

**A META-ANALYSIS ON THE RELATIONSHIP BETWEEN CHARACTER
EDUCATION AND STUDENT ACHIEVEMENT AND BEHAVIORAL OUTCOMES**

William H. Jeynes

Professor

Department of Teacher Education

California State University at Long Beach

Senior Fellow

Witherspoon Institute in Princeton, New Jersey

whjharvard@post.harvard.edu

Ph.D., University of Chicago

Ed.M., Harvard University

Abstract

An extensive meta-analysis, including 40 studies, was undertaken on the relationship between character education student achievement- and behavioral- outcomes. Additional analyses were done to determine whether the effects of character education differed by student grade level, locale, and race, etc. The results character education is associated with higher levels of educational outcomes, no matter what type of standardized or non-standardized measure was employed. Character education was also related to higher levels of expressions of love, integrity, compassion, and self-discipline. Overall, character education had somewhat greater effects for children in high school rather than those who were in elementary school. The effects of character education did not differ by the race of the children. The significance of these results is discussed.

A META-ANALYSIS ON THE RELATIONSHIP BETWEEN CHARACTER EDUCATION AND STUDENT ACHIEVEMENT AND BEHAVIORAL OUTCOMES

For centuries character education played a central role in the U.S. K-12 curriculum (author, 2000; Krisjansson, 2015; Ryan & Bohlin, 1999). Moreover, most of the founders of the modern day education system including Plato, Cicero, and the early Christians believed that developing loving, compassionate, and self-disciplined individuals was actually more important than creating intellectually sophisticated people (Brooks, 2011; Krisjansson, 2015; McClellan, 1999). In spite of the educational foundation mentioned above, many teachers have become reluctant to give character instruction in the classroom (Ryan & Bohlin, 1999). Research indicates that technically many teachers would ideally like to incorporate character instruction into their classroom, but generally do not do so for two reasons. First, they perceive that because of the emphasis that contemporary schooling places on high stakes testing, there is dearth of time available to teach character (author, 2006; Siegal, 2009). Second, most of the public school instructors have not been adequately trained to teach character and therefore teachers do not feel adequately prepared to engage in this practice (Ryan & Bohlin, 1999; Nucci, Krettenauer & Narvaez, 2014; Siegal, 2009).

In spite of the fact that some teachers find that the current school environment makes it difficult to teach virtue, several factors have caused a resurgence in the interest in character education including: 1) the rise in school shootings and violence in US public schools and 2) the realization that some of the world's greatest problems are a result of peoples' inherent inability to get along, rather than lack of intelligence (Carlson, 2004).

It is important to note that, historically speaking, virtually all the leading educational architects for 2,300 years believed that instruction in character and virtue was the most vital part

of education (Marrou, 1956; Middleton, 2004; Moore, 2005). The reason why there was so much consensus on this issue is because individuals from Cicero to Martin Luther King believed that the most dangerous people on the face of the earth were those who were highly- intelligent and schooled, but were not virtuous (Cicero, 2001; Middleton, 2004; Palmer, 2001). Educators throughout the centuries believed that it was of utmost importance to create a society that was loving, compassionate, civil, and self-disciplined (Cicero, 2001; Marrou, 1956; Middleton, 2004; author, 2007b). Without this foundation, having intelligent people was of limited value (Krisjansson, 2015). Given this emphasis on virtue, American schools had character instruction as the centerpiece of the curriculum from the early 1600s until 1963 (author, 2002; Middleton, 2004).

In a series of three U.S. Supreme Court decisions in 1962 and 1963, voluntary prayer and Bible reading were removed from the public schools (Sikorski, 1993). Although the U.S. Supreme Court did not specifically state that they were removing moral instruction from U.S. public schools, by removing the Judeo-Christian foundation of that character training, their decisions involved the de facto jettisoning of character instruction from American public school classrooms (author, 2007a; Sikorski, 1993). Building on this initial impact is the fact that all it would take is one parent complaining by insisting that if a teacher taught about love or forgiveness that this was somehow Christianity being taught in the schools (author, 2012; Sikorski, 1993). Even though one does not have to be a Christian to emphasize traits such as love and forgiveness, schools would quickly go into a retreat mode and remove all semblance of moral education in the public schools (Nucci, Krettenauer & Narvaez, 2014; Sikorski, 1993).

RECENT CALLS FOR THE REINTRODUCTION OF CHARACTER EDUCATION

During the mid-to-late 1990s, in particular, there was a new call for the reintroduction of a non-sectarian approach to character education in the schools (Lapsley & Power, 2005; Lickona, 2004). Several of these calls came from political figures such as President Bill Clinton on the Democratic side and former Secretary of Education, Bill Bennett on the Republican side (Bennett, 1996; Neuhaus, 2001). In reality, such declarations were hardly new, but previously they had primarily come from parents, ministers, and those that combined spiritual leadership and calls to virtue such as Martin Luther King (author, 2003a, 2003b). By the mid-1990s politicians were so alarmed by the surge in crime, out-of-wedlock births that were tearing apart hope for inner city youth, and a pervasive illegal drug problem that they understood that something had to be done to reintroduce a strong sense of virtue in America's youth (author, 2015a, 2015b, 2016; Nucci, Krettenauer & Narvaez, 2014). President Clinton called for a renewed emphasis on self-discipline, school uniforms, and respect for religious liberty in the schools as keys to this end (author, 2007a; Neuhaus, 2001). Bill Bennett asserted that there were certain values that virtually every person in the nation cherished, unless one was a criminal or sociopath, and these common virtues could be taught in the classroom (Bennett, 1996). He wrote a series of books to illustrate this point including, *The book of virtues (1996)*, *The book of virtues for young people (1997a)*, *The children's book of heroes (1997b)*, *The moral compass: Stories for a life's journey (2008)*, and *The book of man: Readings on the path to manhood (2011)* to illustrate his point (Bennett, 1996, 1997a, 1997b, 2008, 2011).

