oswald (1998) researched the effect of self-esteem on health behaviors. They developed three exercises to use in the classroom to help students understand the abstract concept of self-esteem by creating an ideal body from magazine clippings, evaluating previous life experiences (positive and negative), and helping students appreciate their own accomplishments and talents. The researchers also educated the students on positive and negative moral behavior. The results indicated a significant relationship, between positive self esteem and positive moral behavior.

Three researchers collaborated to determine if character education had an effect on students' behavior with regard to character traits (Duer, Parisi & Valintis 2002). The researchers taught at three different schools (one middle school and two high schools) with different demographics. The researchers developed and implemented an intervention plan at the three different schools. The researchers initially surveyed students and teachers. Then they conducted focus groups to better understand the initial survey results. At the schools' open houses, the researchers informed the parents of the intervention plan. They performed the intervention (consisting of four activities) in their respective classes. After the intervention, the researchers surveyed the students and teachers. Finally, they collected "Administrative Referrals" for disciplinary behavior before and after the intervention. The researchers compared the results of the initial survey and the final survey, and concluded that the character education intervention was successful in the three classes.

What values and character traits are important in today's society? Grubb, & Fasko (1998) used the Phi Delta Kappa surveys on core values to determine which values are important to educators and students. The "What Do You Really Believe" survey was administered to students and a corresponding "How would Teenagers Respond?" survey was administered to educators. The six categories of character traits in the survey were: honesty; responsibility; democracy/freedom; religion; moral behavior; and ethics. Each survey contained 43 statements. The students' survey asked for students to indicate "Yes" if they believed in the statement and "No" if they did not believe in the statement. The teachers' survey asked the teachers to indicate how they think most teenagers in their school would respond to the same 43 statements as

the students' survey. The researchers (Grubb & Fasko, 1998) compared the students' responses with the teachers' responses and the results are summarized below by category:

- Honesty – Teachers and students agreed honesty is important. Teachers predicted that students were less honest than the actual students' responses indicated.
- Responsibility – Teachers and students agreed that it is currently a tough time to live, teens are more selfish today, and people typically do not take action if something is not right.
- Democracy/freedom – The teens' beliefs agreed with the teachers' perceptions.
- Religion – Teachers and students agreed on three of the four statements. They did not agree on the statement, "Faith is more important than reason". Overall, students said "Yes" to the statement, but the teachers predicted the students would respond "No".
- Moral Behavior – Teachers predicted that students were using alcohol and drugs, and engaging in sex. Students indicated that they were strongly opposed to drugs and undecided about alcohol use and sexual activity.
- Ethics – Teachers perceived that peers have a strong influence on teenagers, but the teenagers strongly rejected the statement. Students indicated that parents are influential in learning right from wrong, but the teachers' responses were undecided. (p. 11-12)

Overall, students' responses agreed with teachers' perceptions. Further research is needed to determine the relationship between these character traits and the current problems in society. The researchers indicated that they have an interest in administering the survey to parents to compare the parents' perceptions of teenagers' values with the teenagers' responses and teachers' perceptions (Grubb & Fasko 1998). The "What Do You Really Believe" survey addressed many of the values in the Sullivan South High School AFJROTC curriculum.

### **JROTC Program Effectiveness**

Numerous research studies have been performed to determine the effectiveness of the JROTC programs in the high schools across the nation. The following are some of the studies reviewed.

Morris (2003) developed a survey which asked the principals to respond to 24 statements using a Likert scale; seven demographic questions about the JROTC program (answered if the principal's school had a JROTC program); and ten questions about the principal's school and perceptions about JROTC. A total of 344 surveys were mailed to principals of North Carolina high schools and 184 surveys were returned (a 54% response rate). The demographic information indicated that 50% of the JROTC units were sponsored by the Army. The JROTC programs primarily attracted students with GPAs between 2.1 and 3.5. Most of the JROTC instructors were male and had received a standard or outstanding rating on teaching performance. The opinion data indicated that the principals agree that the cadets benefited from the JROTC programs, especially in the areas of leadership, citizenship and teamwork. Morris' findings support

the premise that students benefited from character education programs like JROTC by encouraging positive character traits and behaviors.

Another research study compared the leadership behavior, self-esteem, attendance and out-of-school suspensions of 57 Army JROTC sophomores and 57 non-JROTC sophomores (Flowers, 1999). Flowers surveyed the students using a standardized questionnaire to determine leadership behavior, a second standardized questionnaire to determine the self-esteem of the participants, and a third questionnaire to determine demographic information. Flowers also collected attendance and out-of-school suspension data from the school administration.

