

6-2010

Must Economics Always Determine Academic Destiny? Achievement Across Time in Two Academically Equivalent But Socioeconomically Diverse Same City Catholic Schools

Roseanne L. Williby
University of Nebraska at Omaha

John W. Hill
University of Nebraska at Omaha, jhill@unomaha.edu

Follow this and additional works at: <https://digitalcommons.unomaha.edu/edadfacpub>

 Part of the [Economics Commons](#), [Education Policy Commons](#), [Inequality and Stratification Commons](#), and the [Social and Philosophical Foundations of Education Commons](#)

Please take our feedback survey at: https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE

Recommended Citation

Williby, Roseanne L. and Hill, John W., "Must Economics Always Determine Academic Destiny? Achievement Across Time in Two Academically Equivalent But Socioeconomically Diverse Same City Catholic Schools" (2010). *Educational Leadership Faculty Publications. 2.*
<https://digitalcommons.unomaha.edu/edadfacpub/2>

This Article is brought to you for free and open access by the Department of Educational Leadership at DigitalCommons@UNO. It has been accepted for inclusion in Educational Leadership Faculty Publications by an authorized administrator of DigitalCommons@UNO. For more information, please contact unodigitalcommons@unomaha.edu.

MUST ECONOMICS ALWAYS DETERMINE ACADEMIC DESTINY? ACHIEVEMENT ACROSS TIME IN TWO ACADEMICALLY EQUIVALENT BUT SOCIOECONOMICALLY DIVERSE SAME CITY CATHOLIC SCHOOLS^{*}

Roseanne Williby
John Hill

This work is produced by The Connexions Project and licensed under the
Creative Commons Attribution License[†]

Abstract

The study analyzed the pretest-posttest results of high stakes test scores, absence frequencies, and high school eligibility cut scores of students who completed fourth-grade through eighth-grades in two academically equivalent but socioeconomically diverse same city Catholic schools. Study outcomes were compared for a naturally formed group of students ($n = 28$) who had completed fourth-grade through eighth-grades in an urban Catholic school representing fewer family socioeconomic advantages and 40% eligibility for free and reduced price lunch program participation and tuition assistance and a randomly selected group of students ($n = 28$) completing fourth-grade through eighth-grades in a suburban Catholic school representing greater family socioeconomic advantages and 2% eligibility for free and reduced price lunch program participation and tuition assistance. We reject hypothesized outcome differences based on economic diversity and assert that when students of economic need continuously attend a standards-based school, over multiple years, that requires parental commitment and student engagement, guided by unity of purpose, socioeconomics does not determine academic destiny.



NOTE: This manuscript has been peer-reviewed, accepted, and endorsed by the National Council of Professors of Educational Administration (NCPEA) as a significant contribution to the scholarship and practice of education administration. In addition to publication in the Connexions Content

^{*}Version 1.3: Jun 20, 2010 6:21 am GMT-5

[†]<http://creativecommons.org/licenses/by/3.0/>

Commons, this module is published in the *International Journal of Educational Leadership Preparation*, ¹ Volume 5, Number 2 (April - June, 2010). Formatted and edited in Connexions by Theodore Creighton, Virginia Tech; and Janet Tareilo, Stephen F. Austin State University.

1 Introduction

The public schools are not alone in their challenge to provide effective educational opportunities for students from lower socioeconomic families. The Catholic schools have long held a commitment to educate children, particularly those of the poor, within the inner cities and urban areas guided by a religious mission and the pursuit of academic excellence (Cook, 2001). Whereas a strong commitment by the Church and lay American Catholic leaders remains constant today, changing demographics and socioeconomics have had a major impact on enrollment (Huber, 2007). Catholic schools in urban areas have been hardest hit economically as jobs have been eliminated and families can ill afford tuition. Enrollment declines have consequently triggered a renewed call for faith-based schools to be part of the national solution to public education's problems for children from our nation's poorest families who remain in these neighborhoods (Birdsell, 2009; Kearney, 2008). Historically, variable demographic trends in the United States have repeatedly threatened the viability of Catholic schools throughout the country.

2 Review of Literature

American Catholics have a long history of support for Catholic education dating from 1606 when the Franciscan religious order opened a school in what is now St. Augustine, Florida (Gautier, 2005). Complementary to the teaching of reading and writing, was instruction on the doctrines of the faith. Soon after, the ratification of the Bill of Rights in 1791, with the First Amendment guarantee of religious freedom, helped to further the cause for Catholic education in America. The middle of the 19th century saw increasing interest in Catholic education as many poor immigrant families flocked to the Catholic Church and schools for comfort (Cattaro, 2002). Bishops meeting at the First Plenary Council of Baltimore in 1852 urged every Catholic parish in the nation to establish a school (McDonald, 2005). Parents also requested their establishment, lay boards approved and financed their creation, and many laymen and laywomen were their first teachers (Kealey, 1989).

Despite the decree by the Council of Bishops, the number of parish based Catholic schools only approached 60% by the mid-1960's (Kealey, 1989). During this period, major Catholic ethnic groups, notably those of Irish and Italian heritage, assimilated into society. The 1965-66 school year saw the largest number of Catholic schools at any time in the nation's history. However, the decline in the number of Catholic schools in the nine years following their peak number in 1965 was cataclysmic (Convey, 1992). By 1974, after only nine years, a record number of school closings had neutralized a 35-year increase. Demographic factors were major contributors to the decline of enrollment of Catholic schools. Along with the steep declines in birth rates between 1960 and 1965 as the post World-War II baby boom ended, another factor was the migration of the Catholic population from parishes in urban areas to suburban parishes, not all of which had parochial schools (Convey, 1992).