President Clinton and Secretary Bennett's efforts had such dramatic effects that the implementation of school uniforms in public schools increased substantially and many educators embraced Clinton's guidelines for how to teach religion in the classrooms in a way that was objective, as had actually been prescribed in the U.S. Supreme Court decisions of 1962 and 1963

regarding Bible and prayer in the schools (Neuhaus, 2001). Concurrently, Bill Bennett's book, *The book of virtues (1996)*, became immensely popular in schools and actually became a very frequently watched program series on *PBS* (Bennett, 1996).

Admittedly, there has been resistance to the idea of character education among a considerable number of educators (Nucci, Krettenauer & Narvaez, 2014). The most adamant opposition has come from two groups in particular: those who insist on increased standardized testing and those who emphasize multiculturalism (Gatto, 2001; Henningfeld, 2008). First, those who emphasize standardized tests argue that public schooling should be almost entirely an academic enterprise and there is no time for the teaching of right and wrong (Nucci, Krettenauer & Narvaez, 2014). According to this line of thinking, if the United States is to compete with East Asian schools, the nation needs more academic emphasis and more standardized testing (Gatto, 2001; Henningfeld, 2008; author, 2005). The response by those who advocate character instruction is two-fold: 1) with all the moral problems that the United States has, we do not have time to avoid teaching character education and 2) many of the East Asian systems of education modeled their school systems after the American paradigm of the 1870-1945 period and part of that rubric was moral education, which the East Asian schools have kept and the American public schools have largely jettisoned (author, 2007a; Khan, 1997).

Second, multiculturalists often ask the question, "*Whose values shall we teach?*" as an excuse to teach no values at all. To this character instruction proponents respond by saying, "*Our values and human values.*" That is, there are certain values that virtually every American and human being believes should be taught in the schools. Unless one is a criminal or a sociopath these are values that virtually everyone embraces, e.g., honesty, sincerity, responsibility, and respect. A Gallup poll reveals that between 91-99% of Americans believe that qualities such as honestly,

the golden rule, courage, sincerity, patriotism, and responsibility should be taught in the public schools and that depending on the character trait these percentages are often near 100% (Lahey, 2013; Nucci, Krettenauer & Narvaez, 2014).

The Need for a meta-analysis on character education

Given that the inclusion of a strong character instruction program is no longer the standard practice in public schools and many teachers question its salience, it is vital that a meta-analysis be undertaken to determine its overall efficacy and to gain insight into whether the effectiveness of character education varies by age and the type of program initiated.

There are three particular challenges that face any attempt to assess the effects of character instruction that make undertaking a meta-analysis on this topic particularly important. First, there are limited opportunities to test the effectiveness of character instruction programs. This is a result of the U.S. Supreme Court's de facto removal of character education from public schools in 1962 and 1963. Even with the recent increased interest in reactivating character education programs, there are only a limited number of schools implementing character education programs in a substantial way (Krisjansson, 2015; Nucci, Krettenauer & Narvaez, 2014). Second, virtually all studies of moral instruction examine its effects using only a limited number of outcome variables (Lickona, 2004; Nucci, Krettenauer & Narvaez, 2014). A meta-analysis allows for the broadest assessment of the relationship between character education and the academic and behavioral effects of character education. Third, virtually all studies examining character education use localized samples, which make generalizing the conclusion to the general student population difficult and perhaps impossible. Conducting a meta-analysis will draw from a wide array of studies from all across the country and all around the world.

Nevertheless, it should be noted that whatever results emerge from the meta-analysis, they will likely be very conservative compared to the actual effects of character education. This is because most studies examine the influence of moral instruction over a short period of time. Consequently, the effect sizes that emerge are likely going to be considerable underestimations of the degree of influence that restoring character instruction encompassing the full gamut of the thirteen year period of K-12 schooling (Salkind & Rasmussen, 2007). Estimating the impact of restoring such instruction must be done in the context of this important caveat.

METHODS

Research Methods and Data Analysis Plan For the Meta-Analysis on the Character Education

Analytical Approach

This meta-analysis examined the relationship between character education and student academic and behavioral outcomes. The procedures employed to conduct the meta-analysis are outlined under this heading (Analytical Approach) and the following headings below: Data Collection Method, Statistical Methods, Study Quality Rating, and Effect Size Statistics, and Defining of Variables. Each study included in this meta-analysis met the following criteria:

- 1) It needed to examine character education and the specific independent variables in a way that could be conceptually and statistically distinguished from other primary variables under consideration. For example, if a researcher examined character education in conjunction with other independent variables that could not be statistically isolated from the other features; the study was not included in the analysis.
- 2) It needed to include a sufficient amount of statistical information to determine effect sizes. That is, a study needed to contain enough information so that test statistics, such as those

resulting from a t-test, analysis of variance, and so forth, were either provided in the study or could be determined from the means and measures of variance listed in the study.

3) If the study used a control group, it had to qualify as a true control group and therefore be a fair and accurate means of comparison. Moreover, if the research utilized a control group at some times but not others, only the former comparisons were included in the meta-analysis.

4) The study could be a published or unpublished study.

Due to the nature of the criteria listed above, qualitative studies were not included in the analysis. Although qualitative studies are definitely valuable, they are difficult to code for quantitative purposes and any attempt to do so might bias the results of the meta-analysis.

Data Collection Method (Coding and Rater Reliability)

In order to obtain the studies used in the meta-analysis, a search was undertaken to locate the relevant studies on character education. The first procedures to be used to locate these studies involved a computer search using 60 research databases (e.g., Psych Info., ERIC, Dissertation Abstracts International, Wilson Periodicals, Sociological Abstracts, and so forth) to find studies examining character instruction and/or training. The search terms character education, character instruction, moral education, values, values education, virtue, virtue education, self-discipline, and many other similar terms. Reference sections from journal articles on the character education were also examined to find additional research articles. This search produced 40 studies are included in the analysis.

A number of different characteristics of each study were included for use in this study. These characteristics included: (a) report characteristics, (b) sample characteristics, (c) intervention type, (d) the research design, (e) the grade level or age of the students, (f) the outcome and

predictor variables, (g) the attrition rate, and (h) the estimate of the relationship between character instruction and student academic and behavioral outcomes.

Report Characteristics- Each study entry began with the name of the author of the study. Then the year the study was recorded, followed by the type of research report. Research reports were defined either as a journal article, book, book chapter, dissertation, Master's thesis, government, school or private report, conference paper, or other type of report.

