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A Survey to Determine the Relationship between Self Concept and Reading Ability in a Selected Group of Secondary Students: Case Studies of Four High Schools in the Chicago Area

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A SURVEY TO DETERMINE THE RELATIONSHIP BETWEEN SELF CONCEPT

AND READING ABILITY IN A SELECTED GROUP OF SECONDARY STUDENTS:

CASE STUDIES OF FOUR HIGH SCHOOLS IN THE CHICAGO AREA

by

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VITA

The author, Doris Lenora Gross, is the daughter of Charles Johnson and Eula (Matthews) Johnson. She was born August 28, 1928, in Alton, Illinois.

Her elementary education was obtained in the public schools in East Alton, Illinois. Her secondary education was completed in 1945 at the Wood River Community High School, Wood River, Illinois.

In 1947, Mrs. Gross entered Shurtleff College in Alton, Illiois. She began a career in Chicago where she taught continuing education and extension classes, and conducted seminars and programs for womens groups, businesses, hospitals, and clubs.

In 1973, she received a Bachelor of Arts from Northeastern Illinois University, and in 1975, she received a Masters in Education from the same university. She entered Loyola University of Chicago in 1976, and served as a graduate assistant to Dr. Gerald Gutek in the School of Education during the final two semesters, completing courses in the Fall of 1986.

Mrs. Gross taught 6th grade classes in Chicago and served as substitute teacher in elementary and secondary grades in Chicago and the northern suburban area. She is married to B. G. Gross, Ph.D. Adjunct Professor Emeritus at Loyola University and is the mother of two sons, Brent Gerard and Dean Charles. She lives in Winnetka, Illinois.

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Historical Orientation

In the 1870's and 1880's, when the United States was changing from a rural to an urban society, the public high school began to emerge to meet the demands of an industrial economy and expectations of an increase in city populations.[1]

Two distinct schemes of education had existed since the early colonies, and although they sometimes overlapped at the elementary level, generally one tended to serve the upper classes, the merchants, planters, clergy and lawyers, while the other served the common people. In the South, children of the higher classes had private tutors or attended one of the endowed "free schools" and children of the lower classes attended "old field houses".[2] At times the two classes attended classes together, as in the North, where the more well off attended private dame schools, sometimes attending town schools along with the poorer children for reading and writing classes.[3]

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[1] Gerald L. Gutek, A History of the Western Educational Experience (New York: Random House, 1970), pp. 368-369.

[2] Merle Curti, et. al., The Social Ideas of American Educators (Totowa, N.J.: Littlefield, Adams & Co., 1959), p. 7.

[3] Walter H. Small, Early New England Schools (Boston, 1914), pp. 311 et. seq., in Curti, et. al., The Social Ideas of American Educators, p. 8.

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In the 1820's, children of the more well to do still began their education in private dame schools and continued into private academies. These academies taught Latin and modern languages and provided a step between elementary school and college level for the higher classes. New England's free schools, which were required by law and maintained in part by general taxation, established a precedent for the nineteenth century, and although they were class conscious, they provided charity education for the poor. Even one hundred years ago, American schools reflected the class prejudices and religious interests of colonial society, where religion and class structure determined the character of schooling a student was to receive.

Thomas Jefferson's ideal of education provided for education for all children, ending after elementary school for the poor classes and providing for higher training for the upper classes, was challenged by Dewey, who saw this as a division of people into two classes. On the one hand, laborers, who received elementary education only, with learned classes for the talented poor, who were trained at public expense, and the wealthy, who received higher education.[4]

Curricula differed in the private and common schools, and class character continued into the secondary school, the poor being condemned to inferior training, where girls and Negroes were not considered for schooling equal to boys, whereas of the wealthy, even the mediocre were given instruction suitable to their talents.[5]

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[4] Curti, et. al., The Social Ideas of American Educators, pp. 20-25.

[5] Ibid., pp. 46-47.

The land-grant state universities of the 19th century gave rise to more widely available education for all students. In the past, where higher education had been private and benefitted only the few privileged students, with government subsidies, federal and state scholarship and loan programs, and with the need for college educated individuals in an increasingly technological society, more access by larger portions of the population became a reality. Lower enrollment fees and lowered admission standards allowed for more egalitarian education for low-income and minority families.

It was not until Thomas Cooley's decision in 1874 regarding the support of high schools through public tax that educational opportunity was provided for all students. High schools were viewed as a means by which lower classes could improve their status, however, while high schools were made available for all students, they functioned primarily to benefit the upper socio-economic classes, with some providing college preparatory courses as the academies had done, and others geared toward manual, industrial, commercial and vocational programs.[6]

By 1930, the high school had grown tremendously and enrolled students from diverse backgrounds. The comprehensive high school offered varied kinds of courses. With compulsory education came the concept of equal education for all students. Conant found that school offerings differed, based upon the area in which the schools were located. For the most part, suburban high schools offered college-preparatory courses while those in economically-deprived areas offered inadequate vocational programs. With the decline of the comprehensive high school in metro-

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[6] Gutek, A History of Western Educational Experience, p. 390.

politan areas, where tracks and curricula varied within the school, the populations of particular high schools were based largely on socioeconomic status (SES). Conant warned that the high school was in danger of becoming a dual educational system with separate tracks for the upper and lower classes which could divide American society into two separate groups." Further, in large cities this bifurcation was directly related to de facto racial segregation.[7]

In 1982, the National Education Association appointed a committee to standardize the high school curriculum, providing for no differentiation in the treatment of college preparatory and terminal students.[8]

The Supreme Court decision of 1954 altered the interpretation of equality, making it necessary to look at the effects of education in terms of outputs. The equal outcome definition included the idea of narrowing the gap between students of differing SES groups. In 1966, The Coleman Report, a national assessment of educational opportunity containing the largest collection of data on high schools ever attempted, was instrumental in drawing attention to student outcomes. The Report described the relative impact of inputs on achievement and the differences between outcomes in schools. According to the Report, even when inputs to the schools were similar, as curriculum facilities and per pupil expenditures, and students were exposed to the best teachers, some students performed at lower achievement levels, leading Coleman to conclude that these variations in output, were directly related to home

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[7] James B. Conant, Slums and Suburbs (New York: McGraw-Hill, 1961).

[8] Report of the Committee on Secondary School Studies (Washington, D.C: Government Printing Office, 1983), p. 17; Milton Goldberg and James Henley, "The Report of the National Committee on Excellence in Education," Phi Delta Kappan (October, 1983), pp. 14-18; 175-178.

backgrounds of students.[9]

The Report came at a time when the country was deeply concerned with educational excellence and policy makers were faced with finding remedies for more equal educational outcomes. Programs such as Head Start, the War on Poverty, bussing and the use of vouchers for educational choices were inaugurated. Many educational theorists and sociologists studied the effects of schools on the achievement levels of students and arrived at varying conclusions, largely due to the complexity of the many variables involved and their interactions, and the difficulties of adequate research designs.

Those who agreed with Coleman's Report felt that family SES is the indicator of school success, and the higher the SES of the student's family, the higher his or her academic achievement. According to Boocock, the most powerful predictors of achievement are the composition and climate of the school's student body.[10] Jencks and others have agreed that family background (SES) has the greatest effect on a student's attitudes, expectations and aspirations for higher education.[11]

There were critics of the Report, however, such as Dyer, who felt that Coleman's impression that, "schools can do little to improve achievement" based upon "money spent per pupil," neglected attitudes and

[9] James S. Coleman, Ernest Q. Campbell, .et. al., Equality of Educational Opportunity, U.S. Department of Health, Education and Welfare, Office of Education (Washington, D. C.: Government Printing Office, 1966).

[10] Sarane S. Boocock, Sociology of Education: An Introduction (Boston: Houghton, Mifflin Co., 1980), p. 207.

[11] Christopher Jencks, et. al., "Social Stratification and Higher Education," Harvard Educational Review 38: 2 (1968), pp. 227-316; A. W. Astin and P. H. Cross, The Impact of Financial Aid on Student Persistence in College (Los Angeles: Higher Education Research Institute, 1979).

outlook of students' participation and did not take into account quality difference in the developmental needs of different kinds of students.[12] These opponents viewed the context of the schools as an important factor in the academic and behavioral outcome of students and felt that the school a student attends makes a significant difference in his or her attitudes and academic achievement, and further, that teacher qualifications, facilities and resource expenditures are important factors which affect student outcomes.[13]

Such findings were in accord with Durkheim's early theorizing that social organizations exert an influence upon the behavior of individuals and shape their behavior in predicmable ways.[14] These contextual effects, also referred to as structural effects or climate effects, are best understood by considering Durkheim's conception of "social facts." According to Durkheim, people who have the same individual characteristics behave differently when placed in different types of groups or social settings and, in order to understand an individual's behavior, we need to know how the unique characteristics, or climate, of the group exercise their effects.[15]

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[12] Henry S. Dyer, "Social Factors and Equal Educational Opportunity," Harvard Educational Review 38 (1968), pp. 38-56.

[13] Alan Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," American Sociological Review 24 (1959), pp. 836-845; R. E. Herriot, "Some Determinants of Educational Aspirations," Harvard Educational Review 33 (1963): pp. 157-177; Wilbur B. Brookover, et. al., Schools Can Make a Difference (Michigan: College of Urban Development, Michigan State University, 1979).

[14] Emile Durkheim, The Rules of Sociological Method, ed. S. Lukes (New York: Macmillan Publishing Co., Inc., 1982).

[15] Ibid.

Extending Durkheim's ideas, Blau theorized that so-called structural effects exist and that they can be measured to demonstrate their impact on individual behavior.[16] They exert an influence by way of external constraints on the thinking and behavior of individuals. Blau described two types of structural effects: one, the more diffuse kinds of normative expectations, i.e., values that permeate society and could have an influence on individuals and, two, networks of social relationships.

Accordingly, a school can also be classified as a social system with certain measurable qualities which may potentially and actually make a difference in students' outcomes. That is, values and beliefs are transmitted, independent of the student's personal values and beliefs. Durkheim's assumption that education is the means by which a society perpetually recreates the conditions of its very existence implies that values and attitudes are transmitted to students in the school's socialization process.[17]

In our society, the process of schooling is the only major legitimate activity for children between the ages of six and eighteen. Dewey's conception of school, for example, as a small community has been widely accepted. The school, as an organization, functions to bring the child into the adult world and reflects other complex functions, such as the family, the home and the neighborhood.[18]

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[16] Peter M. Blau, "Structural Effects," _American Sociological Review_ 25 (April 1960), pp. 178-193.

[17] Emile Durkheim, _Education and Society_ (Glencoe, Ill.: Free Press, 1956), p. 123.

[18] John Dewey, _Democracy and Education_ (New York: The Free Press, 1966).

A fundamental role of the local school, then, is to indoctrinate the children into the society's value system. However, public schools in America have been based on residence and are an outgrowth of the local community's values. These are often referred to as "functional communities". Thus, while public schools are intended to bring students into the mainstream of American society, in cases of ethnic, cultural or religious minorities, this fact itself tends to alienate students from family values. Where an homogenous community exists, and parents' and community goals are coherent, these goals are integrated into the public schools, but where there are differences, and these goals conflict, parents may choose to enroll their children in private schools which serve to preserve the values and goals of the parents. These schools are referred to as "value communities." Catholic schools which share the same place of worship as the residential area may be considered to be value communities based on a functional community.[19]

While it can be said that public schools serve as agent of the larger society or the state, private schools fall into the category of agents of the religious community of which family is a part, representing the values of the parents. Independent private schools serve as direct agent of the individual's family.[20] In the United States, ninety percent of the students attend public schools, six percent attend Catholic schools and four percent attend non-Catholic private schools. [21]

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[19] James S. Coleman and Thomas Hoffer, <u>Public and Private High Schools: The Impact of Community</u> (New York: Basic Books, Inc., 1987), pp. 215-216.

[20] <u>Ibid</u>., p. 216.

[21] <u>Ibid</u>., p. 221.

In summarizing the above, the school, the community, family background, race and ethnic origin all function to form attitudes and values in the student toward education which may effect his or her performance. Educational outcomes, however, are not uniform in our schools, and differences have been shown to exist largely related to SES and racial factors. Researchers have suggested that schools mirror society, and serve to perpetuate social class differences, usually to the detriment of the lower income groups and racial minorities.

Schools, as organizations, exert pressure on a student's values, attitudes toward learning and aspirations toward higher education. These effects vary between schools, due to many factors, which characterize contextual, compositional and climate variables. Included in these variables are teacher expectations, parental involvement, peers, and role models for the individual student. The student's family background has also been found to be responsible for the outcomes, both academic and behavioral, and to have an influence on his or her future plans.

While differences in findings may be due to the measurements and methods of analysis, most studies generally agree that the SES of the family and the SES composition of the school are closely related. In addition, many would agree that a healthy self esteem is related to motivation, attitudes, high expectations and success in the academic arena.

The Purpose of the Study

As suggested above, many studies have suggested that differences exist between schools that are related to student outcomes, with school context and climate having an effect, not only on academic achievement, but also on students' values and goals, which, in turn, are related to academic achievement. Thus, it is suspected that the student's attitudes and expectations will vary, depending on the school he or she attends, and that grades often serve as proxies of students' competence and self worth. Students in schools which emphasize excellence in academic performance may respond differently to poor academic performance than would students in schools where less emphasis is placed on this factor.[22]

The purpose of this study was to determine whether a correlation existed between academic achievement and self concept scores in a selected group of students in four secondary schools in the Chicago area and whether these correlations varied between schools, as well. Did schools in high SES suburban settings differ from lower SES urban areas?

The study also examined whether correlations between students' self concept and their academic skills, related to gender differed within and between the selected schools.

Classroom groupings were also examined to determine whether the effects of differential groups, i.e., honors, regular or tutored, existed and whether they affected students' self concept.

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[22] Edward L. McDill and Leo C. Rigsby, Structure and Process in Secondary Schools: The Academic Impact of Educational Climates (Baltimore: John Hopkins University Press, 1973).

Strategies for Problem Identification

The selection for the schools for the sample involved using urban and suburban schools. Schools were also selected to represent SES and performance levels of the individual schools. Several methodological problems were encountered and dealt with in this study. First, determining whether student characteristics were related to academic achievement, included the subproblem of selecting a questionnaire to differentiate the self evaluations of students and obtaining scores of academic achievement for each student.

The second problem was to determine whether the effects of classroom grouping by ability affected students' self evaluation scores, and/or the correlation between self evaluation and achievement scores, and included a subproblem of selecting students from groups in different levels of achievement.

The third problem was to determine whether gender had an effect on self concepts of students within schools and between schools.

The fourth problem was to ascertain school factor effects on student performance. School context, and/or composition and climate examined in the study included the SES demographics of the neighborhood; urban versus suburban location, and demographics of the school; the amount of resources; high performance versus low performance outcomes; average mean scores of students in the schools; and the number of students who graduated and/or who dropped out. (The time period dealt with the years of 1983-84).

The problem of determining whether self concept of students in schools differed between schools required the opportunity to administer tests to students in the schools.

Finally, the problem of analysis and interpretion of the data in order to discover possible relationships between self evaluations and other variables to determine whether self concept could be predicted and/or explained by the relationship. This required methods for measuring multiple variables.

The Hypotheses

The hypotheses for this study are as follows:

1. Is a student's self concept related to his or her reading level?

2. Are there effects of classroom grouping, or tracks, which vary within schools and affect students' self concept, and, likewise, the relationship between self concept and reading?

3. Are students' self concepts and the correlations between self concept and reading related to gender?

4. Are there contextual effects of schools which affect the student's performance and attitudes? (Between schools related to high, middle or low SES composition, urban or suburban location, high or low performance level, and other characteristics of the schools)?

It is expected that the identification of low scores in academic achievement or self concept may lead to the awareness of a need for the evaluation of student performance to help the parent and/or teacher to deal differently with the student, which, in turn, may help the student

to understand himself or herself and to improve in both cognitive and affective areas.

Procedure for Collecting Data

The data base for this research consisted of: (1) primary data - the responses to the Survey of Interpersonal Values,[23] and to the self esteem questionnaire, and the demographic data from student's responses and school records; and, (2) secondary data - the normative data and scales for the SIV, published studies and texts, and unpublished dissertations and theses dealing with reading achievement, self esteem and self concept measurements and school contextual measurements.

To determine the possible contextual effects of schools, a selection of schools was made to represent various SES and racial compositions. Of the 360 students in the sample, 64 were from New Trier High School in Winnetka, a suburban public school which is nearly 100% Caucasian and located in a community of primarily middle to upper-middle class families; 66 were from Lane Technical High School, an urban public school of racially mixed composition, which is made up of of students who are selected for high academic achievement from the Chicago area; 201 were from Cathedral High School, a private Catholic School which is composed equally of Hispanic, Caucasion and Black students from the greater Chicago area; and 21 students were from Schurz, an inner city public high school on the North side of Chicago, which included one selected group

[23] Leonard V. Gordon, Survey of Interpersonal Values (Chicago: Science Research Associates, Inc., 1976). (See copy of Surveys in Appendix B)

of students in remedial reading classes. Schurz was chosen to compare tutored levels of students from a low SES school to tutored levels of students in New Trier High School, a high SES school. The sample population included all students in the reading division of English classes at New Trier High School, a group of students in the English classes at Lane Technical High School, all students in Sophomore and Junior levels at Cathedral High School, and students from freshman tutored reading level classes at Schurz High School.

The first hypothesis, to determine whether a relationship existed between scores of students in academic courses and in self evaluations required data which were obtained from school files, teacher records and from the student's answers on questionnaires. Data relating to the student's grade level, reading and grouping of students were provided from school records, with students providing the data on age and sex.

Standardized reading test scores were used at New Trier and Lane Technical High Schools. In New Trier, Iowa Silent Reading Test[24] ISRT, levels 1, 2 and 3, were given to students at the beginning of the school year. In Lane Technical, students' scores were obtained from Tests of Academic Progress[25] TAP, which were administered by the Chicago Board of Education at the beginning of the school year. Teachers' classroom scores were utilized for academic achievement of students at Cathedral. Math scores were included in the study for Lane Technical High School and Cathedral High School.[26] Within New Trier High School, the study ex-

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[24] Iowa Silent Reading Test (New York: Psychology Corp., Harcourt, Brace, Jananovich, Inc., 1973).

[25] Tests of Academic Progress (Iowa City, Ia.: Houghton, Mifflin, 1979-1982).

amined the vocabulary and reading power scores, as well as reading scores.[27]

To test the hypothesis that self concept correlated positively with reading level, two questionnaires were selected; a standardized questionnaire and a self esteem inventory, based upon students' views of self concept. A search of Buros Eighth Mental Measurement Yearbook[28] was made and the Survey of Interpersonal Values was chosen.[29] The criteria groups on which it was standardized were general and included schools from all parts of the country, and the reliability of the questionnaire has been well documented and established. Further discussion of this may be found in Chapter 3. The SIV is made up of a triad of items for forced choice of "most important" to "least important" to the student. The test can be scored on an ordinal scale for comparative purposes.

The value scales are defined by what high scoring individuals value, and conversely, what low scoring individuals do not value on that particular scale.

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[26] Math scores were obtained from TAP Tests at Lane Technical High School and from school records at Cathedral High School.