2.1 Urban Catholic Schools

Children of the immigrants became part of the mainstream, moved to the suburbs, and abandoned their urban origins (Cattaro, 2002). Without a nearby population to support them, many Catholic schools in urban areas currently suffer great financial difficulty. Even amid urban decay in many parts of the nation, the Catholic Church has struggled but not abandoned its mission of education (Cattaro, 2002). For example, of the 30 Catholic elementary schools in Omaha, 16 or 53% of these schools are in urban areas. Although decreasing in numbers in the past 35 years, 44.2% of all Catholic schools in the United States are located in

¹<http://ijelp.expressacademic.org>

urban and inner city areas (McDonald, 2005). Meanwhile, there are thousands of potential students in more affluent areas waiting to be admitted to schools in their suburban neighborhoods (McDonald, 2005).

2.2 Financial Challenges

While Catholic schools are accessible in terms of location, operational costs frequently consume financial resources in urban school budgets, which can limit access due to rising tuition. In a search for budgetary relief, Catholic schools receive only a small portion of revenue from the federal government (Hunt, Joseph, & Nuzzi, 2004). A historical review of the use of Chapter I monies, (of Title I of the 1965 Elementary and Secondary Education Act) for example, which assists in educating disadvantaged children, indicates that of all students served in 1990-1991, only 3% went to religious schools (Hunt et al., 2004). However, as school costs continue to escalate, financial challenges become even more acute. The National Catholic Education Association (2009) reports the average per student tuition cost in a Catholic elementary school is \$3,159, approximately 53.8% of the actual cost per pupil at \$5,870. The difference between tuition and per student cost is obtained through direct subsidy from the local parish, diocesan or religious congregation resources, and from multi-faceted developmental programs and fund-raising initiatives. Moreover, about 87% of Catholic elementary schools provide some form of tuition assistance to their students (McDonald, 2005).

2.3 Teachers

A greater share of the cost to operate Catholic schools is directly related to the shift in teaching staff from religious and clergy to a lay faculty. From the 1920's through the 1950's, about one in 10 Catholic schoolteachers were from the laity (Convey, 1992). As the enrollment of Catholic schools swelled after World War II, a large number of lay teachers were hired to satisfy the increasing demand for additional teachers (Convey, 1992). By 1980 lay teachers comprised almost three-fourths of the full-time teachers in both elementary and secondary schools (Convey, 1992). Over the past decade, the lay faculty percentages have increased from 85% to 95% (McDonald, 2005).

Since salaries and benefits for lay teachers now comprise the greatest share of a school's operational budget, urban schools with limited budgets often reserve only meager funding allocations for instructional resources. As a result, the quality and availability of academic programs provided in urban Catholic schools may be in jeopardy. In comparison to public schools where population density of the local area and its age distribution of children typically affect school size, local demand for a school's instructional philosophy also contributes to the size of the enrollment for private schools (National Center for Education Statistics, 2002). Consequently, the quality of academic programs as measured by student achievement influences local demand and directly impacts individual school enrollments.

2.4 Preference for Private School Education

As has been seen in other states where polls have been conducted, there is a wide disconnect between what the residents would like to see in terms of school choice options and what the system is able to provide. In a recent Friedman Foundation's *Survey in the State* (2009), 48% or three times as many parents in the state of Nebraska preferred a private school compared to 16%, who preferred a regular public school for their student.

Mindful of recent survey results (Friedman Foundation, 2009) indicating 84% of likely Nebraska voters polled would opt for schools other than traditional public schools, and that declining enrollment usually means reduced funding for schools that already receive few federal funds, which can result in teacher losses and program reductions, it was evident that there was a need for research regarding the achievement of students within the same archdiocesan Catholic schools program, who experience different socioeconomic advantages. Common, coherent, and challenging standardized curricula are at the core of the archdiocesan education system where both schools reside. With these similar program experiences, more research was needed to determine if eighth-grade students from two Catholic elementary schools in the same metropolitan area, who

attended their respective schools from fourth-grade through eighth-grade, differed in their achievement and readiness for high school transition. The findings of the study are of significant interest for parents who select their location of residence and parish membership relative to the location of a Catholic school, and for parents seeking a non-public school choice. The study is also of significant interest to the leadership of the Catholic Schools Office who endeavors to provide an equivalent, standardized, instructional program and assessments for all of their schools, regardless of their location within the archdiocese.

2.5 Standards-Based Curricula

Under the administration and supervision of the Archdiocese of Omaha Catholic Schools Office, archdiocesan schools are provided curricula that have been written within the framework of state and archdiocesan academic content standards with performance assessments in reading, language, and mathematics (Archdiocese of Omaha Catholic Schools Office, 2005a, 2005b, & 2005c). Standardized curricula and required assessments were written to achieve instructional excellence and improved student outcomes. The standards-based reform affects what teachers determine for their instructional goals, how they revise their curriculum to align with the standards, often modifying some content areas, and how teachers organize their instructional time (Ogawa, Sandholtz, Martinez-Flores, & Scribner, 2003). With a standards-based curricula quality is measurable. "In a standards-based system, the rules are clear: Either the student meets the standard or the student does not" (Reeves, 2001, p. 7).