Sample characteristics included the number of students sampled, their locations, and how they were selected, e.g., via random selection, stratified random selection, or via advertisement.

Intervention Type- I recorded the experimental or procedural manipulation used, if any, to determine the effects of character education.

Research Design- The studies in this meta-analysis will be categorized into three basic types of designs. First, I noted the studies that employed some type of manipulations to assess the effects of character education. The second type of design included studies that took cross-sectional measures of character education without utilizing any type of manipulation. The third type of design involved the calculation of a correlational coefficient between character education and student academic and behavioral outcomes.

For studies that employed a manipulation to assess the effects of character education, I recorded (a) the length, frequency, duration, and total number of training sessions, (b) the method of training (workshop, individual meetings, phone calls, videotape, email communication, newsletter), (c) the type of behavioral or achievement-related outcome measure (e.g., standardized achievement test; non-standardized achievement test; or class grades), (d) the unit of analysis (individual student or classroom) at which the effect size was calculated, and (e) the magnitude of the relationship between character instruction and the measured outcomes.

For the cross-sectional studies and correlation studies, if it was available, I also recorded (a) the socio-economic status of participants in the sample and (b) the types of behavioral and academic measures that were used.

The grade level or age of the students was coded, including means and standard deviations when they were available.

The outcome and predictor variables from each study were coded to include the different ways that the character education was measured.

Attrition Rate- When available, the attrition rate of each study will be coded.

The estimate of the relationship between character education and student scholastic and behavioral variables- The process of the effect size estimation is described in the next section.

Statistical Methods and the Effect Size Statistic

Effect sizes were computed from data in such forms as t tests, F tests, p levels, frequencies, and r-values via conversion formulas provided by Glass and his colleagues (Glass, McGaw & Smith, 1981). When results were not significant, studies sometimes reported only a significance level. In the unusual case that the direction of these not significant results was not available, the effect size were calculated to be zero.

For studies with manipulations the standardized mean difference was used to estimate the effect of character education. The *d*-index (Cohen, 1988) is a scale-free measure of the separation between two group means. Calculating the *d*-index for any comparison involved dividing the difference between the two group means by either their average standard deviation or by the standard deviation of the control group. In the meta-analysis, the researchers subtracted the experimental group mean from the control group mean and divided the difference by their average standard deviation. As a supplement to these analyses, the Hedges' "g" measure of effect

size was used (Hedges and Vevea, 1998). Since it employed the pooled standard deviation in the denominator, it customarily provided a more conservative estimate of effect size. Hedges also provided a correction factor that helped to adjust for the impact of small samples.

For studies that involved cross-sectional measures of the relationship between character education and achievement, the following procedures were undertaken. For those studies that attempted to statistically equate students on other variables, the preferred measure of relationship strength was the standardized beta-weight, β . These parameters were determined from the output of multiple regression analyses. If beta-weights could not be obtained from study reports, the most similar measures of effect (e.g., unstandardized regression weights) were retrieved.

For studies that involved cross-sectional measures but included no attempt to statistically equate students on third variables, the results from the t-tests, F-tests, and correlation studies provided by the researchers in the study were used. Probability values were used as a basis for computation only if the researchers did not supply any of information on the test statistics just mentioned.

Calculating average effect sizes. A weighting procedure was used to calculate average effect sizes across all the comparisons. First, each independent effect size was first multiplied by the inverse of its variance. The sum of these products was then divided by the sum of the inverses. Then, 95% confidence intervals were calculated. As Hedges and Vevea (1998) recommend, all the analyses were conducted using fixed-error assumptions in one analysis and applied random-error assumptions in the other.

Tests of homogeneity were completed on the overall character education variables to gain a sense of the consistency of specific character education measures across studies.

Study Quality Rating

Two researchers coded the studies independently for quality, the presence of randomization, and whether the definitional criteria the achievement gap are met. Study quality and the use of random samples will be graded on a 0 (lowest) to 3 (highest) scale. Quality was determined using the following:

1) Did it use randomization of assignment? 2) Did it avoid mono-method bias? 3) Did it avoid mono-operation bias? 4) Did it avoid selection bias? 5) Did it use a specific definition of character education?

I calculated inter-rater reliability by computing percentage of agreement on: the definition of character education, issues of randomization, and quality of the study. A supplementary analysis was done to include only those studies with quality ratings with quality ratings of 3 and also 2-3.

Character Education and Student Outcomes

This meta-analysis examined the relationship between character instruction in and pre-kindergarten-college freshman school outcomes. This meta-analysis first (research question #1) addressed whether there is a statistically significant relationship between character education and pre-kindergarten to college freshman student achievement and behavioral outcomes. A second question assessed whether the effects of character education differed by the age of the student (research question #2). The third analysis (research question #3) specifically focused on the relationship between character education and outcomes for students of color, as well as for students of low-socioeconomic status (low-SES). The final analysis addressed the effects of character education on specific measures of achievement and behavior (research question #4)

Defining of Variables

Independent Variable

For the purposes of this study, character education will be defined as instruction designed to enhance love, integrity, self-discipline, and compassion in the lives of youth.

Dependent Variables

Academic achievement was defined by such measures as grade point average (GPA), standardized test scores, and other measures. Regarding the achievement tests just mentioned, there were not only overall measures but also specific assessments in mathematics, reading, science, and social studies (history, civics, and geography). Additional academic indicators, referred to as “other measures,” included assessments of whether a child had been left back a grade.

Behavioral Variables included measures of love, integrity, self-discipline, compassion, and a variety of other lifestyle measures.

Measures of socioeconomic status, race, and gender were also taken.

RESULTS

The results indicated that there is a statistically significant relationship between character education instruction and overall student outcomes. Overall, the results of the meta-analysis indicated that there is a relationship between character education for kindergarten through college freshman youth as expressed in academic and behavioral outcomes combined. The results presented here used analyses based on random-error assumptions. The rationale for presenting these results rather than those using fixed-error assumptions is to utilize analyses that yielded more conservative effect sizes (Hedges & Vevea, 1998). As one would expect, the analyses based on fixed-error assumptions yielded somewhat larger effect sizes.