[27] Iowa Silent Reading Test, p. 7.

[28] Oscar K. Buros, ed., Eighth Mental Measurement Yearbook (Highland Park, N.J.: The Gryphon Press, 1978).

[29] Gordon, Survey of Interpersonal Values.

The six values measured in the <u>Survey</u> <u>of</u> <u>Interpersonal</u> <u>Values</u> <u>are</u>:

S - Support: Being treated with understanding, being treated with kindness and consideration.

C -Conformity: Doing what is socially correct,doing what is proper, being a conformist.

R - Recognition: Being looked up to and admired, being considered important, attracting favorable notice, achieving recognition.

I - Independence: Having the right to do whatever one wants to do, being free to make one's own decisions, being able to do things in one's own way.

B - Benevolence: Doing things for other people, sharing with others, helping the unfortunate, being generous.

L -Leadership: Being in charge of other people, having authority over others, being in a position of leadership or power.[30] More specific definitions will be found in the description of the tests in Chapter 3.

The self esteem questionnaire, a non-standardized test, was chosen for the generalized pattern of questions and ease of use, scoring and interpretation. This questionnaire, an investigator developed instrument which was designed to measure the student's general self image, consists of 50 questions relating to self attitude and behavior. Scored on a scale from 0 to 3; students indicate: not true, somewhat true, largely true and true. Students were instructed to answer every question on each questionnaire and there was no time limit. Both of these questionnaires were valid for measuring the groups being observed. This will be discussed in Chapter 3.

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[30] <u>Ibid</u>., p. 18.

Prior permission for student participation and release of the data had been obtained through a letter from Dr. Steven I. Miller to each selected school (See Appendix B).

Questionnaires were administered to students in each level during classes at the selected high schools. Teachers administered the questionnaires at New Trier, Cathedral and Schurz High Schools, and the researcher administered the questionnaires to the students at Lane Technical High School. Anonymity was stressed and students were asked not to identify themselves.

The second hypothesis required student classroom groupings, which was provided by the schools. Through the school's testing programs, students were placed in various levels of academic achievement. In New Trier, this division included regular and tutored levels; Lane Technical included honors and regular classes; Cathedral had no class groupings; and Schurz students were all from tutored classes. Gender differences were examined in the third hypothesis, with data provided by the students.

The fourth hypothesis dealt with comparisons of students' mean self concept scores between schools and composition effects based upon SES of neighborhood or location of school, urban versus suburban area, amount of resources, high performance versus low performance school, i.e., students' mean academic achievement scores within the schools, number of students who graduated and number who attended college.

The data needed for determining these differences between schools were obtained from The School Report Card for Illinois Schools.[31] Each

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[31] The School Report Card for Illinois Schools (Chicago: Illinois State Board of Education, Public Act 84-126, 1986).

school was defined by demographics, such as the percentage of low income students, the average academic level, the graduation rate, the percentage not promoted, the college preparation level, the dropout level, SAT and ACT scores, teacher/student ratio, per capita tuition rate, and (where available) the amount of money spent in teacher's and administrator's salaries and resources. The SES composition of the school, as a latent factor within the school, was determined by the location and the percentage of low income families within the school from the data in The Illinois Report Card and other available studies.[32] Data were collected also from direct observation, interviews with superintendents, counsellors, and teachers, and from school board reports. Further discussion of this will be found in the case studies of each school and in the findings in Chapters 4 and 5.

Procedure for Treating Data

The data were analyzed to determine whether students' self concept scores were related to reading scores and and whether differences in scores existed between schools.

Context, climate and/or composition of the school was examined to determine school effects on students' self concept scores. Classroom grouping was also examined for effects on students' self concept to determine whether differences existed between students within schools.

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[32] Gary Orfield, et. al., "The Chicago Study of Access and Choice in Higher Education." University of Chicago, Committee on Public Policy Studies Research Project, University of Chicago Press, 1984.

Classrooms consisted of tutored, regular and honors levels of students. Respective groups were also examined between schools.

Means of students' self evaluation scores and correlations between these scores and academic achievement were compared within and between schools.

The completed forms were screened to eliminate those in which information was incomplete or improperly filled out. The data were then interpreted through use of a scoring key from the SIV questionnaire, and adjusting the raw score to percentile scores. The self esteem results were obtained from odd and even scores which determined the final score.

Analysis was performed only on those students for whom data on all tests and school scores were provided. Missing data were set to zero and not used. Standardized scores of academic achievement were used within schools and for comparison of students' scores in groups between schools. Aggregate mean scores, rather than individual scores, were used in the analyses.

In order to look at all areas simultaneously, to examine the intercorrelations and interactions of variables and their strengths and effects, multiple regression analyses were used. SPSSX computer programming was utilized in analysis of the data.[33] Dummy variables, through variable codings were used. Pearson correlation coefficients, chi square and oneway observations were also used to determine significant differences between groups. F tests and t tests were used to determine significance. Methodology will discussed further in Chapter 3.

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[33] N. H. Nie, C. H. Hull, J. G. Jenking, K. Steinbrenner and D. H. Bent, Statistical Package for the Social Sciences SPSSX, 2nd ed. (New York: McGraw Hill, 1975).

In summary, the units of study included both the classroom and the
school. Schools were identified relative to the location and demograph-
ics of the school and the neighborhood.

Definitions of Terms Used in the Study

Achievement is the accomplishment or proficiency of performance in a
given skill or body of knowledge.[34]

Attitudes, broadly defined, are "the sum total of a person's inclina-
tions and feelings, prejudice or bias, preconceived notions, ideas,
fears, threats and conviction about any specific topic."[35]

Personality is a set of cognitive and noncognitive traits that inter-
act to explain how an individual behaves. Included are such elements as
intellect, achievement, stature, values, attitudes, sexual orientation,
health, voice quality, appearance, etc.[36]

Personality traits are aspects of the individual's total personality
used to measure single, meaningful characteristics for purposes of anal-
ysis.

Self concept is the individuals's perception of himself or herself as
a person, which includes his or her abilities, appearance, performance

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[34] C. V. Good, Dictionary of Education, 3rd ed. (New York: McGraw-Hill
Book Co., 1973), p. 7.

[35] L. L. Thurstone and E. J. Chave, The Measurement of Attitude (Chica-
go: University of Chicago Press, 1929).

[36] R. Ebel and D. Frisbie, Essentials of Educational Measurement, 4th
ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965), p. 317.

and other phases of daily living.[37] Self concept is viewed as a multidimensional construct having many factors, including academic self concept.[38]

Self esteem is the judgement and attitude an individual holds about himself or herself,[39] and incorporates the processes of self evaluation and self[40]worth. Academic achievement, family, physical appearance, socialization, and self worth are seen as essential to self esteem.

Self worth is derived from the integration of feelings in specific self esteem and relates to behavior, physical appearance, intelligence and the social and emotional self.[41] Self worth includes a sense of competence based on intrinsic rather than extrinsic determinants, as one who is in control of his or her own actions.[42]

Self evaluation is the value one places upon himself or herself, where, as in questionnaires for this study, self esteem can be measured as self evaluation.[43]

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[37] S. Coopersmith. The Antecedents of Self-Esteem (New York: W. H. Freeman, 1967), pp. 4-5.

[38] B. M. Byrne, "The General Academic Self Concept Nomological Network: Review of Construct Validation Research," Review of Educational Research 54 (1984), pp. 427-456.

[39] Good, Dictionary of Education, p. 325.

[40] D. Brisset, "Toward a Clarification of Self-Esteem," Psychiatry 35 (1977), pp. 255-263.

[41] C. Richman, R. Clark and K. Brown, "General and Specific Self Esteem in Late Adolescent Students: Race X Gender X SES Effects," Adolescence 20:79 (Fall 1985), pp. 555-566.

[42] Brisset, "Toward a Clarification of Self-Esteem," pp. 259-260.

[43] R. B. Burns, The Self Concept (New York: Longman, 1979).

Significant others are those whom individuals admire, who are important to them, whose values they respect, and whose opinions they accept and emulate.[44]

SES (socioeconomic status) is the social class to which one belongs, not entirely based upon income, but a combination of characteristics, such as the economic groups and associations one has, others with whom one interacts, status in job and prestige in the community. Warner's description included occupations, source of income, house type and dwelling area.[45] Measures often used are father's education (or mother's, or sometimes both), income level and occupation of parents (which are related strongly to characteristics and attitudes of a specific SES level in relation to academic performance). In this study, SES is used to represent the set of values and beliefs held by these groups. SES is measured at the individual level (family background), the total school level (composition), the community level (context) or a combination of these factors often used to represent the context of the school.

School context includes variables as components of the instructional environment that affect the quality and character of more proximate interpersonal, subjective and structural determinants of school outcomes.[46]

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[44] M. Rosenberg, Conceiving the Self (New York: Basic Books, 1979).

[45] W. L. Warner, M. Meeker and K. Eells, Social Class in America (New York: Harper and Brothers, 1960), p. 40.

[46] G. E. Thomas, K. Alexander and B. K. Eckland, "Access to Higher Education: The Importance of Race, Sex, Social Class and Academic Credentials," School Review 57 (1979), pp. 133-157.

<u>School</u> <u>climate</u> <u>effects</u> are associated with a number of school factors that establish the "personality" of the school and include a combination or series of measures, such as the attitudes of students and the staff.

<u>School</u> <u>compositional</u> <u>effects</u> are those variables related to the SES of the students, schools or immediate neighborhoods, and may include some indication of income, prestige or education of student's family background.

Abbreviations Used in the Study

NTHS - New Trier High School

Lane Technical - Lane Technical High School

Cathedral - Cathedral High School

Schurz - Schurz High School

SES - Socio-economic Status

EEO - Equal Educational Opportunity

NCES - National Center for Education Statistics Studies (1980-1982)

HSB - High School and Beyond Study

SIV - <u>Survey</u> <u>of</u> <u>Interpersonal</u> <u>Values</u> <u>Scale</u>

TAP - <u>Tests</u> <u>of</u> <u>Academic</u> <u>Progress</u>

ISRT - <u>Iowa</u> <u>Silent</u> <u>Reading</u> <u>Test</u>

GPA - Grade Point Average

MRA - Multiple Regression Analysis

Limitations

The scope of this study included immediate data from questionnaires, the information given by the student, the data provided by the teachers relating to a student's group and academic scores, and the context of the school and the classroom as formerly described, and was limited to these areas. The study used mean aggregate scores rather than individual scores and, thus, would not identify individuals of a particular school, group or sex as possessing the characteristics of the group, nor would the study extrapolate from the findings of the study to predict beyond the selected sample being examined. Therefore, no attempt was made to predict the future success of students, nor to evaluate the ability of students in academic achievement based upon their self esteem level, nor their self esteem level based upon their degree of academic performance.

In justifying this sample, the schools were chosen to compare the academic performance level as well as the location of the school.

Assumptions

1. Students studied in the test group were representative of students in other classes.

2. Academic achievement in school was identifiable by tools of measurement.

3. The SIV and self esteem questionnaires would identify the student's self concept differentially from those of other students' within and between schools.

4. Reading scores and academic scores would vary relative to group
level of students, within schools and between schools.

5. The case study method of analysis would identify characteristics uni-
que to the school, for comparison with other schools in the study.

6. The use and interpretation of self evaluation scales would aid in the
understanding of student's self concept and the relation to academic
achievement outcomes to help students improve in academic performance
and/or self concept.

The Importance of the Study

Although the reality of structural effects in school settings will
constitute an important assumption of the present study, it should be
noted that opponents to this position argue that the supposed contextual
influence of values is due to an individual's own personal characteris-
tics.

While many studies have examined differences corresponding to stu-
dents' self concept between schools, fewer have focused on differences
of respective levels between schools. Classroom grouping has been sug-
gested as having an effect on student's attitudes and self concept, how-
ever, these groupings have not been examined for bivariate correlations
between self concept and level of achievement within the groups. This
study will attempt to determine whether students differ both within and
between classroom groupings on their self concept evaluations, and on
the bivariate relationship of reading and self concept. Gender within
groups and between groups also will be examined.

As stated earlier, many educators have assumed that a relationship exists between academic achievement and self esteem, even though a causal relationship has not been clearly defined.[47]

Some researchers have suggested that the definition of self esteem and self concept should be reexamined.[48] Self worth, as an inseparable part of the self, makes the task of observation and measurement very difficult, due, in part, to the fact that self concept encompasses a broad scope. With this in mind, because the need exists to further define both self esteem and self concept in order that they can be more closely analyzed, the Survey of Interpersonal Values (SIV)[49] and a self esteem test were utilized. As described earlier, the SIV factors out the traits of support, conformity, recognition, independence, benevolence and leadership that are identified as valuable to the respondee. By contrast, the self esteem questionnaire was used as a much broader tool measuring, in general, the amount of self worth an individual feels for himself or herself. Through the application of the data generated from the SIV and the self esteem test, it is expected that more awareness of the possible relationship between evaluation variables and academic achievement will be realized. In addition, it is hoped that this data will give teachers, counselors, parents and students greater insight into student attitudes and behavior.

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[47] R. Wylie, The Self-concept: Theory and Research on Selected Topics, Vol. 2 (Lincoln, Nebraska: University of Nebraska Press, 1979).

[48] Burns, The Self Concept, p. 17.

[49] Gordon, Survey of Interpersonal Values, 1976.

An important factor in this study is the case study method which utilized all available data in each school to make various comparisons within the schools. Different in depth analyses were made within schools, based upon the availability of the data. The New Trier case study examined reading, vocabulary and reading power, while Lane Technical and Cathedral examined reading and math scores. The bilingual variable was included in both Lane and Cathedral High Schools, but not from New Trier High School, where it likely would not have been an important factor, since there are fewer minority students in this school.

While other studies have examined self concept related to academic achievent, this correlation has not been examinded by classroom groups between schools to the degree which this study has compared the findings.

The reference group theory was used for comparisons between schools, where the combined attributes of all members of the group form a single measure by which they are identified. (See Appendix A, Tables 45-47).

The Organization of Remaining Chapters

An introduction to this study was presented in the first chapter. The second chapter will contain a review of related literature. Chapter 3 will describe the sample characteristics of the subjects and the method of procedure. Schools will be analyzed as case studies in Chapter 4, with each school described by location and demographics. Students' scores will be compared between schools in Chapter 5 and an analysis of

the results will be made. Furthermore, data from studies describing contextual effects of schools and classrooms, including the effects of SES, racial mix, school performance and resources will be examined. A summary, findings, conclusions and recommendations will be presented in Chapter 6.

REVIEW OF THE LITERATURE

Introduction

The relationship between self concept and academic achievement has been investigated in many studies, and a consensus exists that a healthy self esteem and success in the academic arena are strongly correlated, however, as discussed in Chapter 1, research studies have reached varying conclusions for their findings.

Reading is basic for education in schools, and while not causal, reading and self concept are related. The difference in academic outcomes between schools were investigated in depth in The Equality of Educational Opportunity survey of 1966.[50] The survey pointed out differences in academic achievement, attitudes and aspirations of students as it examined the characteristics of the student body, institutional staff, school programs and resources and their effects on the educational development of students.[51] The EEO Report posited that these differences were a result of family background, and that the variance in outcome was associated with socioeconomic status (SES) and racial composition of the schools.

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[50] Coleman, Campbell, .et. al., Equality of Educational Opportunity, pp. 320-321.

[51] Ibid.

Those who concurred with the EEO Report placed the largest emphasis for academic performance on parents' educational backgrounds, income, profession, race and ethnic group. Opponents to this view believed that the school a student attends makes a significant difference in his or her attitudes and academic achievement and that teacher qualifications, facilities and resource expenditures are important influencing factors.[52] The contextual argument further holds that students' attitudes and behaviors are affected by the climate, composition and the context of the school and the classroom and that the norms, performance standards and values held by the staff and student body hold, exert great influence on students' attitudes and values.[53]

The issue of whether school context or family background has the stronger effect has been examined in many recent studies with conflicting conclusions. One of the difficulties in comparing studies has been the unit of study for analysis, which have included the school, the district or the entire system. Tyler found individual schools often varied more within a school district than averages of school districts within the region, especially when there were special influences common to the particular school.[54]

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[52] Alan Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," pp. 836-845; Otis D. Duncan, Socioeconomic Background and Achievement (New York: Wiley, 1972); R. E. Herriott, "Some Determinants of Educational Aspirations," pp. 157-177; Brookover, et. al., Schools Can Make a Difference, p.229.

[53] Brookover, et. al., Schools Can Make a Difference, pp. 194-195.

[54] Ralph Tyler, "The Functions of Measurement in Improving Instruction," in Educational Measurement ed. E. F. Lindquist (Washington, D. C.: American Council on Education, 1951), pp. 47-67.

Bidwell and Kasarda divided the school into two factors, with "school" represented as the physical or material quality of education and "schooling" as the actual education which takes place within the school.[55] Brookover used the school as unit of study. Recognizing that individual background may affect the way in which a school social system socializes the students, and may explain much of the within school outcomes, he focused on the social system existing within the school and hypothesized that the school social climate structure and student role definitions which characterize a school social system will affect the cognitive and other behavior acquired by children in that social system. [56]

Brookover identified student body composition by SES and racial composition of the school and other personal inputs, such as, school size, daily average attendance, professionals per student, teacher's average teaching years, tenure, average degrees and mean salary. Included among these variables are the percentage of disadvantaged students, the percentage of white or black students, percentage of seniors in college, and the schooling a student expects to get.[57]

School characteristics are complex factors for measurement, with the variables most often used in contextual analyses of schools being the demographic factors of SES composition and racial composition. To de-

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[55] C. E. Bidwell and J. D. Kasarda, "Conceptualizing and Measuring the Effects of Schools and Schooling," American Journal of Education (August 1980), pp. 401-426; Bidwell and Kasarda, "School District Organization and Student Achievement," American Sociological Review 40 (1975), pp. 55-70.

[56] Brookover, et. al., Schools Can Make a Difference, pp. 38-44.

[57] Ibid.

scribe differences between schools, researchers have made distinctions
between school climate, school context and school composition.
(1) Climate effects include student characteristics and demographic
variables, i.e., numbers (school size), abilities, student body SES and
student body I.Q.; (2) social characteristics include professional and
educational background of parents (SES), race, and ethnic backgrounds;
and (3) attitudinal variables include social climate attitudes (atti-
tudes toward school and learning) and values of the student body.[58]

Through examination of larger units of study such as school systems
and school districts, researchers have distinguished school context from
school climate. Brookover used school climate and structural character-
istics of the school, and some of the specific behaviors associated with
these characteristics of the social system, to investigate the extent to
which they explain the differences in outcomes between schools. His
categorical divisions included: (1) school, (2) schooling and (3) envi-
ronment, each measuring structural effects.[59] The first two constructs
comprised the composition of the schools as defined above. The third
construct defined school climate.

The first set of variables, "school", or school social system, was
based upon students' parents' occupations, and included SES and racial
composition of the school student body, i.e., the percentage of white
students in the school student body, and personnel inputs, such as,
teacher qualifications (experience and advanced education), ratio of

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[58] W. G. Spady, "Mastery Learning: Its Sociological Implications," in
Schools, Society, and Mastery Learning, ed. J. H. Block (New York: Holt,
1974), pp. 91-116.