While standards have played an important role in K-12 education, problems have emerged. Teachers have been challenged with more content than they can actually teach, and the standards have not been written in a way that enhances classroom instruction and assessment (Marzano & Haystead, 2008). The proposed solution to these problems has required a reconstitution of standards documents to make them more useful to classroom teachers. Important to this process is the limiting and designing of measurement topics (Marzano & Haystead, 2008). Based upon the state standards, the Catholic Schools Office provided curricula that featured content checklists and a limited number of performance assessments per grade. The Third International Mathematics and Science Study (TIMSS) reports that a clear challenging curriculum does make a difference in student achievement, such that national differences in student achievement correlate with differences in curriculum coverage (Schmidt, 2004).

Continuing a trend bolstered by the standards-based-reform movement of the 1990's, a study from the Center on Education Policy reports that achievement gaps between advantaged and disadvantaged students on state tests have narrowed in many instances over the past decade. Using test data collected from all 50 states from 2002 through 2008, across all subgroups, grade levels, and subjects studied, 74% of the trend lines show the gaps in the percentage of students scoring at the *proficient* level narrowing, while 23% show them widening (Education Week, 2009). Therefore, the achievement gap closes with a more rigorous curriculum (Burriss & Welner, 2005). Furthermore, highly qualified and effective teachers must teach a rigorous curriculum. It is therefore essential to determine whether Catholic schools which are academically equivalent but socioeconomically diverse, with similar parental commitment, equally impact important student outcomes.

3 Purpose of the Study

The purpose of this exploratory study was to determine the achievement and high school preparedness of eighth-grade students who had completed fourth-grade through the eighth-grade in two academically equivalent but economically diverse same city Catholic elementary schools, one urban with fewer family socioeconomic advantages and the other suburban with greater family socioeconomic advantages. In the Archdiocese of Omaha approximately 20,133 students in 76 schools were in attendance during the 2008-2009 school year in elementary buildings (grades K-8), middle schools (grades 4-8), and high schools (grades 9-12).

4 Method

Of the schools in the Archdiocese within the city boundaries of Omaha, for the purpose of this study, those schools located east of 60th Street in Omaha, Nebraska, would be considered urban while those schools located west of that boundary would be considered suburban. Regardless of location all Catholic schools of the Archdiocese of Omaha are expected to play their historic role of providing upward mobility for poverty and immigrant families by (a) ensuring academic excellence in the context of a faith-filled Catholic culture, (b) engaging students in critical reflection on Gospel values and Catholic social teaching, empowering them to be advocates for justice in today's society, (c) developing moral character faithful to the teachings of the Catholic Church, (d) providing education and training in technology and communication skills, and (e) addressing the whole person: spiritual, mental, emotional, and physical (Archdiocese of Omaha, 2009). With a unified curriculum and a religious leader superintendent of schools, the Catholic schools of the Archdiocese of Omaha have the third largest enrollment in the state of Nebraska.

Religious school setting served as the studies independent variable with two conditions—an urban Catholic school (UCS) with fewer family socioeconomic advantages, and a suburban Catholic school (SCS) with greater family socioeconomic advantages.

4.1 Participants

Study subjects from the UCS where there was lower enrollment comprised a naturally formed intact sample of students ($n = 28$) who had been in the same school fourth-grade through eighth-grade while subjects from the SCS were randomly selected from a larger cohort group ($n = 92$). Of the 92 students in the SCS school 54 met the subject selection criteria of completing fourth-grade through eighth-grades in the same school. To match the UCS participant total, 28 students were randomly selected from the 54 students who met the grade completion criterion. Of the 28 students that comprised the naturally formed sample from the UCS 13 (47%) were boys and 15 (53%) were girls. Of the 28 students that comprised the randomly selected sample from the SCS 16 (57%) were boys and 12 (43%) were girls. Of the total number of selected subjects ($N = 56$) the balanced gender ratio was congruent with enrollment patterns in both the UCS and SCS programs. Study participants ages ranged from 13 years to 15 years. The UCS and SCS subjects of this study were all Caucasian. Overall, in the UCS 40% of the students received free or reduced price lunch and tuition assistance combined while in the SCS 2% received free or reduced price lunch and tuition assistance combined. In this study 11 UCS students and one SCS student were eligible for free or reduced price lunch program participation and tuition assistance.

4.2 Research Design

The pretest-posttest two-group comparative efficacy study design is displayed in the following notation:

Group 1 $X_1 O_1 Y_1 O_2$

Group 2 $X_1 O_1 Y_2 O_2$

Group 1 = study participants #1. Naturally formed intact group of students ($n = 28$) attending the UCS.

Group 2 = study participants #2. Randomly selected group of students ($n = 28$) attending the SCS.

X_1 = study constants. All study participants completed fourth-grade through eighth-grades in their respective UCS and SCS programs. Other study constants included: Students completed studies guided by the same diocesan approved standards-based curriculum, students were required to wear uniforms, and parents were responsibility for paying tuition.