INSERT TABLES 1 AND 2 ABOUT HERE

The results of this study indicate the overall U.S. character education variable yielded a statistically significant outcome of .31 ($p < .01$), 95% CI [.10, .52], of a standard deviation. Table 1 indicates that the effect sizes ranged from a high of 1.70 to a low of .08. It is interesting to note that although there were a number of individual studies in the meta-analysis that did not yield statistically significant results, all of the overall relationships were in the positive direction. This is a very unusual result and will be more fully addressed in the Discussion section. The studies with the smallest samples produced the most extreme effect sizes on either end, consistent with the "funnel" pattern ideal in effect sizes (Greenhouse & Iyengar, 1994). Eighty percent of the studies (32 of 40) produced effect sizes between .20-1.70.

Table 2 summarizes the studies by average-year of the study, sample size, quality of study, and the quality of the definition of character education. The average year of the study was 2005.9. About 90% of the studies took place from 2000 and afterward. The average sample size was 4010.1. Among the categories listed the largest number of studies (17) had a sample size of 500+, although an almost equal number of studies had sample sizes of 100-499 (15). The average rating for the definition of character education in each of the studies was a good deal higher than the middle of the mid-point of the range of ratings allowable, 0-3. The mean quality of definition for character education for the studies was 2.60. The average quality of each study was 1.70 with most (about 63%) of the studies being rated either 3 or 2.

Tests of homogeneity for character education indicated that the measures were relatively homogeneous when sophisticated controls were used ($X^2=3.09$, $p=n.s.$) and when sophisticated controls were not included ($X^2=2.92$, $p=n.s.$).

INSERT TABLE 3 ABOUT HERE

Effect Sizes For Character Education Overall (Research Question #1)

Table 3 lists the effect sizes that emerged for character education as a whole, addressed under research question #1. The first outcomes examined included both academic and behavioral ones combined. Statistically significant effect sizes emerged for character instruction. The effect size for the U.S. overall character education variable was, .31 ($p < .01$), 95% *CI* [.10, .52], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .17, ($p < .05$), 95% *CI* [.02, .32]. The effect size for the U.S. + Foreign overall character education variable was, .29 ($p < .01$), 95% *CI* [.08, .50], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .16, ($p < .05$), 95% *CI* [.01, .31].

When the General Overall Measures were limited to studies with a quality rating of 3, the effect size for the U.S. overall character education variable was, .33 ($p < .01$), 95% *CI* [.11, .55], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .20, ($p < .05$), 95% *CI* [.03, .37]. The effect size for the U.S. + Foreign overall character education variable was, .33 ($p < .01$), 95% *CI* [.11, .55], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .20, ($p < .05$), 95% *CI* [.03, .37].

When the General Overall Measures were limited to studies with a quality rating of 2-3, the effect size for the U.S. overall character education variable was, .29 ($p < .01$), 95% *CI* [.09, .49], of a standard deviation, which was statistically significant at the .01 level of probability, when no

sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .17, ($p < .05$), 95% *CI* [.02, .32]. The effect size for the U.S. + Foreign overall character education variable was .28 ($p < .01$), 95% *CI* [.07, .49], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .16, ($p < .05$), 95% *CI* [.01, .31].

The effect size for U.S. overall character education *programs* was, .31 ($p < .01$), 95% *CI* [.10, .52], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .18, ($p < .05$), 95% *CI* [.02, .34]. The effect size for the U.S. + Foreign overall character education variable was, .29 ($p < .01$), 95% *CI* [.09, .49], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .17, ($p < .05$), 95% *CI* [.02, .32]. The effects from *programs* were quite similar for the overall measures for character education, in part, because most of the character instruction that was examined was in were in the form of programs.

The meta-analytic outcomes for academic achievement specifically tended to be somewhat smaller than for the overall results for scholastic measures and behavior combined. The effect size for U.S. character education on achievement was, .26 ($p < .05$), 95% *CI* [.04, .48], of a standard deviation, which was statistically significant at the .05 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .17, ($p < .05$), 95% *CI* [.02, .32]. The effect size for the U.S. + Foreign overall character education variable was, .24 ($p < .05$), 95% *CI* [.03, .45], of a standard

deviation, which was statistically significant at the .05 level of probability, when no sophisticated controls were used. The effect size was not statistically significant when sophisticated controls were used, (.15, $p < .ns$).

In contrast to the results just given, those for student behavior specifically tended to be somewhat larger than for the overall results for scholastic measures and behavior combined. The effect size for U.S. character education on achievement was, .37 ($p < .01$), 95% *CI* [.11, .63], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was also statistically significant when sophisticated controls were used, .18, ($p < .05$), 95% *CI* [.02, .34]. The effect size for the U.S. + Foreign overall character education variable was, .36 ($p < .05$), 95% *CI* [.10, .62], of a standard deviation, which was statistically significant at the .01 level of probability, when no sophisticated controls were used. The effect size was not statistically significant when sophisticated controls were used, (.16, $p < .ns$).

INSERT TABLES 4-5 ABOUT HERE

Effect Sizes For Character Education By Student Age (Research Question #2)

The effect sizes for character education varied considerably by age, especially in the academic achievement measures (see tables 4 and 5). The results for high school students were larger for either elementary or middle school students. For the overall results of character education they were .35 ($p < .01$), 95% *CI* [.11, .63], of a standard deviation for U.S. students and .33 ($p < .01$), 95% *CI* [.11, .63], of a standard deviation for U.S. plus foreign students, when sophisticated controls are not used, both of which was statistically significant at the .01 level of probability. The results of character education for elementary school were smaller at .27 ($p < .05$), 95% *CI* [.04, .50], of a standard deviation for U.S. students and .27 ($p < .01$), 95% *CI* [.04,

.50], of a standard deviation for U.S. plus foreign students, when sophisticated controls are not used, both of which was statistically significant at the .05 level of probability. The effects for character education programs were slightly lower for middle school students than they were for high school students. The effects were .34 ($p < .01$), 95% CI [.10, .57] and .32 ($p < .01$), 95% CI [.08, .56] for studies that did not use sophisticated controls and did use these controls, respectively.