[59] Brookover, et. al., Schools Can Make a Difference, pp. 9-14.

students to professional personnel, number of students in school, average daily attendance, and size of school.

The second set of variables, "schooling," called school social structure, included student status-role definitions, the extent to which students are grouped for instructional purposes, the degree of openness in the school organization, and the extent to which parents are known by teachers and principal and are involved in the school social system. Also included were teacher satisfaction, differentiation in student programs, principals' report of time devoted to instruction and type of classroom function, i.e., open or closed classrooms and democratic or autocratic systems.

The third set of variables, "environment", formed the school social climate and included the teachers' attitudes and feelings about the school. This social climate of a school was defined by the interactions which occurred within the school and influenced student perceptions and behavior expectations and attitudes towards themselves and other members of the social system.

The importance of climate in Brookover's study lies in his hypothesis that school characteristics of social structure climate could explain outcomes often attributed to input variables. The study found that three sets of social system variables; social composition (and other personnel imputs), social structure and social climate of the school "explained most of the variance between schools; more than 85% of between school variance in mean reading and math achievement in all schools (explaining 90% in majority black schools, and 66% in predomi-

nantly white schools)." [60] He has suggested that the school has some "common norms and expectations about students and definitions of appropriate behavior" that affect the behavior of the students and it is through these norms and expectations of the school community that the students develop their own norms and expectations of their ability.[61] Boocock agrees that the most powerful predictors of student achievement are the composition and climate of the student body and these norms affect the definitions of appropriate student role behavior, which are crucial characteristics of the school social system on the socialization of the students.[62]

Contextual Effects

McDill, et. al., reanalyzed data from the EEO Report which stated that schools bring little influence to bear on a child's development that is independent of his or her background and general school concept, and associated the variance in outcome with socioeconomic status (SES) and racial composition of the schools. In a carefully controlled analysis of school value climate, including size, SES and ethnic composition, and the community of the school, McDill, et. al., took the proposition that the quality of high schools, as measured by various components of their educational climates, was positively related to student achieve-

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[60] Ibid., p 227.

[61] Ibid., pp. 61-71; p. 224.

[62] Boocock, Sociology of Education: An Introduction, p. 209.

ment and aspirations over and above the student-body characteristics alone. When I.Q. scores and individual SES were controlled, the original effect of SES context almost disappeared, leading McDill, et. al., to conclude that direct measures of school climate should be employed in contextual research whenever feasible.[63]

The McDill and Rigsby study was congruent with the EEO Report in finding that economic resources such as teachers starting salaries and per-pupil expenditures were negligible or negative in relation to student outcomes.

Wilson's studies, like McDill, et. al., found that certain school related characteristics exerted an effect on students even when individual ability and family background were controlled.[64] That is, the students tended to conform to the scholastic norms of the majority in the school, but climate exerted influence above student body alone.[65]

Wilson, in agreement with Coleman on family background effects, indicated that a student's family is the greatest influence on his or her choice of higher education and Wilson's statement that there are large disparities in educational attainments of students attending schools with contrasting racial or socioeconomic composition has been repeatedly documented.[66]

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[63] E. L. McDill, et. al., "Institutional Effects on the Academic Behavior of High School Students," Sociology of Education 40 (1967), pp. 181-199; _____, and L. C. Rigsby, Structure and Process in Secondary Schools: The Academic Impact of Educational Climates, p. 88.

[64] Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," pp. 838-840.

[65] McDill and Rigsby, Structure and Process in Secondary Schools: The Academic Impact of Educational Climates, p. 199.

[66] Alan Wilson, "Social Class and Equal Educational Opportunity," Har-

Herriott and St. John concurred that the SES context of the school has an independent effect on school performance.[67] Conant suggested that many of the school characteristics that tend to be associated with differential levels of academic performance and tend to be linked to SES level of the pupils' parents and peers also tend to be the kind that are deeply rooted in the economic, social and cultural level of the community and are not readily affected by spending more money or changing the administrative decisions in the school[68] Most of the school correlates of pupil achievement are fairly obviously linked to the SES level of the community where the schools operate. A relationship does exist between the money a school spends which is reflected in the SES of the community. Those items easiest to change in the school relate to money, program or administration and those hardest to change are the areas which deal with the characteristics of people who make up the schools, such as teachers race, attitudes and verbal ability, and students expectations, and it is in these functional areas that the largest differences occur.[69]

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vard Educational Review 38 (1968), pp. 77-84; pp. 227-316; Astin and Cross, The Impact of Financial Aid on Student Persistence in College Jencks, "Social Stratification and Higher Education," pp. 227-316; Jencks, et. al., Inequality: A Reassessment of the Effect of Family and Schooling in America (New York: Basic Books, 1972).

[67] R. E. Herriott and Nancy St. John, Social Class and the Urban School (New York: John Wiley, 1966).

[68] James Conant, The Comprehensive High School: A Second Report to Interested Citizens (New York: McGraw-Hill Book Co., 1967).

[69] J. S. Coleman, "The Concept of Equality of Educational Opportunity," Harvard Educational Review 38:1 (1968), pp. 7-21.

Dyer found school characteristics to have a definite influence on

achievement and criticized Coleman for counting the easiest to measure

characteristics, such as money spent per student, number of hours in

day, year, number of courses, and teacher student ratio. He felt that

if salaries in low academic schools were made competitive with high aca-

demic schools, the students' performance may approach that of students

in high achievement schools, because of the improved instruction. Dyer

pointed out that the hypothesis was compelling that qualitative differ-

ences in the school accounted for much of the variation in academic and

vocational achievement between one school and another and that Coleman's

homogeneous groups concealed relationships in the data.[78]

Compositional Effects

Some researchers who have found compositional factors to be influen-

tial believe that the SES of the families which comprise the school pop-

ulation are the determining factors in the outcome and what is being

measured is actually family background. Hauser felt that context could

not be accurately assessed from SES or other representations for school

environment because, since SES influences norms and educational process-

es in schools, this understates the importance of SES. He found that,

although some relationship existed between SES composition and student

academic achievement and aspirations, this effect was relatively small

and the structural effects were greatly reduced when adequate statisti-

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[78] Harry S. Dyer, "Social Factors and Equal Educational Opportunity," Harvard Educational Review 38 (1968), pp. 38-56.

cal controls were available for individual level attributes.[71]

Wilson found that neither racial composition of the school nor racial or class composition of neighborhood had any independent effect on school performance, over and above the social class composition of the school, upon achievement. In fact, residential segregation may serve to structure the effective environment of students so that their integration in schools makes no difference. He felt that data suggest that the effect of neighborhood segregation upon achievement is entirely through the resulting segregation of neighborhood schools on social class lines and that "restructuring the composition of the schools, even in the absence of residential rearrangements, could be expected to have some effect upon academic achievement of students."[72] Dyer also saw pupil achievement linked to the SES level of the communities and felt that "improvement could come only by changing social environment," which was not possible.[73]

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[71] Robert M. Hauser, Socio-Economic Background and Educational Performance (Washington, D.C.: American Sociological Association, 1971), p. 45; "Contextual Analysis Revisited," Sociological Methods and Research 2 (1974), pp. 365-375.

[72] Alan Wilson, "Educational Consequences of Segregation in a California Community," In U. S. Commission on Civil Rights, Racial Isolation in the Public Schools (Washington, D. C.: U. S. Government Printing Office, 1967), pp. 165-206.

[73] Dyer, "Social Factors and Equal Educational Opportunity," p. 54.

Climate Effects

School climate has been viewed, likewise, as an important contributor to school outcome measures. Some indicators of climate include teacher and student attitudes and expectancy, parents' involvement and interest in student's progress and, more generally, according to a number of researchers, the dimensions of the social and cultural milieu.[74]

The difficulty of measuring climate lies in the problem of separating the composition of classrooms and schools from the individual student's background. Coleman described the value climate of the school, formed by the attitudes of students and the peer groups which operate within the context of the school, as affecting the student's performance which, in turn, reflects back upon the attitudes and aspirations of the student.[75]

Agreeing with Brookover, Spady's study on school resources and children found that the social climate, based upon the students in attendance, affects attitudes and values of the students.[76] He disagreed with the EEO Report, however, concluding that school contextual effects do make a difference on outcomes, and especially when resources are spent to purchase able, well qualified teachers.[77]

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[74] A. W. Halpin and L. Croft, The Organization Climate of Schools (Chicago: University of Chicago Press, 1973).

[75] J. S. Coleman, The Adolescent Society: The Social Life of the Teenager, and its Impact on Education (New York: The Free Press, 1961); E. L. McDill, et. al., "Educational Climates of High Schools: Their Sources and Effects," Journal of Sociology 74 (1969), pp. 567-586.

[76] W. G. Spady, "The Impact of School Resources on Children," in Schooling and Achievement in American Society, ed. W. H. Sewell, et. al. (New York: Academic Press, 1976), pp. 185-223.

In summary, school context refers to the total instructional environment which affects the quality and character of school outcomes.[78] School composition relates to the SES of the students and the immediate neighborhood, and reflects the income, education and values of the student's family. School climate has been defined by those factors which establish the personality of the school and measures that include the attitudes and values of the students and staff.

Findings indicate that schools have a quality that strongly influences the learning of its students and the attitudes of teachers and parents. The differences in income, race and class reflect the home, the neighborhood and the school and produce differences in achievement and aspirations of students, with schools serving students differentially.

Socioeconomic Status (SES)

As described in Chapter 1, SES or socio-economic status has been defined as the process of social stratification in a society. Kahl's interpretation of SES includes the dimensions of prestige, occupation, possessions and income, types of social interaction, class consciousness, value orientations and power.[79] Conceptualization of high SES has implied that those who hold this status are in control of their achieve-

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[77] Spady, "The Impact of School Resources on Children," p. 195.

[78] G. E. Thomas, K. Alexander and B. K. Eckland, "Access to Higher Education: The Importance of Race, Sex, Social Class and Academic Credentials," School Review 57 (1979), pp. 133-157.

[79] J. A. Kahl, "Educational and Occupational Aspirations of 'Common Man' Boys," Harvard Educational Review 23 (1953), pp. 186-208.

ment outcomes and use these "rights" to maintain their advantaged posi-

tions.[80]

Social class, not entirely based upon economic indicators, is com-

posed of a combination of several characteristics, such as the economic

groups and associations which one has, those with whom one interacts,

the status of occupation and the prestige in the community.[81] Whereas

England's class system is rigid, classes in America are considered to be

mobile, with education considered to be one of the principle routes to

upward mobility.

Social stratification has been defined by Warner's social index, The

Index of Status Characteristics (ISC). The ISC is an objective measure,

which uses symbols of one's status, occupation, source of income, house

type and dwelling area to define sex levels of social stratification:

upper-upper class, lower-upper class, upper-middle class, lower-middle

class, upper-lower class and lower-lower class.[82]

While not the only criterion used to define social class, educational

researchers have generally used mean parental education, as the most re-

liable estimate and the primary indicator of social class. Measures of

educational levels for social class groupings have been defined by:

low, fewer than 12 years of schooling, middle, 12 years of schooling,

and high, greater than 12 years of schooling.[83] Also measured are pa-

rents' income level and occupation which have been found to be related

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[80] Warner, et. al., Social Class in America, pp. 38-39.

[81] Ibid., p. 39.

[82] Ibid., pp. 39-43.

[83] Morris Rosenberg, The Logic of Survey Analysis (New York: Basic Books, 1968).

to characteristics and attitudes of a specific SES level and to strongly reflect academic achievement levels.[84]

SES has been used as a measure of composition in schools, reflecting the SES of the location of the school. Units of measure of SES have included the individual level, the total school level, the community level or a combination of these levels. This study identified SES of the · schools relative to the SES of the community, and the compositional structure of the school was defined by the percentage of low income students, the racial mixture, the number of students who continue education into college the dropout level, SAT scores, and, where available, the resources or the amount of money spent per student[85] (See Appendix A, Tables 45-47).

School Context and College Aspirations

As described earlier, the Wilson Study used SES to represent the context or the climate of the school. The contextual effects of schools have been shown to be related to college aspirations, where the school a student attends has been found to have an independent effect on the student's decision to attend college, over the SES of the student's family.[86]

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[84] Jencks, et. al., Inequality, p. 65.

[85] The School Report Card for Illinois Schools (Chicago: Illinois State Board of Education, Public Act 84-126, 1986)

[86] Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," pp. 836-845.

Wilson's study in 1967, under contract with the U.S. Commission on Civil Rights (USCCR), reanalyzing the data collected in the original EEO survey, found that the percentage of students planning to attend college was calculable through consideration of the student's SES, the SES of the school, and the proportion of whites attending the school. The study also found that schools mattered more for the black and low income disadvantaged students, who were especially susceptible to the quality of the schools they attended.[87] Similarly, in his use of a national sample of schools, Michael noted that the achievement scores of students from a high SES background who attended working-class schools were lower than the achievement scores of students from lower SES backgrounds, who attended predominantly middle SES schools, thus, concluding that the SES of a school has a significant effect on achievement, as well as on the aspirations of students.[88] Bain and Anderson, reviewing the relationship between SES of high school and education plans, also found positive relationships between school SES composition and the college plans of students in a given social class. They inferred peer influence was a factor. Students were more apt to plan on college if they attended an upper rather than a middle class high school, and least if they were in a lower class high school.[89]

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[87] Wilson, "Social Class and Equal Educational Opportunity," pp. 77-84.

[88] J. A. Michael, "High School Climates and Plans for Entering College," Public Opinion Quarterly 25 (1961), pp. 585-595.

[89] Robert K. Bain and James G. Anderson, "School Context and Peer Influences on Educational Plans of Adolescents," Review of Educational Research 44 (Winter 1974), pp. 429-444.

Boyle's findings indicated that attending a high SES school, in comparison to one of medium SES, had a fairly strong effect on student's aspirations, while almost no difference existed between attending a medium SES or a low SES school. Moreover, when investigating ability and occupational values and controlling for family background, a relationship appeared to exist between a student's ability and values and his or her college plans.

Jencks reanalysis of EEOR and Project Talent data found middle class high schools to have contradictory effects on students' college plans with no measureable resources of policy showing a consistent relationship to the school's effectiveness on boosting school achievement. While attendance in a middle class high school increased a student's chances of making college oriented friends, it was suspected that a working class student with lower academic achievement attending a high school with high achieving students would not become close to high achieving friends. If that student, however, attended a school with low academic and high aspiration students, he or she would have more chances at making friends.[90] Most schools are either high achievement/high aspiration or low achievement/low aspiration, so that social composition would not be expected to have much impact in most cases.[91]

Sewell, et. al., in the Wisconsin Study of Social and Psychological Factors in Socioeconomic Achievement, which required over twenty years of research, examined the joint effects of SES background and ability and the variance in post-high school educational attainment of stu-

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[90] Jencks, et. al., <u>Inequality</u>, p. 139.

[91] Brookover, et. al., <u>Schools Can Make a Difference</u>, p. 197.

dents.[92] The study concluded that SES has no effect on grades in high school "independent of academic ability, but has strong direct and indirect effects on significant others' influence, and through these on educational and occupational attainments."[93]

Spady, using data from the Sewell and Armer study, found that, because the study used SES of neighborhood status by area, rather than the high school social class, and used student sex, SES and I.Q. as independent variables on college plans, that the results underrated the school SES compositional effects. He found a weak positive relationship between the school's SES composition and college plans when controlling for students' SES and intelligence. Spady found that social climate affected school SES composition and, further, that school SES composition had a sizeable influence on students' college plans. The compositional effect of the school SES was related to the SES of the students' family. The largest compositional effect was found for girls attending upper versus middle class schools, while the difference between middle and lower SES schools was not significant. The influence on college plans for boys was greatest in upper SES schools, negligible for those attending mid versus lower class, and least for lower class students attending mid versus low class schools.[94]

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[92] William H. Sewell, et. al., "The Educational and Early Occupational Attainment Process," American Sociological Review 34 (1969), pp. 82-91.

[93] William H. Sewell and R. M. Hauser, "Recent Developments in the Wisconsin Study of Social and Psychological Factors in Socioeconomic Achievements," (Madison: University of Wisconsin, Center for Demography and Ecology, Working Paper 11, 1976), p. 3.

[94] Spady, "The Impact of School Resources on Children," pp. 185-223.

Orfield's Chicago School study suggested that race and area are largely responsible for the widely disparate distribution of education. The study found that the admission of students to the more select colleges and universities is greatly dependent upon the secondary schools which they attend, with those students who have less adequate preparation having less opportunity for selection. College plans have been shown to be higher in high SES schools, whether students' parents were of higher or lower SES levels.[95] With family background controlled, the school appeared to have a pronounced effect on scholastic ability, and with ability controlled the effect of the school on college plans was reduced by one-third, suggesting that the higher scholastic ability of students attending high SES metropolitan schools is a partial explanation for their higher aspirations. Orfield, et. al., found a complex interdependency system to exist, which is self perpetuating, where the more affluent children are prepared by their suburban high schools for higher education. Meanwhile, inner city schools provide less adequate programs or offer vocationally oriented curricula to prepare students for the labor market, and a large proportion of these inner city minority students drop out even before completing high school.[96]

According to the 1980 Census data, which reflect the inequalities of the high school systems, differences in educational attainment by background, class, race, religion and geographic area were shown to exist.[97]

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[95] Orfield, et. al., The Chicago Study of Access and Choice in Higher Education, p. 5.

[96] Ibid., pp. 6-8.

[97] U.S. Bureau of the Census, 1980 Census of the Population, Vol. 1,. Chapter D. (Washington, D. C.: U. S. Government Printing Office, 1980).

Thus, studies would indicate that schools strongly reflect income, SES, and the racial and ethnic differences of the community in which they are located, and which are representative of the educational backgrounds, income and professional status of the students' parents and that school context and composition affects the outcomes and aspirations, as well as the values and attitudes, of students of who attend these schools.

Classroom Grouping

As discussed, the differential success of high schools in developing the scholastic abilities of their students can be explained in part by the SES of the family and the school context. The failure of scholastic ability to explain all of the effects of the metropolitan high schools suggests the existence of other explanations, such as within school groupings, i.e., "tracking", and the influence of peer groups.

Historically, Dewey saw the classroom as a small society; an institution within a larger society, with individuals brought together because of social functions to be performed by teacher and students and where students learn the functions expected of them.[98] Parsons, who used the classroom as unit of analysis, defined it as the most important place, where formal education is conducted.[99] Classrooms, as climate effects,

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[98] Dewey, Democracy and Education, p. 416.

[99] T. Parsons, "The School Class as a Social System: Some of Its Functions in American Society," Harvard Educational Review 29 (1959), pp. 297-318.

have been shown to have measurable effects upon the students. The

physical environment, teacher attitude, atmosphere and values of those

in the classroom are related to student achievement and values.[10]

McPartland placed the largest emphasis on the peers with which a student

associates,[11] and Goldberg felt the "group personality" of the students

and the teacher, as they interact in the classroom, had the greatest in-

fluence on students' values.[12]

The role structure is important in the definition of a classroom,

where the student is dependent on the teacher. Located in the social

structure in terms of a certain position of one's status, role models

serve as socially defined categories of behavior. The norms of the

structure define the patterned behavior acted out in these particular

status roles.[13] Teacher attitudes, methods and effectiveness influence

the classroom climate, and their expectations of students' ability have

been shown to have an effect on students' attitude and output.[14] The

complexity of relationships in the the classrooms, including age, per-

sonality and SES, have been found to affect individual learning, and af-

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[10] McDill and Rigsby, et. al., "Institutional Effects on the Academic Behavior of High School Students," p. 188.