Y_1 = study independent variable, school location, condition #1. The UCS represented fewer socioeconomic advantages. Eleven of the 28 UCS students were eligible for free and reduced price lunch program participation and tuition assistance combined.

Y_2 = study independent variable, school location, condition #2. The SCS represented greater socioeconomic advantages. One of the 28 SCS students was eligible for free and reduced price lunch program participation and tuition assistance combined.

participation and tuition assistance combined.

O₁ = study pretest achievement dependent measures. (1) Achievement was measured by the required fourth-grade Iowa Test of Basic Skills (a) reading, (b) language, and (c) math national normal curve equivalent scores.

O₂ = Study posttest achievement dependent measures. (1) Achievement was measured by the required eighth-grade Iowa Test of Basic Skills (a) reading, (b) language, and (c) math national normal curve equivalent scores. (2) Absence frequencies data were reported absences for the eighth-grade school year. (3) Unrestricted admittance to an Archdiocese of Omaha religious high school was determined by eighth-grade Iowa Test of Basic Skills national percentile composite test score measured at the 80th percentile.

4.3 Achievement Dependent Measures and Instrumentation

Reading, language, and math normal curve equivalent scores from the Iowa Test of Basic Skills for pretest fourth-grade compared to posttest eighth-grade were used to determine student achievement. Administration of the Iowa Test of Basic Skills, a standardized norm-referenced achievement test, is required by the Archdiocese of Omaha to determine student progress and ensure school accountability. We used normal curve equivalents in this study because they are standard scores with a mean equal to 50 and a standard deviation equal to 21.06 that divides the normal curve into 100 equal intervals yielding an equal-interval standard score that can be combined for the purpose of statistical calculation. In the results section the normal curve equivalents are also converted to percentile ranks, derived scores that indicate the percentage of students whose scores are at or below a given score and the 50th percentile is the mean score and national stanines, standard score bands that divide a distribution into nine parts where stanines 1, 2, and 3 are descriptively referred to as falling within the below average range, stanines 4, 5, and 6 are descriptively referred to as falling within the average range, and stanines 7, 8, and 9 are descriptively referred to as falling within the above average range (Salvia & Ysseldyke, 2004).

4.4 Absence Frequencies Dependent Measures and Instrumentation

Reported eighth-grade absence frequencies data were used to determine behavior. All absence frequencies data were available in the UCS and SCS data management systems for students and provided to the researchers by the appropriate school personnel. Twelve or more unexcused absences may result in course failure and loss of credits towards high school completion.

4.5 College Preparatory Catholic High School Admittance Dependent Measures and Instrumentation

An end of eighth-grade posttest Iowa Test of Basic Skills composite test score measured at the 80th percentile or greater, based on a national normative sample—a group of students of known demographic characteristics such as age, gender, and grade to whom a student's performance may be compared—was used to determine unconditional admittance to any Archdiocese of Omaha Catholic high school. A composite score at the 80th national percentile or greater determines whether a student may apply to any Archdiocese of Omaha Catholic high school and be admitted to college preparatory coursework without any further assessment. Students who fall below the 80th percentile on this eighth-grade measure may be admitted to an Archdiocese of Omaha Catholic high school but may have to take placement exams and also participate in beginning level review coursework.

4.6 Research Questions

The following five research questions were asked and answered as part of this study comparing UCS students' outcomes to SCS students' outcomes.

1. Did students who attended the UCS lose, maintain, or improve their fourth-grade pretest compared to eighth-grade posttest Iowa Test of Basic Skills norm referenced test normal curve equivalent reading, language, and math achievement scores?
2. Did students who attended the SCS lose, maintain, or improve their fourth-grade pretest compared to eighth-grade posttest Iowa Test of Basic Skills norm referenced test normal curve equivalent reading, language, and math achievement scores?
3. Do students who attended the UCS and students who attended the SCS have congruent if different eighth-grade posttest compared to eighth-grade posttest Iowa Test of Basic Skills norm referenced test normal curve equivalent reading, language, and math achievement test score change over time?
4. Do students who attended UCS and SCS programs have congruent or different eighth-grade posttest compared to eighth-grade posttest absence frequencies?
5. Do students who attended UCS and SCS programs have congruent or different eighth-grade posttest compared to eighth-grade posttest Iowa Test of Basic Skills National Percentile Rank composite scores at or greater than the 80th percentile required for unconditional admission to an Archdiocese of Omaha Catholic high school?

4.7 Assumptions

The design of this study has several strong features including the observation that both Catholic schools made every effort to provide instruction according to the standardized curricula and assessments for reading, language, and mathematics provided by the Archdiocese of Omaha Catholic Schools Office for the Archdiocesan school system. It was also assumed that a standardized curricula and related assessments had been the basis for instruction of the participants throughout the time of the study fourth-grade through eighth-grades. It was further assumed that all parents were equally informed of their expected commitment to support their children's Catholic school program. Parental commitment included an agreement to support both UCS and SCS missions and provide assistance in activities and fund raising. It must also be noted that the UCS and SCS study schools are tuition driven and that parents are expected to complete tuition payment in order for their student to remain in school. This criterion was met for all students in this study. Furthermore, the study was approved by the Archdiocese of Omaha Catholic Schools, and the University of Nebraska Medical Center/University of Nebraska at Omaha Joint Institutional Review Board (IRB) for the Protection of Human Subjects.