Flowers analyzed the survey and demographic information for significant differences between JROTC and non-JROTC sophomores with regard to leadership scores, self-esteem scores, daily attendance, and school suspension. Flowers also analyzed the data to determine if there was a relationship between academic performance and this same list of variables. According to Flowers (1999), the data analysis indicated a statistical difference between JROTC and non-JROTC sophomores (at the 0.05 level) for the leadership scores and daily attendance (JROTC students had higher leadership scores and attendance rates). The data analysis also indicated there was not a statistical difference between the self-esteem scores and out-of-school suspensions. Flowers recommended further research since the self-esteem results were not consistent with previous studies. He emphasized that the results of his research study demonstrated the contributions of the JROTC to schools and society by cultivating leaders, encouraging school attendance and academic performance, and providing extracurricular activities for students.



Annually, the Marine Recruit Depot in San Diego, California holds the Military Order of the World Wars (MOWW) Leadership Training Program for high school JROTC cadets from California. The cadets participate in a weeklong simulation of the life of real Marine cadets. On the final day of the program, Schmidt (2001) administered The Personal Development Test (PDT) to 64 cadets. The PDT categories were: self-esteem; coping skills; positive assertiveness; locus of control; conformity; sympathy; self-efficacy; and caring. Compared to typical high school students, the cadets tested higher in each PDT score and statistically higher in eight of the thirteen PDT scores. Female and male cadets were only statistically different in the sympathy score (female cadets showed more sympathy than male cadets). Since JROTC programs provide character education to high school students, the PDT instrument is an effective instrument in determining the effectiveness of a character education program like the JROTC program (Schmidt, 2001).

Since the development of the JROTC Career Academy in 1992, Elliot, Hanser and Gilroy (2001) examined the effectiveness of the program by comparing grades, attendance and graduation rates. The researchers collected data from 10 groups of students (27,490 students) from urban high schools. All the schools in this research study were dominated by minority student populations: five of the groups were primarily African American; and the other five were primarily Hispanic. The statistical analysis of the data indicated that the JROTC Career Academies were more effective at improving attendance, grades and graduation rates than the general academic program or regular ROTC program (Elliot, Hanser, & Gilroy 2001).

### **Opponents of JROTC in high schools**

Lutz and Bartlett (1995) researched JROTC programs for two years and were critical of the programs. In 1992, the Department of Defense requested additional funding, so that JROTC programs could expand. The researchers were concerned because 65 percent of the units were in 14 Southern states and were in schools with a high proportion of minority students. The Department of Defense's strategy was to put JROTC units in schools which were not affluent. Nationwide, 54 percent of the JROTC cadets (excluding the Marines) were minority students.

The JROTC programs also attract young women; in 1994, 40 percent of the cadets were female. On the other hand, the JROTC programs have a masculine orientation with primarily male JROTC instructors, and a curriculum which does not support a "nonsexist atmosphere". Even though the JROTC explicitly states that the purpose of JROTC is not to recruit, 45 percent of cadets enlist in some branch of the military after high school, which is a higher rate than the general population. In fact, the JROTC program is a less expensive for recruiting than the advertising and marketing programs. As far as positive moral behavior, no research data indicated that the JROTC program lowers drug use (Lutz & Bartlett, 1995).

The three main themes of the JROTC curriculum are citizenship, military history, and leadership. The researchers contend that "the military is equated with the core of American beliefs and with democracy" (Lutz & Bartlett, 1995, p. 13), which implies that to become an American citizen, a person must join the military. The leadership curriculum describes the various types of leaders and provides the characteristics of

leaders. But, the focus of the JROTC program is more on conformity and following a leader, instead of becoming a leader.

Since the Department of Defense provided additional funding to increase the number of JROTC units in high schools, the Chicago area was a prime target of growth because 91 percent of the students were from minority groups and 85 percent were from low-income families (Shaeffer-Duffy, 2003). The mayor of Chicago, Richard Daley supported the concept of having JROTC programs in every school. Critics of the program stated that the students of one military academy (which was 90 percent black) were learning military history, but they were not learning African American history. However, supporters of this effort are impressed with the results: improved discipline and improved grades. Critics of the movement state that students are learning to be followers, not leaders. Students are learning militaristic skills that are not conducive to a civilian setting. Again, the military has been successful at recruiting students from the JROTC programs (about 40 percent). Critics would like to see a greater percentage of minority students entering college after high school versus enlisting in the military. The critics have been successful and Chicago is revising the JROTC expansion plans; Chicago will slow down the expansion of the JROTC programs in Chicago's high schools.