The differences in the effects for character education by age were especially evident in the academic achievement measures. For high school students the effects were .32 ($p < .01$), 95% CI [.08, .56], of a standard deviation for U.S. students and .28 ($p < .05$), 95% CI [.04, .52], of a standard deviation for U.S. plus foreign students, when sophisticated controls are not used. For middle school students and their younger counterparts in elementary school the results were not statistically significant, although they were in the expected positive direction at .16 and .14 of a standard deviation units, respectively. When sophisticated controls were employed the outcomes were, .22 ($p < .05$), 95% CI [.04, .40], for U.S. students and .20 ($p < .05$), 95% CI [.02, .38], for U.S. plus foreign students. The effects for the elementary (.15 and .14) and middle (.11 and .11) school students were in the expected direction, but were not statistically significant.

Effect Sizes For Character Education for Minority Students (Research Question #3)

The relationship between character education and academic and behavioral outcomes overall for minority students were statistically significant both when sophisticated controls were not utilized and also when they were. The effects were, .36 ($p < .01$), 95% CI [.10, .62], of a standard deviation unit when sophisticated controls were not used and .27 ($p < .05$), 95% CI [.04, .50], of a standard deviation unit when sophisticated controls were utilized. The results for the meta-analysis for low-SES students had very similar numbers, although the 95% confidence intervals

were a little bit tighter for low-SES students than they were for minority pupils. The results were, .36 ($p < .01$), 95% *CI* [.11, .61], of a standard deviation unit when sophisticated controls were not used and .27 ($p < .05$), 95% *CI* [.06, .48], of a standard deviation unit when sophisticated controls were utilized.

INSERT TABLES 6-7 ABOUT HERE

Effects of Character education on Specific Measures of Achievement and Behavior (Research Question #4)

When one examines the specific aspects of academic achievement and student behavior, the effects of character education remain quite evident. The relationship between character education and scholastic outcomes yields statistically significant results whether one examines GPA, standardized tests, or more subjective measures, when no sophisticated controls are utilized. The effect sizes range from .25 to .41 for these three different academic measures. The effects were somewhat smaller when sophisticated controls were used versus when they were not for both standardized tests .21 ($p < .01$), 95% *CI* [.02, .40], and non-standardized measures, other than GPA, .26 ($p < .01$), 95% *CI* [.02, .50]. Once sophisticated controls were employed the results for the relationship between character education and GPA were still in the expected direction (.15), but were no longer statistically significant.

Table 6 indicates that the length of time character education was implemented also was related to larger effect sizes. Those efforts that were in place over a year in the U.S. yielded effects of .37 ($p < .01$), 95% *CI* [.12, .62], of a standard deviation unit when sophisticated controls were not in place and .22 ($p < .05$), 95% *CI* [.02, .42], of a standard deviation unit when sophisticated controls were used. For U.S. plus foreign character education the results were .36 ($p < .01$), 95% *CI* [.10, .62], of a standard deviation unit when sophisticated controls were not in

place and .22 ($p < .05$), 95% *CI* [.02, .42], of a standard deviation unit when sophisticated controls were used. These results were somewhat larger than for the character education initiatives overall.

The results are quite consistent across tests of different subject matter. Whether one examines outcomes (tests and grading) in reading, math, science, or social studies the meta-analysis yields effect sizes of nearly one-half of a standard deviation unit (about .47) when sophisticated controls are not utilized. The standard deviations 95% confidence intervals were somewhat narrower for the reading and math achievement test scores than they were for the social studies and science test scores. This is likely primarily due to the fact that there were a larger number of studies that examined math and reading achievement than there were those that included science and social studies achievement. When sophisticated controls were used, the effects for math (.37) and reading achievement (.40) declined somewhat. However, it should be noted that when these controls were included, the level of probability dropped from a .01 level of statistical significance to .05. In the cases of both science and social studies achievement, although the results were still a pretty good size (.26), they were no longer statistically significant. Once again, this combination can likely be attributed to the relatively small number of studies that examined these outcomes.

Given that the relationship between character instruction and behavioral outcomes was stronger than one finds for that type of education and academic outcomes, it likely comes as no surprise that all of the effects for the individual behavioral variables were in the expected direction. Moreover, all but one of these nine variables reached statistical significance. The results for a greater extent of self-control and lower rates of violence reached statistical significance both when sophisticated controls were and were not used. In the case of self-control

the numerical results were .58 ($p < .01$), 95% *CI* [.17, .99], of a standard deviation unit when sophisticated controls were not in place and .54 ($p < .05$), 95% *CI* [.09, .99], of a standard deviation unit when sophisticated controls were used. When the violence findings were examined, the effects were .59 ($p < .01$), 95% *CI* [.14, 1.04], of a standard deviation unit when sophisticated controls were not in place and .30 ($p < .05$), 95% *CI* [.02, .58], of a standard deviation unit when sophisticated controls were used.

The other behavioral outcomes included in the meta-analysis that yielded statistically significant results only included enough data to run analyses that did not use sophisticated controls. The results indicated that character instruction was associated with a smaller number of suspensions, .53 ($p < .05$), 95% *CI* [.09, .97], higher levels of respect, .73 ($p < .01$), 95% *CI* [.20, 1.26], higher levels of love, .38 ($p < .05$), 95% *CI* [.10, .66], better social skills, .44 ($p < .05$), 95% *CI* [.07, .81], a greater incidence of honesty, .42 ($p < .05$), 95% *CI* [.09, .975], and few expressions of bad behavior, .31 ($p < .05$), 95% *CI* [.03, .59]. Only moral judgment yielded effect sizes that albeit were in the expected direction (.23 and .28), but were not statistically significant.

DISCUSSION

Research questions 1 and 2 probably yield the most notable results of the meta-analysis.