4.8 Limitations

Some limitations are also important to note. While the Catholic Schools Office works in partnership with the Catholic schools in the Archdiocese of Omaha school system, implementation of the standardized curricula and assessments may be affected by teacher quality and administrative involvement. Also, differences may have also existed in the utilization of educational resources, such as type of textbooks and media that were selected by each school program. Furthermore, unaccounted for selection bias could also reduce the utility and generalizability of the findings.

4.9 Data Collection Procedures

Study data were collected by designated UCS and SCS program employees who had ethical access to students' cumulative records. Students in the Catholic schools of the Omaha Archdiocese take the Iowa Test of Basic Skills in the fall of their fourth-grade and end of their eighth-grade school years. A total reading score was computed from the combined scores in vocabulary and reading comprehension. A total language score was computed from the combined scores in spelling, capitalization, punctuation, and usage and expression. A total math score was computed from the combined scores in concept and estimation, problems and data, and computation. The composite score was based on the subtest scores. The Iowa Test of Basic Skills results yield reported normal curve equivalent, national percentile rank, and national stanine scores. Absence frequencies

were collected from student records. All study data were de-identified by the appropriate school staff before data analysis was conducted.

5 Results

The study analyzed achievement test score data, absence frequency data, and admittance to archdiocese Catholic high school data of UCS compared to SCS students to determine if differing socioeconomic circumstances significantly impacted student outcomes. All study achievement data related to each of the dependent variables was retrospective, archival, and routinely collected school information. Permission from the appropriate school research personnel was obtained before achievement and behavioral data were collected and analyzed.

5.1 Research Question #1

The first hypothesis comparing UCS students' dependent t test pretest-posttest Iowa Test of Basic Skills reading, language, and math NCE scores was rejected for two achievement subtests, language and math but not rejected for reading. The pretest reading score ($M = 65.46$, $SD = 15.92$) compared to the posttest reading score ($M = 63.46$, $SD = 17.40$) was not significantly different, $t(27) = -1.18$, $p = .250$ (two-tailed), $d = 0.12$ in the direction of a lower mean posttest score. The pretest language score ($M = 67.36$, $SD = 15.86$) compared to the posttest language score ($M = 74.21$, $SD = 15.81$) was statistically different, $t(27) = 4.23$, $p < .001$ (two-tailed), $d = 0.43$ in the direction of posttest language test score gain. The pretest math score ($M = 66.61$, $SD = 16.76$) compared to the posttest math score ($M = 71.00$, $SD = 19.14$), was significantly different, $t(27) = 2.13$, $p < .042$ (two-tailed), $d = 0.22$ in the direction of posttest math test score gain.

5.2 Research Question #2

The second hypothesis comparing SCS students' dependent t test pretest-posttest Iowa Test of Basic Skills for reading, language, and math NCE scores was rejected for one achievement subtest, language but not rejected for reading and math. The pretest reading score ($M = 68.00$, $SD = 15.35$) compared to the posttest reading score ($M = 64.54$, $SD = 13.99$) was not significantly different, $t(27) = -1.83$, $p = .079$ (two-tailed), $d = 0.23$ in the direction of a lower mean posttest score. The pretest language score ($M = 66.25$, $SD = 17.52$) compared to the posttest language score ($M = 75.79$, $SD = 14.76$), was significantly different, $t(27) = 5.03$, $p < .001$ (two-tailed), $d = 0.59$ in the direction of posttest language test score gain. The pretest math score ($M = 70.07$, $SD = 14.69$) compared to posttest math score ($M = 69.04$, $SD = 15.40$) was not statistically different, $t(27) = -0.73$, $p = .629$ (two-tailed), $d = 0.48$ in the direction of a lower mean posttest score.

5.3 Research Question #3

The third hypothesis was tested using Analysis of Covariance (ANCOVA) with pretest scores serving as the covariate. ANCOVA comparison of UCS and SCS students' eighth-grade posttest Iowa Test of Basic Skills reading, language, and math normal curve equivalent scores were adjusted for fourth-grade pretreatment differences. The null hypothesis was not rejected for the variables (a) eighth-grade posttest UCS vs. SCS x Reading $F(1, 53) = .170$, $p = .681$, $d = 0.06$, (b) eighth-grade posttest UCS vs. SCS x Language $F(1, 53) = 1.122$, $p = .294$, $d = 0.10$, and (c) eighth-grade posttest UCS vs. SCS x Math $F(1, 53) = 3.801$, $p = .057$, $d = 0.11$. Results indicate that at posttest reading, language, and math achievement test measures were congruent and that rate of test score change over time could be considered the same for UCS and SCS students.

5.4 Research Question #4

The fourth hypothesis was tested using chi-square (X^2). The result of X^2 was not statistically different ($X^2(1, N = 56) = 2.10$, p greater than .05) so the null hypothesis of no difference or congruence for UCS students'

absence frequencies compared to SCS students' absence frequencies was not rejected. In this discrete data comparison UCS students' non-troubling absence frequency levels, six or fewer, (22) and percent (79) and troubling absence frequency levels, seven or more, (6) and percent (21) was congruent with SCS students' non-troubling absence frequency levels, six or fewer, (17) and percent (61) and troubling absence frequency levels, seven or more, (11) and percent (39).