[11] J. M. McPartland, "The Relative Influence of School Desegregation and Classroom Desegregation on the Academic Achievement of Ninth Grade Negro Students," Baltimore: Johns Hopkins University, Center for Social Organization of Schools, 1967.

[12] M. Goldberg, et. al., The Effects of Ability Grouping (New York: Columbia University, Teachers College Press, 1966).

[13] Steven I. Miller, An Introduction to the Sociology of Education (Cambridge, Mass.: Schenkman Publishing Co., Inc., 1977).

[14] R. Rosenthal and L. Jacobson, Pygmaglion in the Classroom: Teacher Expectation and Pupils' Intellectual Development (New York: Holt, Rinehart & Winston, 1968).

fect it differently depending on the students' characteristics.[15] Teach-
er roles and roles of other school members also affect student outcomes
in academic achievement and their self concept of abilities and self re-
liance.

Classrooms, grouped on the basis of achievement or ability, have had
the effect of creating inequalities by the fragmentation of students
into homogeneous groups, often leading to differences in teacher and
student expectations and, as a divisive measure between groups, has been
interpreted as racial discrimination in some schools where honors class-
es may include more white students, while lower or remedial classes are
made up of predominantly black students.[16] Even when students are ran-
domly assigned in ungrouped classes, teachers often group them by abili-
ty within the classroom.[17]

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[15] G. J. Anderson and H. J. Walberg, "Classroom Climate and Group Learn-
ing," International Journal of the Educational Sciences 2 (1968), pp.
175-180.

[16] Samuel Bowles and Herbert Gintis, "I.Q. in the United States Class
Structure," in Power and Ideology, eds. J. Karabel and A. H. Halsey (New
York: Oxford, 1968), pp. 215-232.

[17] Ray Rist, "Student Social Class and Teacher Expectations: The Self
Fulfilling Prophecy in Ghetto Education," Harvard Educational Review 40
(August 1970), pp. 411-450.

SES and Student Outcomes

After the EEO Report, on SES, relative to other variables that had an effect on academic achievement, "cultural deprivation" was hypothesized as a further explanation of poor school performance. The social and cultural influences of the home were shown to have a great bearing on the student's motivation and performance in school, where low SES family status interfered with all school learning, but especially with learning to read.[18] Some educators and sociologists, however, felt that focusing on low SES groups provided a distorted image of the low SES family.[19] While money, per se, did not explain more than 15 percent of the overall difference in attainment between students from different class backgrounds,[110] poverty was found to be largely responsible for students' absentee and dropout rate, due to malnutrition, disease, mental retardation or to lack of money for basic supplies or clothing.[111] The Moynihan Report, likewise, argued that children from low income homes, broken homes, where fathers were absent, and uneducated homes had inferior outcomes in school.[112]

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[18] Robinson, Why Pupils Fail in Reading, p. 17.

[19] Andrew Billingsly, "Black Families and White Social Science," Journal of Social Issues 26 (1970), p. 133.

[110] Jencks, et. al., Inequality, p. 139.

[111] H. McKay, et. al. "Improving Cognitive Ability in Chronically Deprived Children,' Science 200 (1978), pp. 270-278.

[112] Daniel Moynihan, The Negro Family: The Case for National Action U.S. Department of Labor. Office of Planning and Research. Washington, D.C., 1965.

The "War Against Poverty," a federally funded program for the disadvantaged under the Elementary Secondary Education Act of 1965, was begun in an effort to upgrade education and equalize educational output. Preschool programs, such as Headstart, high school programs, such as Follow Through and Upward Bound, and desegregation measures attempted to bring the low income, racial minority student into higher level education schools, with varying results.[113] The programs were found to make less difference in a child's achievement than did the variation in his or her family background.[114] Educators and researchers reported that lower SES children benefitted most from integrated schools, teacher quality and teacher interest in reading achievement.[115]

Boocock and Coleman agreed that for most minority groups, particularly black schools, no opportunity was provided to overcome the deficiencies that accompanied low SES, and, in fact, students in these schools fell further behind the white majority in those developmental skills which are critical to making a living and joining the larger society.[116]

The average black student at grade six was found to be 1 3/4 years behind the average white student in reading achievement; at grade 9 to be 2 1/2 years behind; and at grade 12 to be 3 years behind. Puerto Rican children at grade 6 were found to be 3 years behind white children

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[113] Nancy St. John, School Desegregation: Outcome of Children (New York: Wiley and Sons, Inc., 1975).

[114] Ibid.
E. A. Hanushek, "Throwing Money At Schools," Journal of Policy Analysis and Management 1:1 (Fall 1981), p. 87.

[115] Coleman, "The Concept of Equality of Educational Opportunity," pp. 18-21.

[116] Ibid Boocock, Sociology of Education: An Introduction, p. 18.

and 1 1/4 years behind black children. Furthermore, this trend continued over the next six grades.[117] Causes have been attributed to family conditions, deficiencies in facilities and programs of metropolitan area public schools. Likewise, ethnicity, SES, cultural deprivation, expectations, emotional disturbances, segregation and integration all affect class work and self concept of the student.[118]

The EEO Report called attention to the need for equality in black and minority education, as it looked at the educational development of minority group children.

Dyer felt that Coleman's data did not support the assertion that a minority pupil from a home without much educational strength, placed with schoolmates with strong educational backgrounds,would be likely to increase his or her achievement levels, and, in fact, if moved from one group to another, the change may actually be the reverse of Coleman's expectations.[119] Dyer criticized Coleman for placing too much emphasis on verbal learning while neglecting the importance of the development of student attitudes and outlook.[120]

Dentler found that taking into account the influence of SES background on achievement children from higher SES backgrounds showed a consistent advantage over others in lower income and lower occupational status. Levels of aptitude varied with SES composition of the school, and children in integrated schools showed a better total performance.

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[117] R. Dentler, et. al., The Urban R's (New York: The Center for Urban Education, 1967), p. 99.

[118] Ibid., p. 289.

[119] Dyer, "Social Factors and Equal Educational Opportunity," pp. 48-52.

[120] Ibid., pp. 38-56.

Whenever class distinctions were evident within racial groups, achievement and self concept tended to be highly related to SES. Levels of aptitude varied with SES of the school. Dentler found self image of black children, as compared to that of white children, tended to be extremely low. Even black middle class children rarely showed a positive self concept, whereas the self concept of white children in general was positive. Low SES Puerto Rican children were even less negative than low SES black children.[121]

Dentler showed facilities and curriculum to have the least effect on achievement, with teacher quality next, and backgrounds of fellow students as the most significant for educational achievement.[122] Although there is disagreement over the way in which family background and status ultimately affect educational achievement, the effects seem to be both directly and indirectly related to other variables related to related to achievement.[123] From a reanalysis of several surveys, Jencks estimated that family background explained close to half of the variations in educational attainment.[124] The best general predictor of success in school is the SES of the student's family, and this relationship between family SES and academic achievement has been found to be common to every Western society.[125]

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[121] Dentler, et.al., The Urban R's, p. 99.

[122] Ibid.

[123] Boocock, Students, Schools, and Educational Policy, p. 41.

[124] Jencks, et. al., Inequality, Chapter 5.

[125] A. Inkeles, "The International Evaluation of Educational Achievement: A Review," Proceedings of the National Academy of Education, 4 (1977), pp. 139-200.

SES and Cultural Differences

Studies have shown that the values placed on education, attitudes toward learning, motivation, acceptance of school rules and expectation of students vary by SES levels. Students from poor cultural backgrounds are often ill prepared for the learning experience in the classroom and possess an unfavorable attitude toward school, resulting in lower achievement outcomes.[126] They often have difficulty in acclimating to the classroom environment, which is based largely upon middle class norms. Laosa's research examined the relationship between the teacher's style and the effects it had on a particular population of students. The study found that those mothers who had more experience in school tended to use teaching and discipline strategies at home patterned after those used at school, which had adaptive value in the child's adjustment to the classroom.[127]

Rosen has classified the typical middle class family value system and child rearing pattern as an "achievement syndrome" which produces high actual achievement in school and orients the child toward success in school and later life.[128]

Lower SES children often start school with a verbal disadvantage which may be related to the parents own lack of verbal facility and lim-

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[126] Luis M. Laosa, Families as Learning Environments for Children, ed. Luis M. Laosa and Irving E. Sigel. (New York: Plenum Press, 1982).

[127] Ibid.

[128] B. C. Rosen, "The Achievement Syndrome: A Psychological Dimension of Social Stratification," American Sociological Review 21 (1956), pp. 203-211.

ited verbal communications at home.[129]

Entwistle found that, while inner city black children actually entered school with greater linguistic skills than white suburban children, by third grade, the suburban child, whether blue collar or upper middle class, had surpassed the inner city children, whether black or white.[130]

Kohn's study of patents' discipline and control of their childrens' behavior found differences between social classes. Working class mothers were more concerned about the qualities of respectablity, middle classes were more interested in standards of conduct, and higher classes were more interested in having their children be in control of their environment and be able to get along with others. Lower SES parents reflected values of conformity and obedience to rules, or authority, and having the external appearance that make a child acceptable to adults. They selected good manners, neatness, cleanliness, and obedience as important, while higher SES parents selected self control, responsiblity, consideration for others and emphasis upon self direction as the more important qualities for their children.[131]

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[129] Boocock, Sociology of Education: An Introduction, p. 42; Basil Bernstein, "Social Class and Linguistic Development," Education, Economy and Society, ed. A. H. Halsey, et. al. (New York: Free Press, 1961), pp. 288-314; Bernstein, "Social Class, Language and Socialization," Power and Ideology in Education, eds. J. Karabel and A. H. Halsey (New York: Oxford, 1977), pp. 473-486.

[130] Doris Entwistle, "Semantic Systems of Children: Some Assessments of Social Class and Ethnic Differences," in Language and Poverty: Perspectives on a Theme, ed. F. Williams (Chicago: Markham, 1970).

[131] M. L. Kohn, "Social Class and Parental Values," American Journal of Sociology 64 (1959), pp. 337-351; _____, "Social Class and Parent Child Relationships: An Interpretation," American Journal of Sociology 68 (1963), pp. 471-480.

Race and Student Outcomes

Goldberg showed that a positive relationship exists between school integration and pupil achievement and that collective orientations of the student body impact on the individual student's interest in academic endeavor. Segregated schools showed a decline in achievement and lowered self concept. The study found that low SES children rarely attained high achievement levels, even when their self concept was high. Peer values regarding school achievement were especially significant in regard to the lower SES child.[132]

The EEO Report revealed the marked sensitivity of black students to the social environment of classrooms.[133] Moynihan reported that, while schools differed in the degree of impact they had on a student's achievement, the average white students' achievement was less affected by the strength and weakness of the schools facilities, curricula and teachers than was the average minority pupils'.[134] Wilson has also suggested that black students are more affected by the quality of the teachers than are white students.[135]

Katz disagreed with the EEO Report and theorized that the difference in early socialization of academic motivation accounted for some of the favorable effect on blacks, due to teachers and classmates' competence

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[132] Goldberg, et. al., The Effects of Ability Grouping, pp. 56-58.

[133] Coleman, "The Concept of Equality of Educational Opportunity," p. 18-21.

[134] Daniel Moynihan, The Negro Family: The Case for National Action (Washington D. C.: U.S. Department of Labor, 1965).

[135] Wilson, "Social Class and Equal Educational Opportunity," p. 84.

and attendance in predominately white schools. He believed that the low achieving black student tends to use expressions of interest and ambition as verbal substitutes for behavior he cannot attain, and that blacks have unrealistic self devaluation and strong anxiety in racially isolated institutions, which accounted for these differences.[136]

The Spady report showed that racial integration increases formal achievement levels of blacks and stimulates aspirations for success. In an analysis of studies, with regard to SES effects within the school, they found the influence of the dominant SES factor in the school upon individual aspirations and achievement, i.e., low SES students could achieve better in high SES schools, and noted that black and white children respond differently to specific school resources, not only in consistency of effects but also in direction. They felt an important area of influence for blacks regarded teachers, and the best resource allocations were those that purchased able teachers, rather than credentials, curricular materials or modern facilities. Further, those teachers successful with blacks were more likely to be black, young, and inexperienced, with a preference for working with low ability students.[137]

Entwistle, et. al., found that experimental treatments were more effective with boys than girls and greater success was generally achieved with inner-city black children when black adults were used.[138]

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[136] Irwin Katz, "Academic Motivation and Equal Educational Opportunity," Harvard Educational Review 38:1 (1968), pp. 30-40.

[137] Spady, "The Impact of School Resources on Children," pp. 185-223.

[138] Entwistle, "Developmental Sociolinguistics: A Comparative Study in Four Subcultural Settings," pp. 67-84; _____, "Semantic Systems of Children: Some Assessments of Social Class and Ethnic Differences," p. 38.

Bowles and Levin found that most black students who attended predominantly white schools, if voluntarily, performed considerably better than those students who were found in schools with lower concentrations of whites. Also, as most black schools were located in the inner city and were characterized by substantially lower expenditures and lower outcomes, parents who could afford to send their children elsewhere did so.[139]

The McDill, et. al., study concluded that active parental concern regarding the quality of their childrens' education was the major source of variability in school climates, leading to significant differences in student outcomes, even with important resources kept constant.[140]

Harvey and Slatin found teachers' expectations of childrens' academic success or failure was strongly related to race and perceived SES as they observed photos of the children, where white children and children perceived as having high status more often were chosen for success.[141] Schools have, thus, been shown to affect student behavior, attitudes and academic outcomes, with race and SES especially differentially related to student behavior and self concepts.

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[139] Samuel Bowles and H. Levin, "Toward the Equality of Educational Opportunity?" Harvard Educational Review 38 (1968), pp. 89-99.

[140] McDill, et. al., "Educational Climates of High Schools: Their Sources and Effects," pp. 568-572.

[141] D. G. Harvey and G. T. Slatin, "The Relationship Between Children's SES and Teachers' Expectations: A Test of Middle-Class Bias Hypothesis," Social Forces 54 (1975), pp. 140-159.

Self Esteem

To review, as defined in Chapter 1, attitudes may be defined broadly as, "the sum total of a (person's) inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats and conviction about any specific topic."[142] Self esteem has been defined as the judgement and attitude an individual holds about himself or herself. Many social psychologists have acknowledged the importance of self esteem and a healthy attitude toward oneself.[143] Coopersmith's conceptualization of self esteem is the evaluative component of the self esteem which refers to one's feelings of self worth, and of self concept as the individuals's perception of himself or herself as a person, which includes his or her abilities, appearance, performance and other phases of daily living.[144] The evaluation an individual makes with regard to himself or herself indicates the extent to which he or she believes himself or herself to be capable, significant, successful and worthy, and is reflected in individual performance. A basic need to feel good about oneself, mentally, physically and emotionally is responsible for ultimate motivation.[145] Educators have found that an individual's perception of himself or herself is derived largely from the reflected appraisal of others.[146]

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[142] Thurstone and Chave, The Measurement of Attitude, p. 19.

[143] C. R. Rogers, On Becoming a Person (Boston, Mass.: Houghton Mifflin, 1961).

[144] Coopersmith, The Antecedents of Self-Esteem, pp. 4-5.

[145] Ibid., pp. 4-5.

[146] M. Mead, "The Young Adult," in Values and Ideals of American Youth, ed. E. Ginzberg (New York: Columbia University Press, 1961), pp. 37-51; Wylie, The Self-concept: Theory and Research on Selected Topics, p. 4.

Brisset found self esteem includes two basic psychological processes, self evaluation and self worth. Self evaluation, as the value one places upon himself or herself and self worth which includes a sense of competence, based on intrinsic rather than extrinsic determinants, as one who is in control of his or her own actions.[147] Burns included self worth in self concept, with self as knower or experiencer, and determines self esteem can be measured as self evaluation.[148] Rosenberg incorporated ascribed and attained statuses in social identity. He found environment, sociopsychological and significant others to be factors in self esteem. Individuals will accept the opinions and emulate as significant others, those whom they admire, who are important to them and whose values they respect.[149]

Definitions of self esteem vary from wide to narrow conceptionalizations and are not always seen as synonymous terms. The term self esteem has often been used in a broad concept, where it encompasses many undefined variables, and has been found as a personal judgement of worthiness, significantly associated with personal satisfaction and effective functions in locus of control studies.[150] Academic achievement, family, physical appearance, socialization, and self worth have been seen as essential to self esteem. Derived from the integration of feelings in specific self esteem, self worth relates to behavior, physical appearance, intelligence and the social and emotional self. Persons may vary

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[147] Brisset, "Toward a Clarification of Self-Esteem," pp. 255-263.

[148] Burns, The Self Concept, p. 85.

[149] Rosenberg, Conceiving the Self, p. 16.

[150] Coleman, Campbell, et. al., Equality of Educational Opportunity, pp. 320-321.

in their levels of area specific self esteem, thus, one cannot assume that factors related to differences in general self esteem will also significantly affect area specific self esteem.[151]

James found anxiety and self esteem to be closely related, with creative persons ranking high in self esteem. There are necessarily areas where individuals are not in control, as of their physical traits, family backgrounds, academic achievements, and of those who interact upon them and give appraisals of them as parents, teachers, and peers. A positive self esteem is necessary during this transitional period of late adolescence where students have stress due to conflicts regarding independence, sexuality, morality and vocational choice or career aspiration.[152] Values formed in early years influence their goals.[153]

Age has also been found to be a potent mediator of adolescent development, since some aspects of self esteem change with age.[154] One study which assessed the effects of gender, race and social class on the self esteem of high school students, using Rosenberg's General Self Esteem, Piers-Harris Children's Self Concept and Brookover's Self Concept of Ability and School Achievement Scales, found females, whites and lower social class adolescents were consistently lower in their self esteem scores than were males, blacks and upper SES teenagers. High SES white

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[151] Richman, Clark and Brown, "General and Specific Self Esteem in Late Adolescent Students," pp. 555-566.

[152] W. W.Purkey and J. M. Novak, Inviting School Success (Belmont, Ca.: Wadsworth Publishing, 1984).

[153] William James, The Principles of Psychology (New York: Holt Co., 1890).

[154] H. D. Thornburg and R. M. Jones, "Social Characteristics of Early Adolescence: Age Versus Grade," Journal of Early Adolescence 2 (1982), pp. 229-239.

students were lower on the happiness and behavior self esteem measures than black students and white middle class students. Black males and white females were less confident in their school ability than were black females and white males, and white females were found to be lower in general and happiness self esteem than all other gender by race sub-groups.[155] This and other studies have shown that peers are extremely important among high school students, possibly due largely to the fact that these students are in a formative period of self concept.