Effect Sizes For Character Education Overall (Research Question #1)

The results of the study indicate that there is a clear relationship between character education and student outcomes overall. The overall relationship appears to be about .3-.4 of a standard deviation, which in academic terms would be about .4 of a GPA unit on a 4-point grading scale. There is some indication that the relationship is probably somewhat larger between character instruction and student behavior than that of education and achievement, especially for younger children. These findings are consistent with what one would expect given that character

instruction is inherently more concerned with the hearts and behavior of youth than they are with scholastic outcomes (author, 2011; Matera, 2001). Nevertheless, there are many examples of scholars that argue that increased virtue in students will lead to higher levels of self-discipline, a sense of purpose, determination, perseverance, and wise priorities that all tend to lead to success (Rae & MacConville, 2015; Khan, 1997). It is noteworthy that the Educational Testing Service, i.e., the College Board, concluded that one of the key factors contributing to the 17 consecutive years of decline in average SAT scores was the decline of the Judeo-Christian ethic (Wirtz, 1977).

The effects for character education were slightly more robust in the U.S. sample versus the U.S. plus foreign sample, but because the differences were small and were not statistically significant from one another, it is difficult to conclude whether these small differences may reflect anything substantial at all. However, the possibility in differences in effect sizes for foreign and U.S. samples may be a subject worthy of future study.

Effect Sizes For Character Education By Student Age (Research Question #2)

Probably the most interesting set of results were those that emerged by age. The effects for character education were the largest for high school students, the second largest for middle school students, and the smallest for elementary school students. This trend was especially evident for academic achievement measures. These results are especially salient given that the overwhelming percentage of efforts to place character instruction in the schools is made at the elementary school and kindergarten levels. These results challenge that strategy.

There are two likely explanations for these results are: 1) character education may simply have a greater impact of adolescent students than it does on younger students and 2) the results for character education may be so strong at the high school level because it has a cumulative

effect and what the studies are catching is this aggregate effect. Regarding the first point, these findings could simply reflect the fact that adolescents face a wider array of ostensibly moral decisions that include actions regarding pre-marital physical intimacy, illegal drugs, alcohol consumption, and other consequential choices in which character training can be highly worthwhile and remunerative. In terms of the second point, a number of the studies included in this meta-analysis that examined character education in high school had character instruction in place for a number of years. Given that this meta-analysis also indicated that longer initiatives were associated with stronger results, the possibility that the larger effects for high school students reflects, in part, a cumulative phenomenon appears likely.

Both of the above possible explanations for the findings certainly make sense. In fact, the extent to which each argument appears logical is such that further research should be undertaken to determine the extent to which each of these factors are at work.

Effect Sizes For Character Education for Minority Students (Research Question #3)

The results indicate that the effects of character education yield effect sizes that are at least as large as for the general population. These results are encouraging because naturally if one is to aver that character education efforts are to be initiated, one wants to see that it can help the broadest spectrum of people possible. The fact that moral instruction apparently benefits both children of color and those of lower socioeconomic status supports the notion that implementing character education efforts would have a high degree of academic and behavioral utility.

Effects of Character education on Specific Measures of Achievement and Behavior (Research Question #4)

One of the most notable patterns in the data is extent to which character education is related to higher academic outputs across virtually all the major subjects and is also associated with nearly

all types of positive behavioral outcomes. From this meta-analysis, it would appear that the relationship between character education and these kinds of scholastic and behavioral results is pretty pervasive. The fact that the effects for character education hold across so many specific scholastic and behavioral outcomes would appear to provide impetus both for further research on this topic and the implementation of character education programs. The meta-analysis also likely provides insight into why educators for well over 2,000 years have placed such confidence in the efficacy of character education.

Limitations of Study

The primary limitation of this meta-analysis, or any meta-analysis, is that it is restricted to analyzing the existing body of literature. Therefore, even if the researcher conducting the quantitative integrations sees ways the studies included could have been improved, there is no way to implement those changes. A second limitation of a meta-analysis is that the social scientist is limited to addressing the same research questions addressed in the aggregated studies. For example, it would be advisable to have parental expectations measures from all the studies included, but one can only aggregate the existing results.

Concluding Thoughts

The results of this study quite strongly suggest that teachers and leaders need to revisit the potential value of character instruction. There is a certain irony to the fact that in terms of further research on this topic, a much wider implementation of character education is probably required. A greater utilization of character instruction will likely yield three benefits. First, to the extent that practicing more character instruction appears to yield both academic and behavioral benefits, schools and society will likely become stronger in a variety of ways. Second, once this is accomplished, the further study of moral instruction will be facilitated. Third, contemporary

schools will act more consistently with strategies that are known to have benefitted schools and society for over 2,000 years. The results of this meta-analysis make it difficult to argue against teaching love, compassion, responsibility, honesty, and integrity in the schools.

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*Note: Included in meta-analysis.

Table 1- Studies included in the Meta-Analysis Listed by Author, Year of Study, Type of Document, Sample Size, and a Variety of other Characteristics

Study and Year	Sample Size	Distinctions of Study	Grade or Age of Students	Effect Size without Sophisticated	Effect Size with Sophisticated

				Controls	Controls
DiBase, 2010	45	Canadian sample	Grades 5	1.70	-----
Soriano, Franco & Sleeter, 2011	29	Spanish & Romanian sample	Grades 9-12	-----	1.16
Grady, 1999	50	Examined both behavior and attitudes	High School	.99	-----
Mucheron 2012	67	A thorough 10 week study	Grades 4-5	.93	-----
Flay & Allred, 2003	93 schools	Examined achievement & behavior	Grades K-12	.72	.62
Jeynes, 2009	400	1 year program	Grades 7-12	.60	-----
Flay, Allred & Ordway 2001	123 schools	1 year program	Grades K-6	.54	-----
Snyder, Flay & Vuchinich, 2010	100	Examined achievement and behavior, 1 year long program	Grades K-6	.53	-----
Lewis, 2012	1, 170	About an equal number of males and females	Grades 3-8	.53	-----
Stephens, 2004	337	Examined behavioral outcomes	Grades 10-11	.51	.27
Twemlow, 2001	101	4 year program	Grades 3 & 5	.46	-----
Skaggs & Boderhorn, 2006	17,025	Program lasted 3 years	Grades 5-8	.45	.04
Jeynes, 2009	140	Middle School & High School students	Grades 6-12	.43	-----
Yurkewicz, 2009	149	Examined achievement & behavior	Grades 8-12	-----	.41
Benninga et al, 2003	120 schools	Examined behavioral outcomes	Elementary School	.40	-----
Jeynes, 2002	20,706	Diverse large sample	Grade 12	.40	-----
Hofmann-Towfigh, 2007	719	Examined behavioral outcomes	Elementary, Middle-, and High-School	.39	.25
Muscott, Mann & LeBrun, 2008	28	Examined achievement & behavior	Grades K-12	.37	-----
Coleman, Hoffer & Kilgore 1982	25,000	Diverse large sample	Grades 9-12	.36	.20
Jeynes, 2002	20,706	Diverse large sample	Grade 12	.36	.18