5.5 Research Question #5

The fifth hypothesis was tested using chi-square (X^2). The result of X^2 was not statistically different ($X^2(1, N = 56) = 1.16, p$ greater than .05) so the null hypothesis of no difference or congruence for UCS students' high school admittance composite achievement cut scores compared to SCS students' high school admittance composite achievement cut scores was not rejected. In this discrete data comparison UCS students' 80th percentile or higher frequencies (18) and percent (64) and 79th percentile or lower frequencies (10) and percent (36) was congruent with SCS students' 80th percentile or higher frequencies (14) and percent (50) and 79th percentile or lower frequencies (14) and percent (50). Test scores measured at or above the 80th percentile are required for unconditional admittance to an Archdiocese of Omaha Catholic high school.

6 Conclusions

The results allow us to respond to the five research questions guiding the study.

6.1 Research Question #1

Pretest-posttest results indicated that eighth-grade UCS students did significantly improve their language scores over time and that their posttest achievement test scores in the three achievement areas were consistent with continued academic success. Reading, language, and math posttest normal curve equivalent scores converted to national percentile ranks and national stanine scores helps to put their achievement performance in perspective. A norm referenced, normal curve equivalent posttest reading mean score of 64.54 is congruent with a national percentile rank of 75 and a national stanine score of 6, the highest stanine in the average range. A norm referenced, normal curve equivalent posttest language mean score of 75.79 is congruent with a national percentile rank of 88 and a national stanine score of 7, the lowest stanine in the above average range. A norm referenced, normal curve equivalent posttest math mean score of 69.04 is congruent with a national percentile rank of 83 and a national stanine score of 7, the lowest stanine in the above average range. These achievement test scores are congruent with and predictive of continued academic success.

6.2 Research Question #2

Research question #2. Pretest-posttest results indicated that eighth-grade SCS students did significantly improve their language scores over time and that their posttest achievement test scores in the three achievement areas were consistent with continued academic success. Reading, language, and math posttest normal curve equivalent scores converted to national percentile ranks and national stanine scores helps to put their achievement performance in perspective. A norm referenced, normal curve equivalent posttest reading mean score of 64.54 is congruent with a national percentile rank of 75 and a national stanine score of 6, the highest stanine in the average range. A norm referenced, normal curve equivalent posttest language mean score of 75.79 is congruent with a national percentile rank of 88 and a national stanine score of 7, the lowest stanine in the above average range. A norm referenced, normal curve equivalent posttest math mean score of 69.04 is congruent with a national percentile rank of 83 and a national stanine score of 7, the lowest stanine in the above average range. These achievement test scores are congruent with and predictive of continued academic success.

6.3 Research Question #3

Overall, the eighth-grade posttest compared to eighth-grade posttest findings adjusted for fourth-grade pretreatment differences indicated congruent reading, language, and math test score comparisons. Data suggest that UCS and SCS students were equally prepared for eighth-grade performance on reading, language, and math achievement tests and that the rate of achievement score gain over time was the same for both groups. The equivalent posttest achievement test performance also indicates that the differing socioeconomic circumstances of the UCS and SCS schools did not result in poorer achievement test performance for students in the UCS program with greater socioeconomic need.

6.4 Research Question #4

Overall, the eighth-grade posttest compared to eighth-grade posttest findings, indicate that UCS and SCS students had congruent absence frequencies and these frequencies primarily fell within the 6 or fewer non-troubling category, suggesting that absences are not an issue for the majority of students in either of the comparison schools.

6.5 Research Question #5

Overall, the eighth-grade posttest compared to eighth-grade posttest findings indicate that UCS and SCS programs equally prepared students for unconditional admittance to Catholic high schools—perhaps this study’s most important finding—and this is reflected in the congruent composite test score frequencies found at or above the 80th percentile cut score required for unconditional admittance. The observed equipoise for this important discrete data comparison again strengthens the observation that other supportive factors may be more powerful predictors of academic success than economic circumstance alone.

7 Discussion

Importantly, students in the UCS and the SCS programs both improved achievement test scores over the five school years of this study. Furthermore, and perhaps counterintuitively, no significant differences were found between the UCS and SCS students’ Iowa Test of Basic Skills reading, language, and math test eighth-grade posttest score comparisons or the observed college preparatory Catholic high school admittance composite achievement cut score frequencies comparison. These finding may be interpreted as suggesting that equivalent school experiences and values, parent commitment to ensure continued and consistent student participation and enrollment, primarily by paying tuition, and the obvious effort students put into their studies and attending school, resulting in average and above average achievement end of eighth-grade test results trump any *a priori* notion of how differing socioeconomics may effect student outcomes.