A study by Hauck and Loughead found that adolescents low in self es-teem are likely to use self monitoring techniques as a defense against inadequate feelings.[156] Adolescents adept at self monitoring apparently had mastered, to a high degree, the social competencies known as poise, ascendance, self assurance, and inter personal adequacy, while low self monitoring youth had not. High self monitors appeared to be competent and confident in social interactions, but apparently when the manipula-tion of expressive behavior was escalated to high levels, such traits as other centeredness and concern for the reaction of others were sacri-ficed. The significant interactions imply generally, that the adoles-cent with higher levels of self esteem and self monitoring behavior is most sensitive to social relationships and is less fearful of engaging in self revelation and, thus, more willing to try on various social im-ages. Overall, the interaction of self monitoring and self esteem has a negligible influence on a wide range of personality traits. Their con-

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[155] Richman, Clark and Brown, "General and Specific Self Esteem in Late Adolescent Students," pp. 560-563.

[156] W. E. Hauck and M. Loughead, "Adolescent Self-Monitoring," Adoles-cence 20:79 (Fall 1985), pp. 567-574.

clusions were that low self esteem adolescents could in some cases mask their negative self findings through self monitoring and be difficult to identify and help. Males with low self esteem and high self monitoring could be engaging in defensive postures to protect a perceived negative self and females with lower self esteem displayed greater social presence than males.[157]

Elliot postulated that self esteem may be associated with a fabricated self image with the rationale for this relationship resting on the notion that youths with high self esteem approved of their self image and, thus, found no need to invent acceptable facades to conceal their true feelings.[158] Those with low self esteem felt that they were too imperfect and became anxious at the thought of an accurate self presentation. While they presented a false front to others they masked their true feelings. This false impression frequently is more socially desirable and may lead to self fulfilling prophecies, which in the long run may produce a healthier self image. However, this deception also can contribute to disillusionment and a failure to establish an adequate identity.

Ornstein and Rosenfield found that the poor self image of the disadvantaged child often leaves him or her dispirited and rejected, in turn rejecting school.[159] A study of a group of elementary school students

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[157] Ibid., p. 573.

[158] G. C. Elliot, "Self-esteem and Self-presentation Among the Young as a Function of Age and Gender," Journal of Youth and Adolescence 11 (1982), pp. 135-153.

[159] A. Ornstein and S. Rosenfield "Environmental and Other Factors Which Mitigate Against Disadvantaged Youngsters in School," Contemporary Education, 49:4 (January 1968), pp. 156-160.

who were overly aggressive or overly withdrawn, habits which can often lead to underachievement in the classroom, were found to be from from low SES backgrounds in the school. Using Rotter's Test of Self Concept and teacher evaluations to assess student self concept, a program was designed to use parent volunteers as tutors on a one to one basis outside the classroom twice per week for fourteen weeks to encourage students in academic tasks. The findings were positive, and students improved in math and reading, as they progressed in viewing themselves more positively.[160] Many studies have shown achievement, to some degree, dependent on how children view themselves and their ability.[161]

In summary, self-esteem incorporates the processes of self-evaluation and self-worth and includes many factors, one of which is academic self-concept.[162]

Reading as a Measure of Academic Achievement

Different measures used to represent academic achievement have included verbal scores as cognitive achievement for outcome measures,[163] as well as science and foreign language. The Shaycroft study found it

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[160] J. Van Boven, "Improving Self-Concept: A Possible Aid to Increased Achievement and More Desirable Behavior." Unpublished Ph.D. dissertation, Nova University, Ft. Lauderdale, Fla.,(April, 1973).

[161] Spady, "Mastery Learning: Its Sociological Implications," p. 115; Coleman, "The Concept of Equality of Educational Opportunity," pp. 18-21.

[162] Brisset, "Toward a Clarification of Self-Esteem," pp. 255-263.

[163] Coleman, Campbell, et. al., Equality of Educational Opportunity.

was in the areas of subjects which students study in school, such as literature, mathematics, business subjects, science, etc., that substantial differential effects among schools exist, even when differences in SES levels have been accounted for.[164]

Educators have traditionally considered achievement in reading to be the crucial criterion which predicts success in the academic arena. Most studies have used reading to measure student outcomes and reading was chosen in this study to define academic achievement because it is both one of the most important aspects of school experience and a necessity if one is to function in society. As schools are essentially reading schools, the student who has difficulty, falls behind in the basic skills of reading (word recognition, comprehension, vocabulary building and study skills) at the elementary level will be severely handicapped in all subject areas.

The central part of compulsory education as a preparation for adult life is the acquisition and application of literacy. The first step in school for the child is learning to read, as reading is essential for acquiring the knowledge of what society sees as significant. This early encounter with school knowledge shapes a child's perception of himself or herself as learner. The relationships between reading and math, reading and spelling and reading and verbal ability have been established in a number of studies. This study will examine only the relationship between reading and the student's self perception.

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[164] M. Shaycroft, The High School Years: Growth in Cognitive Skills (Pittsburgh: American Institute for Research and School of Education, University of Pittsburgh, 1967).

Reading Achievement and Self-Concept

A relationship between individual student achievement and individual self concept of ability has been found to be significant by many research studies. The construct of self concept is very broad and includes many factors. How a student views academic skills and how these skills are valued will define a student's values and goals. Studies have found that students reflect those skills which are important to the school and which are reinforced by peers, teacher attitudes and school climates.[165] Student academic achievement is related to self concept, or the way a student feels about himself or herself, [166] and many studies relate academic achievement and self concept, indicating that the attainment of a satisfactory level of self esteem is a prerequisite to achievement in reading comprehension. Robinson, for instance, demonstrated that self concept is a both a predictor and correlate of reading ability.[167] The reading specialist, Spache, also found that family attitudes and aspirations, striving for sexual identity, peer relations, race and teacher pupil interaction all impinge on self concept and academic success.[168] Butowsky and Willows observed that children from first and second generation immigrant families, and especially bilingual fami-

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[165] Coleman, The Adolescent Society: The Social Life of the Teenager, p. 42; McDill, et. al., "Institutional Effects on the Academic Behavior of High School Students," p. 194.

[166] Coopersmith, The Antecedents of Self-Esteem pp. 4-5; R. C. Wylie, Dynamics of Personal Adjustment (Boston: Holbrook Press, Inc., 1975); Brookover, et. al., Schools Can Make a Difference, p. 7-9.

[167] Robinson, Why Pupils Fail in Reading, p.89.

[168] G. D. Spache, Investigating the Issues of Reading Disabilities (Boston: Allyn and Bacon, 1976).

lies, reflect poor self image and may lack motivation and self confidence needed for successful reading.[169] Curil's study which examines the relationship between self esteem and grades of Hispanic students and the length of exposure to bilingual education agreed with this observation.[170]

Caslyn, in a study combining data from four separate research projects, examined the pattern of causal predominance between general self concept, academic self concept, locus of control and school achievement. Using the independent variable of academic grade point average and the dependent variable of self concept, the study found that grade point average was related to self concept, interests and anxiety in students.[171]

Sweet and Burbach examined the pattern of self esteem and reading comprehension, vocabulary and spelling achievement to ascertain which condition bore the greater prevalence. Although no pattern of predominance in the relationship was found between vocabulary and self esteem, they showed that levels in increases in self esteem are followed by increases in reading comprehension, and that these increases in reading ability raised the level of self esteem. This led them to suspect the existence of an unidentifiable intervening variable relating to self concept and school ability.[172]

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[169] Irwin S. Butowsky and Dale M. Willows, "Cognitive-motivational Characteristics of Children Varying in Reading Ability," Journal of Educational Psychology 72:3 (June 1980), pp. 408-422.

[170] H. Curil, "Achieved Reading Level, Self Esteem and Grades as Related to Length of Exposure to Bilingual Education," Hispanic Journal of Behavioral Sciences 2:4 (December 1980), pp. 381-400.

[171] R. J. Caslyn, "Self-concept of Children and Their Intelligence, Achievement, Interests and Anxiety," Childhood Education 3 (1967), pp. 436-438.

Coleman has been criticized for treating the noncognitive variables; self concept, interest in learning and sense of control of the environment as conditions of learning; however, he pointed out that students' self concept explains more of the achievement variable than the other two non-intellective variables.[173]

Carkhuff and Schubert suggested that positive self esteem may be the key variable in developing social competence and showed that a child's self concept has a significant influence on how the child behaves. One who has a negative perception does not attempt new tasks, believing he or she will fail, and upon experiencing a failure, reinforces this negative self fulfilling prophecy. Conversely, a student with a positive self perception readily accepts new challenges, believes in his or her ability to overcome obstacles and is more confident and has more control of his or her life.[174] The EEO Report examined student achievements and found a relationship to exist between student achievement levels and self concept of ability, as well as a relationship between ability and self reliance.[175]

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[172] Anne E. Sweet and Harold Burbach, "Self Esteem and Reading Achievement," Annual Meeting of the American Educational Research Association (New York: April 1977).

[173] Coleman, The Adolescent Society, pp. 82-96.

[174] R. Carhuff, Toward Actualizing Human Potential (Amherst, Massachusetts: Human Development Press, 1981); D. G. Schubert, "Reading Improvement Through Self Concept Development," Reading Improvement 15 (1978), pp. 157-160; H. M. Lefcourt, "Internal versus External Controls of Reinforcement," Psychological Bulletin (1966), pp. 206-220.

[175] Coleman, Campbell, .et. al., Equality of Educational Opportunity, p. 320.

A positive relationship also appears to exist between the individual's self concept in a given subject and his or her accomplishment in that subject.[176] Esteem may vary across different areas of experience, and be related to sex, age, and role defining conditions.[177]

Environments which were deprived caused low self concept in children and the lower the self concept the lower the test scores.[178] Self concept, whether from environment, physical or psychological origins, influences a person's views of himself or herself and his or her performance and, thus, may may influence school achievement and educational plans.

Coleman found differences in relationships between self concept and school achievement, with self concept less important for black children for achievement than for whites. For middle class children self concept was one of the most important factors in school achievement. Because black students felt less in control of their environment, they did not place as high a value of self concept on ability as it related to academic outcome.[179]

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[176] Thomas and Cresimbeni, Guiding the Gifted Child, p. 12.

[177] Coopersmith, The Antecedents of Self Esteem, p. 17.

[178] Ibid.

[179] Coleman, "The Concept of Equality of Educational Opportunity," pp. 320-321.

Motivation

To the degree which a student believes his or her own efforts are responsible for the academic outcomes, the more he or she forms self concepts related to success or failure. The motivational aspect of reading has been found to be an important factor where expectancy effects are related to self concept. To support or protect their self-esteem, as in taking credit for successes and blaming other factors for failure, how strongly a person feels about his or her own ability and effectiveness determines whether he or she will even attempt to cope with difficult situations.[180]

In perceiving causality, the main issue is whether to attribute an event to internal states or to external forces. External attributions would accredit causality to something external, as the environment, another person, role constraints or luck, while internal attributions would involve personality traits, motives, emotions, attitudes, effort, abilities and mood.[181] Those students who have control over their own behavior and who perceive an outcome of their behavior to be a consequence of their own action will perform tasks better than individuals who perceive behavioral outcomes as a result of luck, or fate, or "powerful others".[182] The adolescent who places blame on society for his or

[180] Miles Hewstone, and Serge Moscovici, "Social Representations and Social Explanations: From the 'Naive' to the 'Amateur' Scientist," in Attribution Theory, ed. Miles Hewstone (Oxford, England: Basil Blackwell Publishers, 1983), p. 75.

[181] B. Weiner, "A Theory of Motivation for Some Classroom Experiences," Journal of Educational Psychology 71 (1979), pp.13-25.

[182] J. B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs 80:1 (1966), p. 609.

her own failures often alleviates his or her own sense of duty and responsibility. The student who accepts his or her own efforts and ability for his or her success or failure is more able to build self esteem than the student who places the blame on external causes.

One study found that the adolescent with higher levels of self esteem was more sensitive to social relationships and less fearful of engaging in self revelation. Adolescents who were adept at self monitoring had mastered the social competencies known as poise, ascendance, self assurance, and interpersonal adequacy, while low self monitoring youth had not. Low self esteem adolescents could, in some cases, mask their negative self findings through self monitoring and, thus, present a more socially desirable front to others. Males with low self esteem and high self monitoring could be engaging in defensive postures to protect a perceived negative self while females with lower self esteem could be displaying a greater social presence than males.[183]

Values which families place on achievement and educational aspirations also influence student's outcomes, with white parents generally having more concern than black parents. Teacher expectations enter into this self expectation of the student. Motivation, or the need to succeed, deals with the value or worth placed on excelling.

Within the general framework of attitude research there has been an increasing amount of attention directed to the relationship between attitude and motivation, with motivation identified as a large factor in both learning and retention.[184] Unfavorable home conditions as well as

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[183] Hauck and Loughead, "Adolescent Self-Monitoring," p. 569.

[184] Robinson, Why Pupils Fail in Reading, P. 45.

deprivation of suitable physical surroundings and an atmosphere lacking in acceptance, security and affection are a major factor in reading problems.[185]

Rotter implies that skill or ability are the key determinants of the outcome for the individual who perceives himself as being internally controlled, with chance or fate as the causal factor for the individual who perceives himself as being externally controlled.[186] Flanders and Sulo concur that the construct of internal versus external locus of control tends to predict learning performances.[187]

Teacher/student relationships have been shown to be a causal factor in students' self esteem and pattern of success or failure.[188] Studies found students' self acceptance to be significantly determined by their reading level. Students who received disapproval from teachers, parents and peers, based upon performance in reading, exhibited a lowered self image.[189]

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[185] R. J. Havinghurst, "Conditions Productive of Superior Children," in Studies in Adolescence, ed. R. E. Brinder (New York: Macmillan, 1963).

[186] J. B. Rotter, "Generalized Expectations for Internal Versus External Control of Reinforcement," Psychological Monographs 80:1 (1966), pp. 609-610.

[187] Ned Flanders and H. Sulo, "The Effect of Teacher-Pupil Contacts Involving Praise on the Sociometric Choices of Students," Journal of Educational Psychology 5 (1960), pp. 65-68.

[188] L. Lightfoot, "Politics and Reasoning: Through the Eyes of Teachers and Children," Harvard Educational Review 43:2 (May 1973), pp. 197-244.

[189] W. Nelson, "Locus of Control, Self Esteem and Field Independence as Predictors of School Achievement Among Anglo American and Mexican American School Children," Hispanic Journal of Behavioral Sciences 2:4 (December 1980), pp. 323-325.

Even though many theorists assume that a relationship exists between self-concept and school achievement, they disagree on a causal relationship. Hansford and Hattie, who evidenced only a small positive average correlation between self-concept and achievement,[190] and both Caslyn and Pottebaum, et. al., who found evidence that a significant correlation exists between self concept and achievement, did not imply causation, either from self concept to achievement nor achievement to self concept.[191]

Causal links have been found, however, between learning and delinquency, demonstrating that student failures in basic subjects may be directly related to differences in the ways they perceive themselves. Failure in the classroom often manifests itself in antisocial behavior. A child who has learning problems and experiences continued failure in the classroom situation often develops a negative self concept, resulting in a high level of frustration and may become submissive, withdrawn or antisocial, and may dropout, may turn to drugs, exhibit negative behavior, or may associate with others like himself of herself.[192] In a study of juvenile delinquents it was noted that nearly 100% of these delinquents were significantly below their age and grade in academic per-

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[190] B. C. Hansford and J. A. Hattie, "The Relation Between Self and Achievement/Performance Measures," Review of Educational Research 52 (1982), pp. 123-142.

[191] R. J. Caslyn, The Causal Relation Between Self-Concept, Locus of Control, and Achievement: A Cross-Lagged Analysis Ph.D. dissertation, Northwestern University, 1973. Dissertation Abstracts International, 42, 4076a; S. Pottebaum, T. Keith and S. Ehly, "Is There a Causal Relation Between Self-Concept and Academic Achievement?" Journal of Educational Research 79:3 (January/February 1986), pp. 140-144.

[192] E. A. Allen, "Attitudes of Children and Adolescents in School," Educational Research 3 (1960), pp. 65-80.

formance.[193] Of low achieving students in a Minischool study, only four of the 125 dropouts or near dropouts had normal self esteem levels.[194]

Kifer suggested that both success and reward are important to future development and that this accrues over years, leading to growth of self concept.[195] One's intellectual ability, self esteem and feelings of responsibility for one's own progress are needed for building confidence. As students experience more success in academic endeavors, they value themselves more positively and experience a sense of control over their destiny.[196]

That motivation plays an important part in success in reading achievement also has been shown by many studies. Wylie found those students who are goal oriented are those who value themselves highly and will strive for high goals, whereas, those with low opinions will be contented with mediocre standards.[197]

In the above examination of various studies, it can be assumed that self concept is an important component of self esteem or self worth. Persons with high self esteem function effectively in a variety of situations and perform more effectively in meeting environmental demands

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[193] Curil, "Achieved Reading Level, Self Esteem and Grades as Related to Length of Exposure to Bilingual Education," pp. 381-400; M. Wizner, "Juvenile Delinquency Educational Perspectives," _Journal of Special Education_ 5:4 (Winter 1981), pp. 293-302.

[194] Wizner, "Juvenile Delinquency Educational Perspectives," p. 295.

[195] E. Kifer, "Relationship Between Academic Achievement, and Personality Characteristics: A Quasilongitudinal Study," _American Educational Research Journal_ 12 (1975), pp. 191-210.

[196] J. R. Edwards, _Language and Literacy_ (Silver Spring, Maryland: Institute of Modern Language, Inc., 1981).

[197] Wylie, _Dynamics of Personal Adjustment_, p. 4.

than persons of low esteem.[198] The relationship between self concept and academic performance appear to be very important for a student's success in school. Moreover, classroom climate, as well as school climate, has been shown to have an effect upon a student's attitudes and behavior.

High School as Level of Observation

While many studies have been made at the elementary level of education, it was not until the 1960's that high schools became the focus of observation. Many unique factors are operating in the secondary level of schooling which may cause stress and insecurity among individual students. Puberty is a time of physical change, emotional turbulence, pressures by peer groups, the fear of not measuring up to expectations by teachers and parents, as well as concern for personal appearance, and general social behavior.[199]

Boocock has described the youth of today as a being in a complex age/stratification system, dependent upon parents for longer periods of time before holding jobs, thus, creating a subculture causing peers to become much more important.[20] Evidence of peer group influence on the individual has been examined in many studies and has been found shown to

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[198] Coopersmith, The Antecedents of Self Esteem, p.19.

[199] Jerome Kagan, "The Conception of Early Adolescence," Journal of the American Academy of Arts and Sciences (1971), pp. 190-196; Kenneth Keniston, "Youth: A New Stage of Life," The American Scholar (Autumn 1970), pp. 182-188.

[20] Boocock, Students, Schools, and Educational Policy, Sociological View (Palo Alto, Ca. Aspen Institute for Humanistic Studies, 1976).

have a strong effect on student's attitudes and values. This is a time
when adolescents, in their struggle to achieve an identity, portray var-
ious roles, to their parents, peers, teachers and significant others, as
they formulate conceptualizations of self.[21] It has been suggested that
most important to the level of accomplishment in schools is who the stu-
dent interacts with there. While a mixed demographic composition of
students and staff may enhance academic performance of some students it
may have a negative impact on other students.[22] The exceedingly strong
effects of peer modeling have been demonstrated in modeled responses by
students in studies by Bandura through differential reinforcement of re-
sponses by the same model in matching responses.[23] Well documented stud-
ies have shown that models who are high in prestige, power, intelligence
and competence are emulated to a considerably greater degree than models
of subordinate standing. While the value of modeled behavior is not re-
vealed, observers must rely on such clues as "clothing, linguistic
style, general appearance, age , sex, likeableness and various competen-
cy and status symbols as the basis for judging the probable efficacy of
the modeled modes of response."[24]

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[21] M. Rosenberg, Society and the Adolescent Self-Image (Princeton, N.
J.: Princeton University Press, 1965); Hauck and Loughead, "Adolescent
Self-Monitoring," p. 570.