### **Conclusion**

Debate continues on the effectiveness of character education programs. Proponents of these programs continue to tout their effectiveness. JROTC programs have been evaluated in numerous studies and have been shown to have positive results, especially with at risk, minority students in urban high schools. Is the JROTC

program as effective in a predominately Caucasian high school in a suburban/rural setting? Opponents of JROTC programs state that the programs are primarily a recruiting tool for at risk students. Should at risk, minority students in JROTC programs be attending colleges versus entering the military? What defines success of a JROTC program? Research has documented that JROTC programs are effective using various measures such as academic achievement, attendance, leadership scores, and maturity scores (Bulach, 2002; Cassel & Standifer, 2000; Flowers, 1999; Reiger & Demoulin, 2000; and Schmidt, 2001).

### Methodology and Procedures

The population for this research study came from Sullivan South High School. This rural/suburban high school is located in Sullivan County just outside the city limits of Kingsport, Tennessee. The school had 1,111 students in Grades 9 through 12, and was 97.4% Caucasian. The minority population was small with seven African American students, eight Hispanic students, nine Asian students, two Native American students and three Pacific Islander students. Only 24.9% of students received free or deduced lunches (Report Card 2005).

The sample for this study was drawn from 59 AFJROTC cadets who were enrolled in AFJROTC classes and completed the survey. The surveys were separated by gender. A random sample of 20 female students was selected from the female students who completed surveys and a random sample of 20 male students was selected from the male students who completed surveys.

The instrument used in this research study was the opinionnaire "What Do You Really Believe" survey developed by Phi Delta Kappa (Grubb, 1998), but the responses were modified from "Yes/No" responses to the Likert Method of Summated Ratings (strongly agree, somewhat agree, neutral, somewhat disagree, and strongly disagree). The statements in the following five categories were retained in the survey: honesty, responsibility, democracy/freedom, moral behavior, and ethics. The statements regarding religion and the statements not related to any of the five categories were removed from the survey (10 questions in all).

The instrument also included four questions to collect the following demographic information from each student: whether the student was male or female; current grade; number of semesters the student had taken an AFJROTC class; and extracurricular activities.

### Procedures

The researcher requested permission from the principal of Sullivan South High School. After permission was granted, the researcher distributed parental consent forms to all AFJROTC cadets currently taking an AFJROTC class at Sullivan South High School. The researcher explained the purpose of the research study and the procedures that were used. Two weeks later (at the end of the semester) the researcher administered the survey to all AFJROTC cadets who had parental consent to participate in the study. After the survey was administered to the cadets, the survey form and parental consent form for each participating cadet were collected and stapled together. At the beginning of the spring 2005 semester, the survey forms and parental consent forms were given to the Guidance Department. The Guidance Department listed each student's high school grade point average at the end of the fall 2005 semester on a "removable" label attached to the parental consent form. The researcher moved the label with the grade point average to the survey and then separated the parent consent form from the survey. At this point, the surveys were anonymous.

The character traits and grade point averages of the groups were examined to determine the relationship between character traits and academic performance; the difference between female and male AFJROTC cadets on character traits and academic performance; the difference of character traits scores of AFJROTC cadets

who completed one semester; two or three semesters; and four or more semesters of AFJROTC classes; and the impact of the subcategory scores on the composite character traits score.

## Results

### Research Questions

Five research questions were used to guide the analysis of data.

Research Question 1: Is there a relationship between character traits and academic performance, as measured by grade point averages of AFJROTC cadets?

Research Question 2: Is there a difference between the character trait scores of female and male AFJROTC cadets?

Research Question 3: Is there a difference between academic performance, as measured by grade point averages of female and male AFJROTC cadets?

Research Question 4: Is there a difference among the character traits scores of AFJROTC cadets who completed one semester of AFJROTC classes, cadets who completed two or three semesters of AFJROTC classes, and cadets who completed four or more semesters of AFJROTC classes?

Research Question 5: Does one of the four subcategory scores (honesty, responsibility, moral behavior or ethics) predict the Composite Character Traits Score?

Each research question was followed by a research hypothesis. Research question 1 was analyzed using Pearson Product Moment correlation, 2 and 3 were analyzed using t-test for independent means, question 4 was analyzed by using analysis of variance (ANOVA), and 5 was analyzed by using multiple regression procedure.