8 Connecting our Findings to the Literature

While we interpret our study findings with appropriate caution we believe them to be consistent with and contributory to a growing literature that continues to illustrate that Catholic schools benefit urban and socioeconomically diverse students, alike (ACE Fellowship 2009). As with our study, qualities such as clear academic and disciplinary guidelines, involved parents, and teachers and administrators who care all seem to contribute to lessening of socioeconomic impact (Bryk, Lee, & Holland, 1993; Jeynes, 2007; Marks & Lee, 1989). Several studies also found that students with multiple socioeconomic and family disadvantages benefit the most from Catholic schools (Evans & Schwab, 1995; Neal, 1997). Furthermore, according to York (1996) poorer students with multiple academic and attendance risk factors may be expected to make, relatively speaking, the greatest achievement gains in Catholic schools. Because the findings of this study reflect solid academic performance for the students attending both the UCS and SCS programs, meaningful, we believe, beyond mere statistical significance, it may be predicted that if these students will in fact attend and graduate from the Catholic high schools they are qualified to attend they will be more likely to earn

higher wages than public school graduates (Hoxby, 1994; Neal, 1997). As adults and graduates of Catholic high schools these students may also in the future tend to be more civically engaged (Campbell, 2001), more tolerant of diverse view points (Greene, 1998), more committed to service as adults (Wolf, Greene, Kleitz, & Thalhammer, 2001), and more likely to vote (Dee, 2005) than public school graduates. We posit that it is the values associated with providing upward mobility for poverty and immigrant families that results in educational and societal benefit for all students—those more and those less socioeconomically advantaged thanks to equal classroom opportunities (Archdiocese of Omaha, 2009).

8.1 Parental Participation

As a covariate in this study it must be surmised that parental support and involvement played a key role in the success of students at both schools. A meta-analysis by Henderson and Berla (1994) indicated that the most accurate predictor of student achievement was the extent to which the family was actively involved in the child's education. Furthermore, parental participation was reported to be higher in Catholic schools than in public schools due to the formation of a neighborhood parish community, which induces parents, who would otherwise be uninvolved, to participate (Henderson & Berla, 1994). Parent participation in Catholic schools increases the social resources available to students through organizing collective events, giving students more intensive contact with a smaller number of teachers, and strengthening the relations of parents with one another and with the school—all expected standards for involving parents in Catholic school programs (Henderson & Berla, 1994). Furthermore, student success results by making it clear to parents that they are valuable allies in the educational process and have a great deal to offer (Jeynes, 2007). Keeping communication between home and school positive and preventative rather than negative and remedial is one step toward strengthening parents' appreciation of their role (Henderson & Berla, 1994). Parents literally become family support staff providing assistance when there are indications that students are not working up to their full potential because of problems at home. As such, schools can be a powerful force in building parent capacity and subsequently buffer the negative consequences of low income (Slavin, Madden, Karweit, Livermon, & Dolan, 1990).

9 Final Thoughts

It must be held that the challenges of home and neighborhood are not reasons to have lower expectations in schools, and it is a grave error when educational leaders, teachers, and parents presume that we should have different expectations for students because of their socioeconomic status or ethnic heritage (Reeves, 2001). However, we must evaluate the equalizing experiences that schools provide—sufficient for making the aforementioned true—by first understanding that socioeconomic circumstance is not only linked to academic achievement but also indirectly linked through interacting systems including neighborhood and school location, urban and suburban, to supportive relationships and societal norms and values—all in play as children learn (Coleman, 1988; Dika & Singh, 2002; Sirin, 2005). For the UCS students in our study we speculate that perhaps the most significant contributing covariant to their success would be their continuous attendance in the same school for five contiguous school years, fourth-grade through eighth-grade, suggesting a strong bond and positive relationship between home and school. We say this knowing how poverty and different school contexts can increase the number of students having trouble mastering reading particularly as parents move from one place to another increasing student mobility and discontinuous learning, predictors of a broken bond between home and school that most often deepens a student's academic struggles (Viadero, 2010). We conclude by asserting that when students are fortunate enough to participate in equivalent standards-based school programs, over an extended number of years, that require parental commitment and student engagement, guided by unity of purpose, conditions extant in the UCS and the SCS programs of this study, socioeconomics does not negatively determine academic destiny.