[22] Boobcock Students, Schools, and Educational Policy, p. 45.

[23] A. Bandura, Social Learning Theory (New York: General Learning Press,
1971); _____ and P. Barab, "Conditions Governing Nonreinforced Imita-
tion," Developmental Psychology 5:2 (1971).

[24] A. Bandura, Analysis of Modeling Processes, Paper, National Institute
of Mental Health, U.S. Public Health Service, p. 54-55; J. P. Flanders,
"A Review on Imitative Behavior," Psychological Bulletin 69 (1968), pp.
316-337.

Gordon's study focused on the relationship between social status and adolescent behavior. His findings were similar to those of Coleman. He saw informal friendship groups as especially powerful in controlling adolescent behavior and scholastic achievement.[25]

In an attempt to explain the observed association between the average status of a school and the educational aspirations of its students, vis-a-vis, the variable interpersonal peer group influence, Campbell and Alexander concluded that school status is related to college plans, the status of one's friends, and the status of friends chosen by those at each status level. They found informal friendship groups to be powerful influences in controlling behavior and achievement.[26] They stated that personal relationships with one's friends within the school environment determined high or low academic aspirations. The student body comprises the pool from which friends are drawn and in that way the student body influences attitudes and aspirations.[27] In summary, the above studies collaborate the findings that schools do make a difference on academic achievement and college aspirations, and that contextual effects exist and operate. This study will deal with the question of whether a relationship exists between self esteem and academic achievement and whether the relationship could be assumed to vary according to context of the school.

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[25] W. C. Gordon, The Social System of the High School. (Glencoe, Ill.: Free Press, 1957).

[26] E. Q. Campbell and N. C. Alexander, "Structural Effects and Interpersonal Relations," American Journal of Sociology 71 (1965), pp. 284-289.

[27] Ibid.

At the elementary level, while not attributable to any difference in intelligence, but rather due to boys slower maturation and to cultural influences, which assign diverse roles to boys and girls, girls were found to be generally superior to boys in reading ability and other verbal activities.[28]

The number of boys in remedial reading groups and clinics at the elementary level was found to exceed that of girls by a ratio of ten to one according to the National Education Association.[29] Girls have been shown to mature earlier than boys, physically, emotionally and intellectually.[210]

Erikson points out that girls and boys have been found to use space differently; while girls emphasize inner space, boys emphasize outer space.[211] Boys tend to act out their aggressions, while girls are more apt to conceal or to interiorize them, thus, allowing boys to remove some of the self judgments based upon their accomplishments and achievements, or lack of them, in the classroom.

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[28] W. Barbe and W. Grilk, "Correlations Between Reading Factors and I.Q." School and Society 75 (March 1952), pp. 134-135.

[29] National Education Association, "Ability Grouping," Research Summary (Washington, D. C., 1968).

[210] D. H. Eichorn, "The Berkley Longitudinal Studies, Continuities and Correlates of Behavior," Canadian Journal of Behavioral Science 5 (1973), pp. 279-320; E. Prawat, et. al., "Longitudinal Study of Attitude Development in Pre, Early and Later Adolescent Samples," Journal of Educational Psychology 71 3 (1979), pp. 363-369; A. Gessell and L. Ilg, Youth: The Years From 10 to 16 (New York: Harper and Row, 1951).

[211] Erik H. Erikson, Identity: Youth and Crisis (New York: W. W. Norton, Inc., 1968).

Erikson has further suggested that females may be apt to depart from their feminine roles and take on the roles of their male counterparts as they reach adolescence, and may revolt and become more rebellious in their effort to find their identity.[212]

The sex factor is linked to academic performance and may interact with other variables in the schooling process. Classroom activities have been categorized as masculine or feminine and have been related to the degree of motivation of students' preferences for these areas.[213]

Girls' patterns of behavior may be more fitted to the classroom activities than boys and teacher attitude towards girls and they may be more favorably regarded as the more ideal students.[214]

The number of boys in remedial reading groups and clinics at the elementary level exceeds that of girls by a ratio of ten to one according to the N.[215]E. Although theorists do not agree on the causes, many studies have shown that, at the elementary level, while not attributable to any difference in intelligence, but rather due to boys slower maturation and to cultural influences which assign diverse roles to boys and girls, girls are generally superior to boys in reading ability and other verbal activities.[216] para Teacher attitude towards girls may be more

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[212] Ibid.

[213] C. Dwyer, "Influence of Children's Sex Role Standards on Reading and Arithmetic Achievement," Journal of Educational Psychology 31 (1975), pp. 674-685.

[214] Silberman, "Teachers Attitudes and Action Toward Their Students," in The Experience of Schooling, ed. M. Silberman (New York: Holt, Rinehart and Winston, Inc., 1971).

[215] National Education Association, "Ability Grouping," p. 40.

[216] Barbe and Grilk, "Correlations Between Reading Factors and I.Q," pp. 134-135.

favorable as they may be regarded as the more ideal students.[217]

Teacher Expectancy and Student Outcomes

Literature concerning teacher effects agrees that teachers do influence student achievement. The disagreement enters in when formulating how teachers effect outcomes and to what degree.

Teacher/student relationships have been shown to be a causal factor in students' self esteem and pattern of success or failure.[218] Studies have found students' self acceptance to be significantly determined by their reading level because of teacher effect. Students who received disapproval from teachers, parents and peers, based upon performance in reading, exhibited lowered self image.[219]

Research has focused on factors, such as teacher quality, which includes previous experience and training, teaching techniques, teachers expectations of his or her pupils, teacher's background (SES, education, race), teacher's personality, and effects of the school's structure on a teacher's performance.

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[217] M. Silberman, "Teachers Attitudes and Action Toward Their Students," p. 48.

[218] Lightfoot, "Politics and Reasoning: Through the Eyes of Teachers and Children," pp. 197-201.

[219] Rist, "Student Social Class and Teacher Expectations," pp. 435-450; W. Nelson, "Locus of Control, Self Esteem and Field Independence as Predictors of School Achievement Among Anglo American and Mexican American School Children," pp. 323-325; R. Spaulding, "Achievement, Creativity and Self Concept Correlates of Teacher-Pupil Transactions in Elementary School," Cooperative Research Project 1352. (U. S. Department of Health, Education and Welfare, Office of Education, 1963).

The EEO Report concluded that, while all school inputs, including teacher quality, have minimum effects on student achievements as measured by standardized tests, teacher effect had more of an effect than all other aspects of the school combined, excluding the student body characteristics. Teacher quality, measured in terms of verbal facility, educational level, experience, and the educational level of the teacher's mother accounted for slight variations in achievement on verbal tests and with minority students. Spady accounted for this difference by stating that minority students are more dependent on the school setting for stimulation and assistance than the upper SES child who receives more help at home. Other researchers concur that teacher characteristics can have a substantial effect on one particular population.[220] Studies have shown teacher expectancy or "self fulfilling prophecy" to be reflected in students' academic performance.[221] Rist investigated the inequities imposed on children in the classroom of an urban ghetto school where the lower class groups were socialized for lower self expectations by a "caste system" and teacher expectation.

The relationship which exists between teacher awareness and pupil esteem showed gains in self concept, fewer failure experiences and lowered anxiety levels in children when teachers applied classroom methods to increase self rewarding behavior in children.[222] Teacher awareness programs have been found to be successful in changing attitudes towards

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[220] Spady, "The Impact of School Resources on Children," P. 186.

[221] Rist, "Student Social Class and Teacher Expectations," pp. 411-450; Rosenthal and Jacobson, Pygmaglion in the Classroom, p. 89.

[222] Jill Whaley, "Self Esteem, Patterns of Child Rearing and Gains in Reading Achievement of Disabled Readers," Reading Improvement 16:3 (Fall 1979), pp. 242-247.

children, resulting in significantly higher scores in self esteem of the students.[223]

Spaulding found significant positive correlations between levels of student self concept and the degree to which teachers were calm, supportive and facilitating, and lower self concept and poorer performance where teachers were dominating and threatening.[224]

The relationship between teacher attitudes and student's self image has been shown to be of importance. Felker, Stanyck and Kay changed classroom formats in classes where students had poor self images with the results that students were able to overcome insecurity and fears about learning and to begin to feel free and to show self worth, resulting in a raised self image.[225]

School Effectiveness

Factors, such as family SES, determines where the students will go to school. The school, as representative of middle class norms and teachers from middle class culture, replicates the role of society. SES is seen, not as an economic factor, as much, as a difference in cultures and value systems. Contextual effects of schools have been shown to produce differences in outcome. The report of the National Commission

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[223] H. Kohl, The Open Classroom (New York: Vintage Books, 1969).

[224] Spaulding, "Achievement, Creativity and Self Concept Correlates of Teacher-Pupil Transactions in Elementary School," p. 2-12.

[225] D. Stanwyck, and R. Kay, "Effects of a Teacher Program in Self Concept Enhancement in Pupil Self Concept, Anxiety and Intellectual Development," Journal of Educational Research 66 (1973), pp. 442-446.

on Excellence in Education, A Nation at Risk, despite some poor reviews and accusations of being mediocre drew attention to the need to determine what makes an effective school. The hierarchy of the school includes the principal's impact upon teachers, which impacts upon student performance and behavior.[226]

Squires' study, which focused upon conceptions of effective high schools, compared three low achieving and three high achieving elementary schools and found four very different images of effectiveness of high schools.[227]

Thus, studies indicate that composition of the schools, that is, those who make up the schools, i.e., the pupils and teachers and staff, have a large effect on outcomes. Characteristics of those in the school, as the proportion of college bound, race of teachers, racial mix of student body, level of verbal ability (both pupils and teachers), teachers attitudes toward integration, etc., all effect on student outcomes.

Nonfunctional factors show low correlation with academic achievement in crude analysis, but those school characteristics that tend to be associated with differential levels of academic performance tend to be linked to SES levels of pupils' parents and classmates. Functional characteristics are deeply rooted in the economic social and cultural levels of the communities, the total community complex, in which the schools are located. The nonfunctional characteristics, as money spent,

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[226] R. Gross and L. Murphey, The Revolution in the Schools (New York: Harcourt, Brace and World, 1965).

[227] D. A. Squires, "Images of Effective High Schools: An Interview Study of Delaware's Educational Administration," Paper, Annual Meeting of Eastern Educational Research Association, Philadelphia, Pa., (National Institute of Education, Washington, D.C., March, 1981).

length of school day, length of school, pupil/teacher ratio, goods and materials, extra curricular activities and tracks are easiest to change, while functional characteristics are much harder to change.

Peer group influence accounts for the psychologically relevant characteristics of an individual's social environment. As schools strongly reflect income, SES, and the racial and ethnic differences of the community in which they are located, and which are representative of the educational backgrounds, income and professional status of the students' parents, they differ by comoposition of the students in attendance. Schools, thus, make a difference on academic achievement and college aspirations, and contextual effects exist and operate.

More reviews of literature will be found in the final conclusion of this study where they are pertinent to the findings.

METHODOLOGY

Introduction

The major purpose of this study was to investigate the relationship between self concept and reading ability in a selected group of students enrolled in high schools in a large metropolitan area. The study also examined the relationship between these correlations and the classroom grouping, gender, and the context and composition of the school, relative to the SES and racial mixture of students. School effects were examined by comparisons of correlations between reading and self evaluaiton scores and by comparisons of means on self evaluation scores between schools.

The units of study included both the classroom and the school. Students were compared within and between schools. Classroom groupings were treated as intervening variables when comparing students between schools to examine for interaction effects of such groupings. Groupings in this study were based upon reading skill levels. Math was also examined in two of the schools.

The sample consisted of ninth, tenth, eleventh and twelfth grade students enrolled in English and Reading classes in the selected schools during the school years 1983-1984. Subjects were selected from schools which were chosen based upon the geographic area, performance level and

SES composition of the school. Represented were three public high schools, with one suburban district representing a relatively high SES and high performance school: one urban district containing two subdistricts, one representing a low-middle SES and low performance school and the other a middle SES and high performance school; and a Catholic urban school representing a low-middle SES and middle performance student population. The suburban school was predominantly white; the urban schools were racially mixed; and the urban Catholic school had equal numbers of black, Hispanic and white students.

To determine self concept, two self evaluation questionnaires were selected; a standardized questionnaire, The Survey of Interpersonal Values Scale (SIV), which measured area specific self concepts and a nonstandardized self esteem inventory which measured general self esteem.

Scores from these two questionnaires were correlated with reading scores obtained from the Iowa Silent Reading Test (ISRT) at New Trier,[228] Tests of Academic Progress (TAP)[229] at Lane and report card scores at Cathedral. Schurz, which had no individual reading scores, was composed totally of students from tutored, remedial level reading classes. The data were tested through computation of Pearson product moment correlation coefficient to test for significance at the .05 level, however, all at $p < .10$ level were also examined. Multiple regression analyses were done to test for multicollinarity of variables and to determine the strength of the correlations. Crosstabs, oneway and two-

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[228] Iowa Silent Reading Test Manual (New York: Psychology Corp., Harcourt, Brace, Jananovich, Inc., 1973).

[229] Tests of Academic Progress Manual (Iowa City, Ia.: Houghton, Mifflin, 1979-1982).

way analysis of variance and t-tests examined differences between segments of the population and subpopulation.

The following sections are included in this chapter: selection of the sample, characteristics of the sample, procedure for collecting the data, description of the instruments, treatment of the data and a summary.

Selection of the Sample

To obtain samples of high SES and low SES, high performance and low performance, urban and suburban high schools, four schools were chosen from the Chicago metropolitan school district. The subjects were selected from ninth, tenth, eleventh and twelfth grade reading and English classes within the selected schools.

The schools were selected based upon location of the school, status of academic achievement and racial mixture and were contacted, through a letter from Dr. Steven I. Miller from Loyola's Education Department, to gain permission for teacher and student participation and release of the data (See Appendix B).

The sample schools selected were: New Trier High School in Winnetka, a high performance suburban public school which is nearly 100% Caucasian, located in a community of upper-middle SES groups; Lane Technical High School, a high performance, urban Chicago public school, which has a mixed racial composition of students selected from the greater Chicago area based upon academic achievements; Cathedral High School, a private

Catholic School in Chicago, composed equally of Hispanic, Caucasian and Black students, selected from throughout the Chicago area; and Schurz, an inner city Chicago public high school in a low-middle income area, of racially mixed students, which enrolls neighborhood students, from which a tutored level of students were selected.

Characteristics of the Sample

The sample consisted of all students in the reading classes of the English department at NTHS, a selected group of students in the English classes at Lane Technical, all students in sophomore and junior levels at Cathedral High School and selected students from freshman tutored reading level classes from Schurz. The total sample included 360 students; 163 males (45.3%) and 197 females (54.7%). There were 69 students from New Trier (35 males and 34 females), 204 students from Cathedral (75 males and 129 females), 66 students from Lane Technical (35 males and 31 females), and 21 students from Schurz (19 males and 2 females).

The grade levels represented were: New Trier, 1 freshman, 24 sophomores, 35 juniors and 9 seniors; Lane, 27 freshmen, 21 sophomores, and 18 juniors; Cathedral, 104 sophomores and 100 juniors; and Schurz, 21 freshmen. The total sample; 49 freshmen (13.6%); 149 sophomores (41.6%); 153 juniors (42.5%); and 9 seniors (2.5%)

Reading scores were obtained for all students except those from Schurz High School, who were all tutored reading level students. The

New Trier sample included regular reading classes made up of 57 students from levels 2 and 3, and 12 students from level 1, the tutored group. The Lane sample consisted of 21 students from honors classes and 45 students from regular classes. Cathedral, was not separated by class groupings, and all 204 students were designated as regular class group for this study. All 21 students from Schurz were from tutored level classes. The total sample included regular class level, 306 (84.7%), tutored, (9.4%), and honors, 21 (5.8%). Math scores were obtained from Lane and Cathedral only.

Procedure for Collecting Data

The schools were referenced by the combined variables: location of school, demography of the school, performance of students, i.e., average student grades, American College Test (ACT) and Scholastic Aptitude Test (SAT) scores, percent who enter college, percent of dropouts, student attendance rate, resources, pupil/teacher ratio, teacher salaries, and other available data obtained from The School Report Card for Illinois Schools,[230] research articles and studies of the schools,[231] from direct observation, interviews with superintendents, counsellors, teachers and students, and school board reports.

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[230] Illinois State Board of Education, (These state mandated school report cards were first released in September, 1986).

[231] Orfield, "The Chicago Study." (See Appendix C).

Standardized reading test results provided the academic scores at New Trier and Lane Technical High Schools. The Iowa Silent Reading Test (ISRT) (levels 1, 2 and 3), was given to New Trier students at the beginning of the school year. As part of a testing program by the Chicago Board of Education which administers Tests of Academic Progress (TAP) to students in all Chicago public high schools, Lane Technical students also were given the tests at the beginning of the school year. Cathedral scores were obtained from students' final report card scores in school records.

To secure a questionnaire which would measure self concept, a search of Buros' _Eighth_ _Edition_ _Mental_ _Measurement_ _Yearbook_ was made resulting in the selection of the _Survey_ _of_ _Interpersonal_ _Values_ by Gordon. An unstandardized scale, used to measure general self esteem, was chosen to complement the self concept scale and to allow for completion time within one school class period.

The self evaluation questionnaires were administered to students during classes at the selected high schools by teachers at New Trier, Cathedral and Schurz High Schools, and by the examiner at Lane Technical High School. Students were instructed to answer every question on each questionnaire and there was no time limit.

Students provided the data on age, sex and bilingual ability on forms attached to the questionnaires. To increase the validity of the instruments, by allowing for more honest answers and to stress anonymity, students were identified by number.

The SIV tests were scored manually using a matrix and adjusting the raw scores to percentile scores provided by the SIV manual. Normed on a

national sample of high school students, the SIV test is based on an ordinal scale for comparative purposes and contains scaling norms for male and female high school students in each of six value areas.[232] In scoring, each item is keyed to only one scale and is weighted from "most" weight = 1, unmarked = 0, "least" = -1 on its particular scale. The scoring stencil adds a constant of +1 to each weight in order to eliminate negative scores.

A composite score is not available, since the design of the scale does not allow for additive results, as the scores are in opposition to each other, however, the total maximum scores on the scale range from 26 to 32 and all scores should total 90, if correctly marked and accurately scored. If the final score fell within a range of 85 through 95, and no more than two triads had been mismarked or omitted, the obtained scores were used, as these obtained scores generally were well within a standard error of the scores that would have resulted had the booklet been correctly completed. The value scales are defined by what high scoring individuals value, and conversely, low scoring individuals do not value what is defined by that particular scale.