The results of Pearson Product Moment correlation for question 1 indicated a significant correlation ( $r = .439$ ,  $P < .05$ ). Therefore the null hypothesis was rejected.

The results are displayed in Table 1.

*Table 1.*

*Correlation of Character Traits and Academic Performance*

Variable	<i>M</i>	<i>SD</i>	<i>r</i>	2-tail Sig.
Character Traits	3.262	.378	.439	.005*
Grade Point Averages	2.941	.790		

*Note.* \* $p < .05$

T-test for independent means for research questions 2 and 3 were not significant, ( $t(38) = .099$ ,  $t(38) = -1.658$  respectively). Results for the ANOVA for question 4 indicated no significant difference, and results for the multiple regression procedure for question 5 indicated a significant multiple correlation ( $R = .969$ ). The coefficient of determination ( $R^2$ ) was .938. Moral behavior had the greatest influence followed by responsibility, honesty, and ethics respectively. The results are displayed in Table 2.



Table 2

*Multiple Regression Coefficients of Character Traits by Subcategory*

Character Subcategory	Beta	Sig.
Honesty	.322	.001*
Responsibility	.336	.001*
Moral Behavior	.432	.001*
Ethics	.221	.001*

Note. \*p < .05; Dependent variable: Composite Character Traits Score

### **Discussion**

Five research questions were addressed in this research study to determine the relationship between character traits and academic performance.

#### **Character Traits and Academic Performance**

The first research question asked, "Is there a relationship between character traits and academic performance, as measured by grade point averages of AFJROTC cadets?" The Pearson Product-Moment Correlation was conducted and the results indicated a significant correlation between the Composite Character Traits Scores and academic performance, as measured by grade point averages ( $r = .439$ ,  $p < .05$ ).

Therefore, the null hypothesis was rejected; there is a relationship between character

traits and academic performance of AFJROTC cadets. The coefficient of determination ( $r^2$ ) was .19, therefore, 19% of the variation of the grade point averages can be explained by the Composite Character Traits Scores.

The JROTC programs emphasize discipline, responsibility, and doing the right thing. For students to achieve in high school, they need discipline to complete homework on time and study for tests. High school students need to take responsibility for their learning by prioritizing their activities. Students with high character traits have the discipline to study, participate in meaningful extracurricular activities, and take responsibility for their success. The JROTC programs in schools continually emphasize discipline and responsibility; and provide a structured program which encourages students to strengthen these traits. The results were consistent with Rine and Warbles (1996) study.

### Character Traits and Gender

"Is there a difference between the character trait scores of female and male AFJROTC cadets?" was the second question addressed by this research study. To test for significance, a  $t$  test for independent samples was conducted. The results indicated there was not a significant difference in the means ( $t(38) = -.099, p > .05$ ). The null hypothesis was retained; there is not a difference between the character traits of female and male AFJROTC cadets. Since the JROTC program historically was male dominated, the author anticipated a significant difference in character traits between male and female cadets; but was pleased to find no difference. Female cadets have the same opportunity to develop strong character traits as male cadets. Female cadets

should not have to overcome obstacles to be successful in school or the work place. Success is not based on gender, but developing strong character traits and acquiring a strong work ethic. On the other hand, there is not reverse discrimination in the JROTC program. If male cadets develop strong character traits and acquire a work ethic, they will also be successful in school and the work place.

### Academic Performance and Gender

The third research question of this research study asked, "Is there a difference between academic performance, as measured by grade point averages of female and male AFJROTC cadets?" To test for significance, a *t* test for independent samples was conducted. The results indicated there was not a significant difference in the means ( $t(38) = -1.658, p > .05$ ). The null hypothesis was retained; there is not a difference between the academic performance of female and male AFJROTC cadets.

Even though the mean of the grade point averages of the female cadets was higher than the mean of the male cadets, the means were not statistically different. The method for achieving results may be different for each sex, but female and male cadets alike are successful in high school. Female students tend to work hard and want to please teachers. Male students tend to be more results oriented but may not focus on details. Academic achievement can be improved by recognizing the unique strengths of each student, and challenging students to maximize their strengths and improve their weaknesses. If teachers continually discuss character traits in the classroom, students may slowly internalize these positive character traits and reach their potential.