Table 1 (continued)

Study and Year	Sample Size	Distinctions of Study	Grade or Age of Students	Effect Size without Sophisticated Controls	Effect Size with Sophisticated Controls
Elias et al., 1991	250	2 year program	Grades 9-11	.35	-----
Marshall, Caldwell & Foster, 2011	19,317	2-5 year program	Grades K-12	.31	-----

Johnson, 2014	28	All male sample	Ages 17-19	.30	-----
Williams, 2003	204	Program used throughout the school	Grade 12	.30	-----
Foa, Brugman & Marcini, 2012	664	Italian sample	Grades 9 & 11	.28	.30
Gray & Watson, 2002	334	Examined GPA	College Freshmen	.29	-----
Prince, Ho & Hanson 2002	645	Diverse student group	Grades 2-5	.26	-----
Parker, Nelson & Burns, 2010	5853	Examined behavior	Grades 1-5	.25	-----
Zsolinai, 2002	438	Hungarian Students	Grades 6 & 10	.24	-----
Miller, Kraus & Veltkam, 2005	303	A Large per Centage of African American students Students	Grade 4	.23	-----
Seider, Gilbert & Norick, 2013	488	Examined GPA & behavior	Grades 6-8	-----	.21
Johnson, 1999	2,3,000	African American sample	Grade 12	.20	-----
Corrigan et al, 2007	490	Low-SES students	Elementary, Middle-, and High-School	-----	.17
Holtzapple, 2011	8, 350	Examined behavioral outcomes	Grades 7-12	.17	-----
Battistich 2003	521	Mostly white Middle Class	Grades 3-6	-----	.15
Sherblom et al., 2006	5,750	Looked at both Reading & Math Achievement	Grades 3-4	.13	-----
Munoz & Vanderhaar 2006	1039	Summer Program	Grades 3 & 5	-----	.13
Vanderveden, Brugman, Boom & Koops, 2010	622	Foreign group of students	Grades 8	.10	-----
Bavarian, Lewis & DuBois, 2013	1, 170	Focused on students of color	Grades 3-8	-----	.10
Luo et al., 2011	11, 635	Example is from China	Grades 7 & 10	.08	.08

TABLE 2- Means for Measures Assessing the Quality of Study, whether a Random Sample was used, Year of Study, and Sample Size for the 40 studies included in the meta-analysis

	Mean	Standard Deviation or Percentage Distribution	Range
Year of Study	2005.9	2010-2014= 14	1970- 2014

		2000-2009= 22	
		1990-1999= 3	
		1970-1989= 1	
Sample Size	4010.1	1,000+= 13	28- 25,000
		500-999= 17	
		100-499= 15	
		1-99= 5	
Quality of Study	1.70	3= 8	0-3
		2= 17	
		1= 10	
		0= 5	
Quality of Study's Definition of	2.60	3= 29	0-3
Character Education		2= 8	
		1= 1	
		0= 0	
Random Sample	1.47	3= 14	0-3
		2= 7	
		1= 3	
		0= 16	

TABLE 3- Effect Sizes for Character Education with 95% Confidence Intervals in Parentheses

<u>Type of Overall</u> <u>Character Education</u> <u>Variable</u>	<u>Effect Size</u> <u>Without</u> <u>Sophisticated</u> <u>Controls</u>	<u>Effect Size With</u> <u>Sophisticated</u> <u>Controls</u>	<u>Overall Effect</u> <u>Size</u>
<u>Overall Character</u>			

Education Generally

U.S. Overall	.31** (.10, .52)	.17* (.02, .32)	.25 ^a
U.S.+ Foreign Overall	.29** (.08, .50)	.16* (.01, .31)	.24 ^a
U.S. Overall for Studies Rated 3	.33** (.11, .55)	.20* (.03, .37)	.28 ^a
U.S.+ Foreign Overall for Studies Rated 3	.33** (.11, .55)	.20* (.03, .37)	.28 ^a
U.S. Overall for Studies Rated 2-3	.29** (.11, .55)	.17* (.02, .32)	.25 ^a
U.S.+ Foreign Overall for Studies Rated 2-3	.28** (.08, .50)	.16* (.01, .31)	.24 ^a
U.S. Programs Overall	.31** (.10, .52)	.18* (.02, .34)	.26 ^a
U.S.+ Foreign. Programs Overall	.30** (.09, .51)	.17* (.02, .32)	.25 ^a

*p<.05; **p<.01; *** p<.001 NA=Not available

a. Confidence intervals tabulation not undertaken for combined effect size because of difference in sample distributions for the two sets of studies

TABLE 4- Effect Sizes for Character Education with 95% Confidence Intervals in Parentheses

<u>Type of Overall</u> <u>Character Education</u> <u>Variable</u>	<u>Effect Size</u> <u>Without</u> <u>Sophisticated</u> <u>Controls</u>	<u>Effect Size With</u> <u>Sophisticated</u> <u>Controls</u>	<u>Overall Effect</u> <u>Size</u>
<hr/> General Effects For Character <hr/>			

Education			
U.S. Academic Achievement	.26* (.04, .48)	.17* (.02, .32)	.21 ^a
U.S. + Foreign Academic Achievement	.24* (.02, .46)	.15	.19 ^a
U.S. Student Behavior	.37** (.11, .63)	.18* (.02, .34)	.30 ^a
U.S. + Foreign Student Behavior	.36** (.10, .62)	.16	.29 ^a
U.S. Elementary School Students	.27* (.04, .50)	.12	.22 ^a
U.S. + Foreign Elementary School Students	.27* (.04, .50)	.12	.22 ^a
U.S. Middle School Students	.34** (.10, .57)	.20* (.04, .36)	.29 ^a
U.S. + Foreign Middle School Students	.32** (.08, .56)	.12	.27 ^a
U.S. High School Students	.35** (.11, .59)	.20* (.03, .37)	.30 ^a
U.S. + Foreign Middle High School Students	.33** (.09, .57)	.18* (.02, .34)	.27 ^a