For general self esteem measures, the self esteem questionnaire, a non-standardized test was chosen for an overall view of student's self evaluation. Comprised of statements for general self evaluation of students, it consists of 50 questions which apply to self attitude and behavior and was adapted from a core of statements implying positive self esteem (even numbered statements) and negative self esteem (odd numbered statements). Students were asked to respond on a Likert-type scale,

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[232] Gordon, Survey of Interpersonal Values, revised ed., (Chicago: Science Research Associates, Inc., 1976).

scoring each question on a scale from 0 to 3 to indicate: not true, somewhat true, largely true and true, related to how they feel, how they are, what they do. The final score is the difference between odd and even scores, with high scores indicating a high self esteem and low scores indicating a low self esteem. Scores were transformed to positive numbers so that no negative integers were used.

Completed forms were screened to eliminate those questionnaires where information was incomplete or incorrectly entered. Missing data were set to zero and not used. Analysis was performed on each area on those students for whom all data on academic tests and self evaluation scores were provided.

Description of the Instruments

Cognitive Measures

The ISRT,[233] used for academic achievement scores in New Trier, is nationally normed on college preparation scores and is more like a single subject test. The ISRT test measures levels of skill within each age level and provided reading, vocabulary and reading power scores.

The TAP test[234] used in Lane is also normed on a national level of high school students in a cross section of areas, and provides academic achievement in reading, math, writing, science and use of resource materials. The TAP battery is comprised of six tests: social studies, composition, science, reading, mathematics and literature, with each test designed to measure the extent to which the objectives of a basic area of high school instruction have been achieved. Normed the same for all schools, each student took only those items which were at a proper level of difficulty and which measured skills and understandings appropriate to his or her own level. This was achieved by a multi-level format within the test. The test requires 45 minutes and is timed.

The TAP Manual calls attention to the fact that, while norms for the TAP test describe the performance of a large, carefully selected sample of students, this does not mean that the norms should be viewed as standards for the local school.

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[233] Iowa Silent Reading Test Manual, pp. 4-7.

[234] Tests of Academic Progress Manual, pp. 1-8.

> Local expectations must be tempered by a variety of
> relevant factors including the SES level of the
> school district, the average ability of the student
> body, the experience of the teachers, the goals of
> the local school, the adequacy of facilities and
> equipment, and the academic climate of the communi-
> ty.[235]

Explaining the reasons for differences in scores, the TAP Manual further

describes the standard score scale as:

> based on the distribution of scores for grade 11
> students who were tested in the national standard-
> ization program in October, 1979. For this group,
> the standard scores form a normal distribution with
> a mean of 50 and a standard deviation of 10. The
> standard scores for students in grades 9, 10, and 12
> were obtained by an equi-percentile scaling process
> which equated performance of grade 11 students to
> that of students in the other three grades. As a
> result of the scaling process, the standard score
> scale is continuous from a low of approximately 15
> to a high of approximately 85. In addition to the
> important quality of continuity throughout the four
> grade levels, the standard scores are expressed in
> units which are approximately equal at all points on
> the scale. As a result, a one-unit change repre-
> sents the same amount of achievement regardless of
> whether the change occurs at the low, middle or high
> part of the scale.[236]

In New Trier, scores were normed on three levels of college prepara-

tion scores form the ISRT test. These scores served to define track

levels in New Trier based upon students' skills. where students were

separated into a regular classroom group, made up of levels 2 and 3, and

a tutored group, of level 1. Students at Lane were normed on the same

level from the TAP test, where scores served for placement of students

within the school into honors and regular levels. Math scores were found

to be more closely related to groups than were reading scores in Lane

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[235] Ibid., pp. 6-9.

[236] Ibid., p. 7.

Technical.

Self Evaluation Measures

Survey of Interpersonal Values

The SIV survey was used as a measure of students' self concept in six areas of evaluation. An ipsative instrument, it seeks to measure the relative strength of the values within an individual. Norms were available for high school, college and adult samples, and for SES locations, urban and suburban areas, high and low performance schools and male and female for purposes of comparison. The criteria groups were well distributed geographically and appeared to contain good representations of ethnic minorities, educational backgrounds and income levels of parents

The survey is self-administering and directions are given in full on the title page. There is no time limit and most individuals complete the survey within fifteen minutes. The SIV test is made up of thirty sets of three statements or triads. In a forced choice method, for each triad, the respondent indicates one statement as representing what is most important and one statement as representing what is least important to himself or herself. Within each triad, three different value dimensions are represented. The three statements within each set were equated as far as possible for social desirability through a matching on preference value indices.[237]

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[237] Gordon, Survey of Interpersonal Values, revised ed., p. 10.

The SIV describes individuals by the way they characteristically react in given classes of situations, in terms of the temperaments that typify their behavior, and in terms of motivational dimensions, i.e., the values they hold. The scales are interpreted in part by their item content, which reflects what high scoring individuals value. These values may be instrumental in determining what people do and how well they perform and may influence their immediate desires as well as their long range plans, either consciously or unconsciously by their value system.[238] The approach of SIV test is to measure the individual's values to determine what the person considers to be important. The broader meaning of each scale is defined by its relationship with other variables.[239]

Factor analysis was employed in the original development of the SIV test; high school, college, industrial and other adult samples were used through the development of the test. The author reports that the item content was found to be meaningful for each of these groups and the scales to have discriminating power within each of these groups.

Originally normed on college students, the SIV test used ten categories of traits. In factor analyses, the hypothesized constructs clearly emerged as orthogonal factors with substantial unique item representation on each. Items prepared for Deference had their loadings on Conformity; items referring to Dominance and Leadership categories merged to identify a single factor and those for Dependence had high factorial complexity with significant loadings on both Support and Conformity.

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[238] Ibid., p. 1.

[239] Ibid., p. 11.

Aggression items were dropped because of low reliability and deleterious effect on relationship of the other scales.[240]

This form and succeeding revisions were administered to high school, college, industrial and other adult samples and triads were reorganized to result in the final form appropriate for use with all groups, including American minority groups, and has been translated into more than two dozen languages.

Response consistency to the scales of the test was determined through internal analysis and through test-retest administration and coefficients obtained by the two methods related to internal consistency as defined by the Kuder Richardson Formula 20 for samples of 186 college students and 144 high school students. The short term stability of the scales was established by the test retest method (administered twice with a ten day interval between testing to a group of 79 college students). The larger range of stability was assessed by administering the SIV test twice to 5 samples, with retest intervals ranging from 12 weeks to one year. Using Peace Corps volunteers, medics at U.S. Naval Hospital Corps and medical students at the beginning and the end of training, found the resultant coefficients indicative of acceptable score stability.[241]

The SIV test has been widely used since 1960 on college students, junior college students, parents, teachers, counsellors, secondary students, military, potential dropouts and gifted students in high school and college. Comparisons have also been made on attitudes toward

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[240] Ibid., p. 4.

[241] Ibid., p. 3.

school.[242] Briefly, each of the six variables may be described as:

Support: Being treated with understanding, being treated with kindness and consideration.

Conformity: Doing what is socially correct, doing what is proper, being a conformist.

Recognition: Being looked up to and admired, being considered important, attracting favorable notice, achieving recognition.

Independence: Having the right to do whatever one wants to do, being free to make one's own decisions, being able to do things in one's own way.

Benevolence: Doing things for other people, sharing with others, helping the unfortunate, being generous.

Leadership: Being in charge of other people, having authority over others, being in a position of leadership or power.[243]

To further complete the factorial validity of the items identified through factor analytic techniques, correlations with cognitive measures and other measures of personality ratings provided added insight and understanding of what the given scale is measuring. Aside from the few small negative relations with conformity, the SIV scales are largely unrelated to measures in the cognitive domain when compared to verbal, mathematical, intelligence and quantitative tests[244]

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[242] Buros, Eighth Edition Mental Measurement Yearbook, p. 688.

[243] Gordon, Survey of Interpersonal Values Manual, p. 1.

[244] Ibid., p. 10. (See Appendix C).

Comparing the variables with Allport-Vernon-Lindzey relates the SIV variables to human values:

"Theoretical" (empirical, rational, critical and intellectualist) correlated negatively with Conformity and positively with Independence.

"Economic" ("typical American businessman") correlated negatively with Benevolence and positively with Recognition.

"Social" (altruist and philanthropist) correlated positively with Benevolence.

"Aesthetic"(individualist) correlated positively with Independence.

"Political" (seeker of personal power and influence) correlated positively with Leadership.

"Religious" correlated positively with Conformity and Benevolence.[245]

A comparison study, using a compilation of studies, including Edwards Personal Preference Scale, Leary Interpersonal Checklist, Gordon's Survey of Personal Values, Work Environmental Schedule, School Environment Preference Schedule and Personal Profile, Shutz's FIRO-B and The Guilford-Zimmerman Temperament Survey, and others, helped to conceptualize the terms used in the SIV questionnaire:[246] These studies found that:

Support correlated positively with succorance and negatively with ego strength.

Conformity correlated positively with orderliness, goal orientation, deference, endurances, authoritarianism, cautiousness, responsibility, social desirability or being socially approved, religious conservatism, ego strength, inclusion, docility, dependency, and more bureaucratic

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[245] Ibid., p. 11.

[246] Ibid., pp. 9-16.

propensities and negatively with variety and independence.

Recognition correlated positively with exhibitionism and negatively with ego strength.

Independence correlated positively with variety and autonomy and negatively with orderliness, cooperativeness, overconventionality, sociability, authoritarianism, wanting others to act close and personal, or wanting to initiate interactions with others, or wanting to be included by others, bureaucratic propensities, docility and dependency.

Benevolence correlated positively with nurturance, friendliness, ego strength, social desirability and personal relations and negatively with dogmatism, bluntness, aggressive, competitive, exploitive, skeptical and distrustful natures.

Leadership correlated positively with achievement, dominance, achievement, control, ego strength, managerial and autocratic behavior, ascendency, vigor, original thinking and Machiavellianism and negatively with bureaucratic propensities, nurturance, docility and dependency.

John Black, President of Consulting Psychological Press,[247] described the SIV test as an "appropriate addition to tests in personal and career counselling, in programs aimed at improving interpersonal relationships and in assessment research where measures of values is germane." He cited the weakness of the manual in interpretation of scores; however a revised manual in 1976 and a monograph in 1975 provided more information for users of the SIV test in which the normative samples for high school and college students have been doubled or tripled in size by "planned national sampling." He warns that the questionnaire can be faked and

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[247] Buros, Eighth Edition Mental Measurement Yearbook, pp. 1107-1108.

that by asking what people value in their relationships that their work behavior will accurately reflect their interpersonal values cannot be assumed, and therefore the instrument should be used with caution.[248]

Allan La Voie from Davis and Elkins College in West Virginia,[249] cites the extended use of the SIV test in a number of successful research studies. The test reflects relatively good reliability, established by the K-R 20, which range from .71 to .86 with a mean of .815, and test-retest correlations which range from .65 to .76 with a mean of .678, for an interval of 15 weeks, however, he states that this is not sufficiently high for user confidence in individual interpretations. The scale interdependence is generally low, but support and leadership scales correlated -.52 in a negative sample, thereby defining the ends of a single bipolar dimension. This large negative correlation is found in the regular forced choice format as well as the Q-sort format, so the bipolarity seems to be a real phenomenon rather than an artifact of the item style. The SIV test is not designed to detect negative values such as hate or fear since the minimum value is zero, or simply not caring about that outcome.

La Voie cites weaknesses on criterion studies in the manual that support the claim for predictive validity. Many studies are summarized and from them emerges the conclusions that the six scales measure that which they purport to measure.

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[248] Ibid., p. 1110.

[249] Ibid., pp. 1109-1110.

The correlation between the SIV test and other widely used tests report good convergent validity, however, the four areas of representation of self on making a good impression allow for a possibility of misrepresenting oneself.[250]

The SIV test has been seen as most useful in research, in teaching demonstrations and early "ice breaking" in counselling sessions, rather than for providing the user unique insights into the respondent's interpersonal value structure.[251]

Self Esteem Scale

The non-standardized self esteem questionnaire, a Likert-type scale, constructed on the value that the individual gives to a statement, uses normative measures (no more than one measure from 0 to 3) which can vary independently. Students respond to each item with degrees of agreement or disagreement.

Validity

Validation procedures were utilized for content validity, and for correlation with other personality measures. Self esteem scales were determined by their item content; positive scores were derived from even numbered statements, and negative scores were derived from odd numbered statements, thus, odd scores reflected values of low esteem individuals and even scores reflected values of high esteem individuals.

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[250] Ibid., p. 1110.

[251] Ibid.

Kerlinger suggests comparing validation test scores with one or more external variables or criteria known to measure the attribute under study and how well it predicts.[252] The criterion measure of the self esteem scale was the SIV scale, which was given to the same individuals in the sample. The predictive value of the SIV test had been found to be very high and was used as a valid test for identifying variables of self concept.[253] To discover a possible correlation between the two measures, each pair of constructs were entered in a Pearson correlation product-moment correlation.

Self Esteem Scale and SIV Scale Correlations

The self esteem scale is made up of alternating statements; positive scores are derived from even numbered question and negative scores form odd numbered questions. Raw scores from odd numbered statements are subtracted from even numbered statements for the total self esteem scores, which represents the level of self esteem of the respondee. Factoring out the odd and even variables of the self esteem scale, the even and odd scores on the self esteem test correlated, $r = .-181$ ($p = .001$), with each other.

Odd numbered statements, which were constructed to measure low self esteem, correlated positively with SIV scores of recognition, $r = .336$ ($p = .000$), and support, $r = .152$ ($p = .005$), and correlated negatively with independence $r = -.150$ ($p = .005$), and benevolence, $r = -.148$

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[252] Fred Kerlinger, Foundations of Behavioral Research, 2nd ed. (New York: Holt, Rinehart & Winston, Inc., 1973), p. 498.

[253] Gordon, Survey of Interpersonal Values, revised ed.; Buros, Eighth Edition Mental Measurement Yearbook.

(p = .006). This would affirm that the variables of support and recognition measured negative traits, as the negative statements of the self esteem scale, and independence and benevolence were in opposition to the negative statements of the scale. Leadership and conformity traits were unrelated to odd scores.

Even numbered statements, constructed to measure positive self esteem, had significant positive correlations with conformity, $r = .157$ (p = .004), and benevolence, $r = .117$ (p = .031), and a significant negative correlation with recognition, $r = -.115$ (p = .034). A slight negative correlation was found between self esteem and support, $r = -.097$ (p = .074), and no relationship was found between even self esteem and independence or leadership variables. This would confirm that conformity and benevolence measured even scores, or positive traits in the self esteem scale, while support was in opposition to the even statements in the scale. Even self esteem scores related positively to conformity and odd self esteem scores negatively related to independence. In this sense, both scores measured the same traits related to the leadership/conformity continuum in the formulation of the total self esteem score.

As explained in the SIV manual, the leadership variable implies the need to be in charge or to dominate a situation. The lower valuation of this given quality then, would be indicative of a more secure person. Leadership traits, as such, were not addressed in the self esteem test. It is interesting that the correlations between independence and positive self esteem scores were not significant, but that negative self esteem scores and independence were significant. The need for recognition indicates a lack of ego strength and an exhibitionism, therefore, the

negative correlation found between self esteem and recognition is veri-
fication of a satisfactory measure for a low self esteem score. Benevo-
lence and conformity factors on SIV correlated positively with self es-
teem scores. One who has a high self esteem would be expected to be
friendly, trusting, nurturing and would possess good personal relations
as described in benevolence qualities.

Conformity has conflicting descriptions, as conceptualized by the SIV
definition. On the one hand, it implies orderliness, goal orientation,
deference, cautiousness and responsiblity, which are values which would
relate to high self esteem, however, it also implies dependency and doc-
ility and a lack of independence, which are measures of low self esteem,
as defined in the self esteem test. The qualities of high self esteem
are those with which conformity more closely relates.

The negative correlation with support, would indicate that one who
has need for succorance or support would not have a high self esteem.

Using the coefficients of the total self esteem scale and the six
factors of the SIV scale, based upon 355 student scores for comparison,
the highest correlation was found between self esteem and recognition, a
negative relationship, $r = -.304$ ($p = .000$). Items on the self esteem
scale correlated positively with benevolence, $r = .167$ ($p = .002$), and
conformity, $r = .144$ ($p = .008$), and negatively with support, $r = -.163$
($p = .003$).

Both male and female scores attest to this correlation, with female
scores appearing to be responsible for the correlation between support,
conformity and benevolence, and no significant relationships were found
with the scores for the males in the sample on these variables.

For males in the sample, 154 students with complete data, self esteem and recognition were negatively correlated, $r = -.277$ ($p = .001$). For females in the sample, 186 students with complete data, significant negative correlations were found between self esteem and recognition, $r = -.324$ ($p = .001$), self esteem and support, $r = -.226$ ($p = .01$), and significant positive correlations between self esteem and conformity, $r = .224$ ($p = .01$), and self esteem and benevolence, $r = .194$ ($p = .01$). The total sample included proportionately more students from Cathedral than from the other schools.

Bivariate data were examined within schools; reading scores with SIV scores and reading scores with self esteem scores, to test for validation of self esteem scores. Comparing these paired correlations in this study found similarity in traits related to recognition and conformity. The self esteem scale was referenced for interpretation to the mean of the measures of the SIV scale, a set of measures having different means and standard deviations.[254]

Relationships Between SIV Measures

In the total population at New Trier, significant negative correlations were found between self esteem and reading, and between conformity and reading, due to female scores. A significant positive correlation was found between reading and support.

In the regular reading group at New Trier, reading and conformity correlated significantly and negatively, $r = -.295$ ($p = .034$), and reading and support correlated slightly and postively, $r = .257$ ($p = .065$).

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[254] Kerlinger, Foundations of Behavioral Research, pp. 507-508.

Tests for the tutored group found reading and self esteem significantly and negatively correlated, r = -.691 (p = .013), but did not find any other self evaluation scores related to reading. In Lane, neither self esteem nor SIV scores were related to reading or math scores.

Tests for Cathedral found, in the total school, reading and self esteem correlated slightly positively, r = .117 (p = .099). Tests for males found no significant correlations between reading and self evaluation variables, but tests for females- found a significant positive correlation between reading and benevolence, r = .203 (p = .024), and a slight positive correlation between reading and self esteem, r = .156 (p = .081).

In the total school, tests for New Trier found that grade and self esteem, r = -.204 (p = .093), and age and self esteem, r = -.209 (p = .084), were slightly correlated negatively. In the regular reading level, grade and self esteem, r = -.331 (p = .012), and age and self esteem r = -.318 (p = .016), correlated negatively.

A significant negative correlation for the total population at New Trier was found between self esteem and recognition, r = -.367 (p = .003), and a slight positive correlation between self esteem and benevolence, r = .231 (p = .059). Self esteem and recognition correlated negatively, r = -.417 (p = .020), for males. Tests for females found self esteem and conformity slightly positively correlated, r = .318 (p = .071), and self esteem and recognition slightly negatively correlated, r = -.316 (p = .073). Tests for the regular group found a positive correlation between self esteem and benevolence, r = .271 (p = .052), and a significant negative correlation between self esteem

and recognition, r = -.408 (p = .003). Tests for the tutored reading group found a slight negative correlation between self esteem and support, r = -.566 (p = .055), and a significant negative correlation between self esteem and recognition, r = -.252 (p = .024). Age and self esteem for tutored males correlated positively, r = .408 (p = .007).