### Multiple JROTC Semesters

"Is there a difference among the character traits scores of AFJROTC cadets who completed one semester of AFJROTC classes, cadets who completed two or three semesters of AFJROTC classes, and cadets who completed four or more semesters of AFJROTC classes?" was the fourth research question addressed by this research study. An Analysis of Variance was conducted and the results indicated that there was not a difference among the groups ( $p = .340$ ) at the .05 level of significance. The Analysis of Variance results failed to reject the null hypothesis; there is no difference among the Composite Character Traits Scores of AFJROTC cadets who completed one semester of AFJROTC classes, cadets who completed two or three semesters of AFJROTC classes, and cadets who completed four or more semesters of AFJROTC classes.

The results are not significant because the cadets benefit immediately from the JROTC program. The JROTC class at Sullivan South High School expects students to wear their JROTC uniform once each week and a tie another day of the week. The JROTC class rewards students with ribbons for good behavior (no in school suspensions) and good grades. Cadets are taught how to show respect to teachers and parents. Strong expectations result in strong performance, and these benefits are demonstrated from the beginning. Peer pressure from experienced cadets encourages new cadets to demonstrate positive character traits.

#### Instrument Subcategories

The final research question of this research study asked, "Does one of the four subcategory scores (honesty, responsibility, moral behavior or ethics) predict the Composite Character Traits Score?" A Multiple Regression analysis was performed to

determine the impact of the predictor variables (Honesty, Responsibility, Moral Behavior and Ethics subcategories) on the dependent variable (Composite Character Traits Score). Results indicated that the Honesty, Responsibility, Moral Behavior and Ethics subcategories had a significant impact on the Composite Character Traits Score ( $R = .969$ ). The coefficient of determination ( $R^2 = .938$ ) indicates that 94% of the variation of the Composite Character Traits Score can be explained by the four character subcategories: Honesty, Responsibility, Moral Behavior and Ethics.

Moral Behavior was the strongest predictor of Composite Character Traits Score with a Beta score of .432. The questions that comprised this subcategory focused on the students' behavior with regard to the use of drugs, alcohol and sexual activities. Other people are quick to judge a person's character by their behavior. If a student drinks alcohol, uses drugs, or engages in sexual activity; they tend to have more negative character traits. This finding explains why teachers and parents should encourage students to have friends with positive Moral Behavior.

The results of Bulach's survey (2002) indicated the behavior-based JROTC curriculum had a positive effect on students' behavior associated with character traits. Hamilton and Oswald (1998) determined that moral behavior relates directly to positive self-esteem. Since strong moral behaviors are concrete, students are able to relate positive moral behaviors more directly to positive character traits than the abstract concept of self-esteem.

The second strongest predictor of the Composite Character Traits Score was Responsibility with a Beta score of .336. Students need to be responsible for their academic performance. They need to be responsible for completing their homework

and assignments on time. They need to be responsible for their behavior at school, during extracurricular activities, and at home. Students who score low on the Responsibility questions may be quick to blame others. Teachers need to continually emphasize that students are responsible and need to accept the consequences of their own actions – both positive and negative.

Honesty was the third strongest predictor of the Composite Character Traits Score with a Beta score of .332. Students are taught honesty from Kindergarten. The JROTC Program teaches cadets honesty and integrity. Cadets are expected to do the right thing. Teachers need to role model honesty everyday, because the television shows and movies constantly provide examples of how people benefit from dishonesty. Teachers need to clearly express their expectation that students are to be honest, and not create an environment that encourages dishonesty, cheating or stealing. In addition, teachers should clearly communicate the consequences for dishonest actions.

### Conclusions

The purpose of this research study was to determine if there was a relationship between character traits and academic performance. The results of the Pearson Product-Moment Correlation evaluation showed a significant correlation. This research study also determined if there was a difference between male and female cadets in character traits and academic performance. Two *t* tests for independent samples were performed on both dependent variables and the results indicated no significant difference between male and female cadets with regard to character traits and academic performance. The research study also determined whether the cadets' character traits scores improved by taking multiple semesters of JROTC. The ANOVA

results indicated that there was no significant difference in the character traits scores of cadets who completed one semester of AFJROTC, two to three semesters of AFJROTC, and four or more semesters of AFJROTC. The last purpose of the research study was to determine if any of the subcategories scores impacted the Composite Character Traits scores. The Multiple Regression results indicated that four subcategories (Moral Behavior, Responsibility, Honesty, and Ethics; listed from strongest to weakest predictor) impacted the Composite Character Traits Scores.

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