*p<.05; **p<.01; NA=Not available

a. Confidence intervals tabulation not undertaken for combined effect size because of difference in sample distributions for the two sets of studies

TABLE 5- Effect Sizes for Character Education with 95% Confidence Intervals in Parentheses

<u>Character Education and Specific Age Levels of Students</u>	<u>Effect Size Without Sophisticated Controls</u>	<u>Effect Size With Sophisticated Controls</u>	<u>Overall Effect Size</u>
<u>Specific Effects For Character</u>			

Education

For Academic Achievement

U.S. Elementary School Students	.16	.15	.16 ^a
U.S. + Foreign Elementary School Students	.15	.14	.15 ^a
U.S. Middle School Students	.14	.11	.13 ^a
U.S. + Foreign Middle School Students	.13	.11	.13 ^a
U.S. High School Students	.32** (.08, .56)	.22* (.04, .40)	.29 ^a
U.S. + Foreign Middle High School Students	.28* (.04, .52)	.20* (.02, .38)	.27 ^a

Specific Populations

Minority Students	.36** (.10, .62)	.27* (.04, .50)	.33 ^a
Low-SES Students	.36** (.11, .61)	.27* (.06, .48)	.33 ^a

*p<.05; **p<.01; NA=Not available

a. Confidence intervals tabulation not undertaken for combined effect size because of difference in sample distributions for the two sets of studies

TABLE 6- Effect Sizes for Character Education with 95% Confidence Intervals in Parentheses

<u>Character Education and Outcomes</u>	<u>Effect Size Without Sophisticated Controls</u>	<u>Effect Size With Sophisticated Controls</u>	<u>Overall Effect Size</u>
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Specific Outcomes

U.S. Acad. Ach.	.26* (.04, .48)	.17* (.01, .33)	.21 ^a
U.S. + Foreign Academic Ach.	.24* (.02, .46)	.15	.19 ^a
U.S. GPA	.41* (.11, .71)	.15	.33 ^a
U.S. + Foreign GPA	.36* (.06, .66)	.16	.30 ^a
U.S. Standard. Tests	.25* (.05, .45)	.21* (.02, .40)	.23 ^a
U.S. + Foreign Standardized Tests	.23* (.03, .43)	.17* (.01, .33)	.21 ^a
U.S. Non-Standard. Assessments	.33* (.06, .60)	.26* (.02, .50)	.31 ^a
U.S. + Foreign Non-Standard. Assess.	.33* (.06, .60)	.26* (.02, .50)	.31 ^a
U.S. Length of Prog.	.37** (.12, .62)	.22* (.02, .42)	.32 ^a
U.S.+ Foreign Length of Program	.36** (.10, .62)	.22* (.02, .42)	.31 ^a
Reading Outcomes	.47* (.08, .86)	.40* (.06, .74)	.45 ^a
Math Outcomes	.47* (.08, .86)	.37* (.05, .69)	.43 ^a
Science Outcomes	.47* (.05, .89)	.26	.38 ^a
Soc. St. Outcomes	.47* (.05, .89)	.26	.38 ^a

*p<.05; **p<.01; NA=Not available

a. Confidence intervals tabulation not undertaken for combined effect size because of difference in sample distributions for the two sets of studies

TABLE 7- Effect Sizes for Character Education with 95% Confidence Intervals in Parentheses

<u>Type of Overall Character Education Variable</u>	<u>Overall Effect Size</u>	<u>Effect Size With Sophisticated Controls</u>	<u>Overall Effect Size</u>
<u>Character Ed. & Behavioral Results</u>			
Self-Control	.58** (.17, .99)	.54* (.09, .99)	.57 ^a

Respect	.73**(.20,1.26)	NA	.73
Love	.38* (.10, .66)	NA	.38
Honesty	.42* (.09, .75)	NA	.42
Suspensions	.53* (.09, .97)	. NA	.53
Violence	.59* (.14, 1.04)	.30* (.02, .58)	.48 ^a
Moral Judgment	.23	.28	.25
Bad Behavior	.31* (.03, .59)	NA	.31
Social Skills	.44* (.07, .81)	NA	.44

*p<.05; **p<.01; *** p<.001 NA=Not available

a. Confidence intervals tabulation not undertaken for combined effect size because of difference in sample distributions for the two sets of studies

Appendix

Appendix Table 1- List of Search Engines Used in the Meta-analysis

Abstracts in Social Gerontology	E-Journals	NetLibrary
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Academic Search Complete	EBSCO Ejournals	Newspapers
ACLS Humanities E-Book Project	EconLit	Oxford Journals Online
ACM Digital Library	Education Index Retrospective: 1929-1983	Oxford Reference Online
Alt-Press Watch	Education Line	Primary Search
American Indian Experience	ERIC	PsycARTICLES
Annual Reviews	Factiva	PsycINFO
Anthropology Plus	Family and Society Studies Worldwide	Public Administration Abstracts
AnthroSource	Handbook of Latin American Studies Online	Public Affairs Index
AP Images (formerly AccuNet)	Historical Abstracts	Rand California
Association Unlimited	Latino Literature	SAGE Premier Journals Online
ATLA Religion Database	Lexis Nexis Academic	Science Citation Index (SCI) see Web of Science
Black Studies Center	Library Literature & Information Science (H.W. Wilson)	Social Science Citation Index (SSCI), see Web of Science
Brill's New Jacoby Online	Library, Information Science & Technology Abstracts	Social Services Abstracts
Business Monitor Online	MAS Ultra – School Edition	SocINDEX
Chicano Database	MEDLINE (via OVID)	Sociological Abstracts
CINAHL Plus with Full Text	Military & Government Collection	SpringerLink Journals Online Collection
Communication & Mass Media Complete	Natural Standard Professional Database	SPORTDiscus
Dissertation Abstracts International	NetLibrary	Wiley InterScience (including Blackwell Synergy journals)
Dissertation & Theses	Newspapers	WorldCat