10 References

- ACE Fellowship. (2009). Fighting for parental choice. *The researched case for Catholic schools*. Retrieved from <http://acefellowship.wordpress.com/parental-choice-10/the-researched-case-for-catholic-schools/>
- Archdiocese of Omaha Catholic Schools Office. (2009). *Archbishop's dinner for education: Honoring Catholic educators*. Omaha, NE: Author.
- Archdiocese of Omaha Catholic Schools Office. (2005a). *Reading Curriculum K-12 June 2005*. Omaha, NE: Author.
- Archdiocese of Omaha Catholic Schools Office. (2005b). *Language Arts Curriculum K-12 June 2005*. Omaha, NE: Author.
- Archdiocese of Omaha Catholic Schools Office. (2005c). *Math Curriculum K-12 June 2005*. Omaha, NE: Author.
- Birdsell, R. J. (2009). A Catholic alternative: What's missing in the debate on education. *America: The National Catholic Weekly*, May, 20-21.
- Bryk, A. S., Lee, V. E., & Holland, P. B. (1993). *Catholic schools and the common good*. Cambridge, MA: Harvard University Press.
- Burris, C., & Welner, K. (2005). Closing the achievement gap by detracking. *Phi Delta Kappan*, 86(8), 594-598.
- Campbell, D. E. (2001). Making democratic education work. In P. E. Peterson & D. E. Campbell (Eds.), *Charters, vouchers, and public education*. Washington, DC: Brookings Institution Press.
- Cattaro, G. (2002). Catholic schools: Enduring presence in urban America. *Education and Urban Society* 35(1), 100-110.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95-120.
- Convey, J. (1992). *Catholic schools that make a difference*. Washington, DC: National Catholic Education Association.
- Cook, T. (2001). *Architects of Catholic culture: Designing and building Catholic culture in Catholic schools*. Washington, DC: The National Catholic Education Association.
- Dee, T. S. (2005). The effects of Catholic schooling on civic participation. *International Tax and Public Finance*, 12(5), 605-625.
- Dika, S., & Singh, K. (2002). Applications of social capital in educational literature: A critical synthesis. *Review of Educational Research*, 72(1), 31-60.
- Education Week. (2009, October 1). Report finds achievement gap continuing to narrow. Retrieved October 4, 2009 from <http://www.edweek.org/ew/articles/2009^2>, 29 (6).
- Evans, W. N., & Schwab, R. M. (1995). Finishing high school and starting college: Do Catholic schools make a difference. *The Quarterly Journal of Economics*, 110(3), 941-974.
- Gautier, M. (2005, September 30). Does Catholic education make a difference? National Catholic Reporter.
- Greene, J. P. (1998). Civic values in public and private schools. In P. E. Peterson & B. C. Hassel (Eds.), *Learning from school choice* (pp. 335-356). Washington, DC: Brookings Institution Press.
- Henderson, A., & Berla, N. (1994). *A new generation of evidence: The Family is critical to student achievement* (Rep. No. 0-934460-41-8). National Committee for Citizens in Education.
- Hoxby, C. M. (1994). *Do private schools provide competition for public schools?* Cambridge, MA: National Bureau of Economic Research, Working Paper #4978.
- Huber, J. B. (2007). The accessibility of American Catholic secondary schools to the various socioeconomic classes of Catholic families. *Catholic Education: A Journal of Inquiry and Practice*, 10(3), 271-287.
- Hunt, T., Joseph, E., & Nuzzi, R. (2004). *Handbook of research on Catholic education*. Westport, CT: Greenwood Publishing Group Inc.
- Jeynes, W. H. (2007). Religion, intact families, and the achievement gap. *Interdisciplinary Journal of Research on Religion*, 3(3), 1-24.

²<http://www.edweek.org/ew/articles/2009>

- Kealey, R. (1989). Collision course: Clergy and laity on Catholic Schools. *Chicago Studies*, 28, 277-291.
- Kearney, G. R. (2008). *More than a dream: The Cristo Rey story*. Chicago, IL: Loyola Press.
- Marks, H. M., & Lee, V. E. (1989). *National assessment of educational progress proficiency in reading: 1985-86. Catholic and public schools compared. Final report 1989*. Washington, DC: National Catholic Education Association.
- Marzano, R. J., & Haystead, M. W. (2008). *Making standards useful*. Alexandria, VA: Association for Supervision and Curriculum Development.
- McDonald, D. (2005). Annual report on Catholic elementary and secondary schools. The annual statistical report on schools, enrollment and staffing. Washington, DC.
- National Catholic Education Association. (2009). Annual data report: Tuition and costs. Retrieved September 20, 2009, from <http://ncea.org/news/AnnualDataReport.asp>³.
- National Center for Education Statistics. (2002). Findings from the condition of education 2002. *Private schools: A brief portrait*. (ED Pubs 8242-B Sandy Court, pp. 5-7). Jessup, MD: U.S. Department of Education.
- Neal, D. (1997). The effects of Catholic secondary schooling on educational achievement. *Journal of Labor Economics*, 15(1), 98-123.
- Ogawa, R., Sandholtz, J.H., Martinez-Flores, M., & Scribner, S. (2003). The substantive and symbolic consequences of a district's standards-based curriculum. *American Educational Research Journal*, 40 (1), 147-176.
- Reeves, D. (2001). *101 Questions and answers about standards assessments, and accountability*. Denver, CO: Advanced Learning Press.
- Salvia, J., & Ysseldyke, J. E. (2004). *Assessment in special and inclusive education*. New York, NY: Houghton Mifflin Co.
- Slaven, R., Madden, N., Karweit, N., Livermon, B., & Dolan, L. (1990). Success for All: First year outcomes of a comprehensive plan for reforming urban education. *American Educational Research Journal*, 27(2), 255-278.
- Schmidt, W. H. (2004). A vision for mathematics. *Educational Leadership* 61(5), 6-11.
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analysis review of research. *Review of Educational Research*, 75(3), 417-453.
- The Friedman Foundation for Educational Choice. (2009, September). *Nebraska's opinion on K-12 education and school choice*. Indianapolis: IN: Paul DiPerna.
- Viadero, D. (2010). Analysis ties 4th grade reading failure to poverty. *Education Week*, 29(33), 1-3.
- Wolf, P. J., Greene, J. P., Kleitz, B., & Thalhammer, K. (2001). Private schooling and political tolerance. In P. E. Peterson & D. E. Campbell (Eds.), *>Charters, vouchers, and public education* (pp. 268-289). Washington, DC: Brookings Institution Press. Dee, 2005).
- York, D. E. (1996). The academic achievement of African Americans in Catholic schools: A review of the literature. In J. J. Irvine & M. Foster (Eds.), *Growing up African American in Catholic Schools* (pp. 11-46). New York: Teachers College Press.

³<http://ncea.org/news/AnnualDataReport.asp>