At Lane, significant negative correlations were found between support and self esteem, r = -.291 (p = .019), and between recognition and self esteem, r = -.314 (p = .011), and a significant positive correlation between leadership and self esteem, r = .254 (p = .041). Tests for the regular reading group found a significant negative correlation between recognition and self esteem, r = -.311 (p = .040), a slight negative correlation between support and self esteem, r = -.270 (p = .076), and a slight positive correlation between leadership and self esteem, r = .274 (p = .071). Tests for the honors reading group found slight negative correlations between self esteem and recognition, r = -.368 (p = .101), and support, r = -.370 (p = .081). Tests for all males found a slight negative correlation between self esteem and support, r = -.310 (p = .070), and a slight positive correlation between self esteem and leadership, r = .310 (p = .070). Tests for all females found a significant negative correlation between self esteem and recognition, r = -.373 (p = .042), a slight negative correlation between self esteem and support, r = -.325 (p = .080), and a slight positive correlation between self esteem and independence, r = .317 (p = .088).

Tests for Cathedral found self esteem was significantly higher for females than males, t = -.181 (p = .01), and was slightly and positively related to grade, t = .117 (p = .098), and age, t = .122 (p = .084).

Tests between males and females on leadership and independence also found females higher than males, at significant levels, t = -.180 (p = .012), and t = -.151 (p = .034), respectively. Males were significantly higher than females on benevolence, t = .237 (p = .001).

Significant negative correlations were found between self esteem and recognition, r = -.267 (p = .000), and between self esteem and support, r = -.160 (p = .026), and a significant positive correlation between self esteem and conformity, r = .163 (p = .023).

Tests for males found a slight positive correlation between age and self esteem, r = .226 (p = .051), and a slight negative correlation between self esteem and recognition, r = -.199 (p = .095). Age and recogniton were negatively and significantly correlated for males, r = -.265 (p = .025). Tests for females found a significant positive correlation between self esteem and benevolence, r = .223 (p = .014), and a nonsignificant negative correlation between self esteem and leadership, r = -.149 (p = .102), and significant negative correlations between self esteem and support, r = -.209 (p = .021), and self esteem and recognition, r = -.335 (p = .000).

Tests for the low level found age and self esteem slightly positively correlated, r = .195 (p = .073), due to the low level male scores, r = .408 (p = .007), and recognition and self esteem significantly and negatively correlated, r = -.252 (p = .024).

In the middle reading level, self esteem significantly negatively correlated with recognition, r = -.298 (p = .012), and independence, r = -.298 (p = .012), and nonsignificantly negatively with support, r = -.196 (p = .103). Tests for middle reading level males found no

correlations with self esteem, however, middle reading level females found a significant positive correlation between self esteem and conformity, $r = .406$ ($p = .005$), and significant negative correlations between self esteem and support, $r = -.389$ ($p = .009$), and self esteem and recognition, $r = -.393$ ($p = .007$).

Tests for high reading level students found self esteem slightly positively correlated with grade, $r = .263$ ($p = .097$), and for females, $r = .297$ ($p = .079$). A slight negative correlation was also found for females between recognition and self esteem, $r = -.284$ ($p = .076$). Tests for males in the high reading level found no correlations with self self esteem and any other variables. Tests for females in the high reading level found self esteem significantly and negatively correlated with recognition, $r = -.369$ ($p = .029$).

At Schurz, no reading scores were recorded, and no significant correlations were found for the total school between self esteem and any self evaluation scores. Leadership correlated slightly negatively with self esteem $r = -.472$ ($p = .056$). Slight negative correlations for males were found between self esteem and recognition, $r = -.438$ ($p = .09$), between self esteem and leadership, $r = -.445$ ($p = .084$), and a slight positive correlation between self esteem and benevolence, $r = .441$ ($p = .087$).

Reliablity

The reliability of a test is usually described by the means of two measures: one, reliability coefficient; a correlation coefficient which shows the extent to which the test correlates with itself and, two, the standard error of measure; an index reflecting the variability of test scores due to random factors associated with the test, for example, the administration of the test.[255]

In testing for reliability of the self esteem scale, a high internal consistency was found within the self esteem test, i.e., the correlation on even scores, or positive statements, was found to be r = .732 (p = .000), and odd scores, or negative statements, r = -.803 (p = .000), on 354 scores, when each of these were compared with total self esteem scores on Pearson product-moment correlations.

The odd mean score in the total sample was 25.58, and standard deviation of 9.70, with a skew of 6.63 and standard error of 53, and the even mean score was 44.25, and a standard deviation of 9.70, with a skew of -.169 and standard error of 46. The total mean score on all students in the sample was 18.72 and the standard deviation was 13.96 on 355 students. The range of scores was from -50 to 54, skewness, -.535, and standard error, .742. The median was 20 and the variance was 194.94.

The Kuder-Richardson 20, a measure of internal consistency, was performed on the self esteem test as a measure of testing for reliability. Although the correlation was weak, an alpha of .438 was obtained.[256]

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[255] Ebel and Frisbie, Essentials of Educational Measurement, p. 78.

[256] Cronbach's coefficient alpha may be used in place of K-R formulas for establishing the reliability of tests not scored dichotomously.

Summary of the Data

To test for validity, the self esteem scale used the criterion of the SIV scales. Bivariate data between reading and self esteem totals and reading and the factors in the SIV scale were examined. The data confirmed that the self esteem scale is related to the SIV scale. In all schools and subgroups, the correlations between self esteem scale and the SIV scale coefficients were verifiable. Total scores on the self esteem scale correlated significantly and negatively with SIV traits of recognition and support and positively with benevolence and conformity. Singificant correlations of odd scores and SIV factors were positive with recognition and support and negative with independence and benevolence; significant correlations with even scores and SIV factors were positive with conformity and benevolence and negative with recognition and a nonsignificant negative correlation with support, -.097 at .074. Thus, high scores on the self esteem scale related to high scores on conformity and benevolence and low scores related to support and recognition, as found in the SIV scale. Reliability was established by internal consistency measures.

Ebel and Frisbie, <u>Essentials</u> <u>of</u> <u>Educational</u> <u>Measurement</u>, pp. 76-78.

Procedure for Treatment of the Data

As described earlier, the scores for reading were provided from tests administered by the individual schools, and scores for self evaluation which were obtained from questionnaires given to the selected sample of students. These original scores, presented as percentile ranks were re-coded into raw scores for purposes of standardization. Interval data was used to compare levels and groups within and between schools.

New Trier scores from the ISRT were transformed from the manual, normed on three levels of college preparation scores. In Lane, stu-dents' profile scores were transformed from percentile scores into orig-inal raw scores obtained from the TAP Manual. Cathedral letter scores were recoded into numerical data using the median score of each grade, such as A+, A, and A-, etc. Although scores in Lane and Cathedral were provided in other subject areas, only those scores for reading and math were used for analysis in this study.

Selected groups were normed, based upon their own school scores, rather than the national level referenced group. Each normed group thus represented the individual school derived from the levels of performance within each school.

The sample was tested for significance that its analogous value in the hypothesis was determined by means of an F test for power.[257] Using F test for homogeneity, and pooled or separate t-tests for differences, comparisons were made between groups, subgroups and schools. Analysis

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[257] J. Cohen and P. Cohen, Applied Multiple Regression/Correlation Anal-yses for the Behavioral Sciences (Hillsdale, N.J.: Lawrence Erlbaum As-sociates Publishers, 1983), p. 154.

of variance, oneway and twoway, compared relationships between subpopulations. Reading and SIV and self esteem scores were examined by Pearson product-moment correlations. Multiple regression analyses, as analysis of covariance, were run using continuous and discrete data for a mixed model. Entering reading achievement as the dependent variable into the model, along with the scores on the SIV and the self esteem scales as independent variables, partial correlations were computed to analyze the relationship between reading and each of the self evaluations scores. Scores of group, gender and age were partialed for third order and fourth order partial correlations. The dependent variable used the aggregate mean of the reading scores, and the independent variables also used aggregate means of the self evaluation scores. Self evaluation scores as dependent variables were entered into separate models with independent variables of school, gender, group and reading achievement.

The algorithm used to analyze the overall relations of the variables was the SPSS-X Multiple Linear Relationship Analysis.[258] Electronic Computer package. Forward selection, backward selection and stepwise selection regression methods were used.

The schools were treated as categorical by the contextual description, as demography, and composition, i.e., SES, income level and racial mixture of the student population. Other corrolary hypotheses dealing with between school context, gender, group, and reading were also examined using aggregate mean levels. Self evaluation scores were also compared against each of the other self evaluation scores for significant

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[258] Nie, Hull, Jenking, Steinbrenner and Bent, _Statistical Package for the Social Sciences_.

correlations.

This study was limited to reading achievement scores, however, math scores were briefly examined to determine which correlated more strongly with each of the self evaluation variables.

All research questions were tested for significance by utilization of a 2 tailed t-test set at p = .05, and examined up to p = .10. Classification factors were gender, reading achievement, group, and school.

Hypotheses

As stated in Chapter 1, the first hypothesis was that students' self concept is related to academic achievement. To determine whether student characteristics were related to academic achievement scores, self evaluation scores and reading scores were correlated and examined through Pearson product-moment correlation and multiple regression analysis techniques.

The dependent variable in the above hypotheses was the mean of the students' scores of the tests in reading used in the sample. The independent variables consisted of those self evaluation variables having a correlation p = .10 with the individual test scores.

Hypotheses 2, 3 and 4 were, respectively, that group, gender and school were related to self concept.

Dummy variates were used to estimate the parameters that characterize the difference of effects of group D1, D2 and D3, with 1 df (degree of freedom), constant (grand mean) and 3 (for each dependent variable). The parameter of gender was:

D1 = 1 if female = 1

    0 otherwise

D2 = 1 if male = 1

    0 otherwise

Reading groups included tutored, regular and honors. The parameters of groups were:

D1 = 1 if reading group = 1

    0 otherwise

D2 = 1 if reading group = 2

    0 otherwise

D3 = 1 if reading group = 3

    0 otherwise

The parameters of schools were:

D1 = 1 if school = 1

    0 otherwise

D2 = 1 if school = 2

    0 otherwise

D3 = 1 if school = 3

    0 otherwise

D4 = 1 if school = 4

    0 otherwise

Gender was examined within the second hypothesis, as stated in Chapter 1, to determine whether any relationship existed between sex and self concept. Groups were examined within the third hypothesis, as stated in Chapter 1, to determine whether any relationship existed between classroom groupings and self concept.

The study examined for significant difference among the group aggregate mean scores. All terms were incorporated into the model for a saturated model for predicted value. To get at terms of interest, some terms were collapsed, to test only for those partitioned out, and the dummy variate was eliminated.

The fourth hypothesis, as stated in Chapter 1, tested for school effects to determine whether differences existed between selected schools and whether any relationship existed between school and self concept. Schools were examined within this hypothesis. The study examined for difference among the school aggregate mean scores in self evaluations.

Between school examinations, to determine whether differences existed between schools, relative to the interactions effects of gender, group and the interaction between gender and group modeled tests on three different hypotheses. Tests for group effect, gender effect, and interaction effects were run using different models. Eliminating terms for effects on dependent variables and allowing for df of each variable, the full model was entered into the model with differences of R2 for each equation which determined the result.

To summarize the above, multiple regression procedures were used to determine statistical significance with dummy variates. These statistical significances translated into differences, beta weights, differences from a mean, or category deviations. The dichotomous variable, sex; categorical variables, school and group; and continuous variables, academic achievement scores and self evaluation scores made up the models.

Contrasts of comparison were run on cell means to determine if they were different from one another and to find the best fitting model for

these particular data. Tests were run for significant effects due to each variable in the linear model.

The procedure entered the full or saturated model (backward elimination) and eliminated variables to form new models. Subtracting the revised model from the original model gave the amount of the effect. Individual and confounded variables were entered separately and together to determine amount of the effect.

Summary

The criteria for testing the hypotheses were the administration of the SIV and self esteem tests and achievement scores from TAP at Lane and ISPS at New Trier and school record grades at Cathedral. The major hypothesis of this study was that there would be a statistically significant relation between reading ability and the degree of self esteem in a selected group of secondary students. The data were analyzed by utilizing the Pearson product-moment correlation coefficients to determine significance at the .05 level. Oneway and twoway analyses and multiple regression analyses were run. Four hypotheses were formulated.

The study was conducted using a sample of 360 selected students from four schools in a large metropolitan school district. Schools were selected to represent SES, academic performance, resources and racial mixture.

Subjects were chosen from reading and English classes and were administered the SIV and self esteem questionnaires. Scores for academic

achievement were obtained from school testing programs and school re-
cords. Scores were computer recorded and the SPSSX software program was
utilized for anlyses. Pearson product moment, multiple regression anal-
yses and F and t-tests were used in examination of the data. Stepwise,
forward, entry and backward methods tested for strength of variables
correlations entered as independent variables into the equation. The
independent variables included age, group, gender, school and scores on
SIV and self esteem scales, and the interaction of each of these vari-
ables were tested backward, forward and stepwise, isolating each vari-
able, while entering all others.

Testing each school separately as a composite; SES level, income,
area, performance level, resources, etc., with school as dependent vari-
able and regressing on each school separately to compare percentage of
the variable accounted for in each self evaluation trait, SIV traits
were entered into the model. Models using schools as dummy ariates were
also used to test each self evaluation trait for amount of variance.
Using three schools as dependent variables, through dummy entering, and
entering each SIV trait into the model examined for school effects. The
amount of the total variance of each self evaluation was divided into
each school to determine which school drew most strength from each SIV
variable. Interactions of gender, classroom group effects, reading
scores and schools were used as dummy variables.

To determine whether significant effects exist in relationships be-
tween variables, multiple regression analyses were used. Standardized
scores and dummy variables were used to examine for covariation within
schools and between schools. Converted z scores were examined using

SPSSX software coding system. Interactions were non additive; 1st, 2nd and 3rd order. Multiple regression analysis was not limited to linear relations, to partial out variables. F and t tests determined significance. The power of rejection region was set at p = .05, however, all up to p = .10 were examined. SPSSX computer programming was utilized in analysis of the data.

Final self concept scores cannot be weighted, as they are not part of a total score and, therefore, cannot be incorporated into a a single final total score to measure self concept. Ancova, or regression analysis, allowed for testing of these multivariables simultaneously.

Each school case study looked at within school data. In new Trier, reading, vocabulary and reading power were placed into the equation as independent variables and dummy variables were used for gender, grade, age, group and/or level. Cathedral used reading and math as dependent variables and the equation included dummy variables; gender, grade, age and level. Lane used reading and math, also, and included dummy variables; gender, grade, age and group.

While not reported in this study, bilingual data were obtained from Lane and Cathedral.[259] Bilingual data were not collected at New Trier; however, it was assumed that this was not likely to have been an important factor in this school. The findings indicated that a useful future study could be made using these bilingual data.

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[259] Lane had 20 students who were bilingual and 41 not, with 5 missing data; Cathedral had 85 who were bilingual and 108 not, with 11 missing data. The total bilingual data included 105 who were bilingual (29.2% of the total sample), 149 who were not bilingual (41.4% of the total sample) with 106 missing (29.4%, not accounted for).

CASE STUDIES

NEW TRIER HIGH SCHOOL

New Trier High School was chosen to represent a suburban, high SES, high performance school. The sample, composed of nearly 100% Caucasian students, is located in Winnetka, Illinois, a community of primarily middle to upper-class socioeconomic groups. New Trier High School has a reputation of being one of the top schools in the country. The school has its own radio and cable TV stations, as well as a professional stage and theatre.

The community consists largely of professional families with a high percentage of college and post college graduates. The percentage of low income families in this district is .4% as compared to 23.7% statewide, as reported in the 1985-1986 Illinois School Report Card Data.[260] New Trier's graduation rate was 98.5%, with 88% college attendance, and 83% completion of four years of college. The percentage of students who participate in advance placement programs is 30% to 35%; 4% to 6% of these students are National Merit Finalists, and an additional 8% to 10% received National Merit Letters of Commendation. Dropout rate at New Trier is less than 1%.

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[260] The School Report Card for Illinois Schools, 1986.

33% or 326 students in the 1985 senior class in New Trier took 620 Advanced Placement Tests with an average score of 3.99 on a scale of 1 to 5. The average score on the ACT was 22.8 for New Trier, with 36 as a perfect score. The statewide score was 19.1 and 18.8 for a national average. The percentage of New Trier students who took the ACT was 83%, statewide 57.4%. The average score at New Trier on SAT tests was 1,021, a perfect score being 1,600, statewide averages were 985 and national averages, 906. 93.% of New Trier students took the SAT tests, while statewide 14% completed the tests.

At New Trier, there were 59 students out of 15,000 who were named as semifinalists in the 1983 National Merit Scholarship competition, chosen from over one million attending 18,000 secondary schools in the United States.

Procedure for Obtaining Data

A formal request for participation of the school in the research project was presented by Dr. Steven I. Miller, Chair, Foundations of Education of Loyola University, to the superintendent of NTHS, who appointed Teacher A,[261] Director of the Department of Reading to work with the writer. She most generously and graciously offered her time in interviews, describing the reading program at NTHS, and offering information pertinent to the study.

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[261] To protect the identity of the persons in the study, names have been omitted, but are available upon request.

The sample selected for study in this research included all students in the reading classes from sophomore to senior grades, ages 15 to 18, with 34 males and 34 females from levels 1 through 3.

Based upon a track system, students are placed into one of four levels upon entry into New Trier. Level 1 is a Tutorial Assisted Individual (TAI) level, levels 2 and 3 are regular levels, and 4 is the accelerated level. There is also a level 5, taken for college credit. The levels are determined by several factors, including the Cooperative School and College Test (SCAT), Iowa Silent Reading Test[262] (ISRT), grade school records, and 8th grade teacher evaluations. New Trier also has a special education department for the more seriously handicapped students which was not included in this study.

Population

The sample included all the students from the reading classes in the English department; a total of 69 students, 35 males and 34 females; 1 freshman, 24 sophomores, 35 juniors and 9 seniors, made up of levels 1, 2 and 3. Level 2 (24 students) and level 3 (33 students) were combined into one classroom grouping, labeled for this study as regular, which consisted of 57 students, and level 1, tutored level, which included 12 students. The regular group made up 82.6% of the total, and the tutored level made up 17.4%. The mean age was 15.86; with 40.6%, age 16, 39.1%, age 15, 15.9%, age 17 and 4.3%, age 18.

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[262] Iowa Silent Reading Test, 1973.

Procedure for Treating Data

As described in Chapter 3, SIV and Self Esteem questionnaires were administered during class periods by teachers. Transformations were made on male and female totals from raw scores to percentile scores built into the scoring of the SIV questionnaire, based upon national norms of high school students.

Reading, vocabulary and total reading power scores on the Iowa Silent Reading Test (ISRT), were taken from the school testing programs, (scored on level 1 to level 3 norms). Reading power scores were compiled from reading and vocabulary scores. Ranked percentile scores from individual student's profiles were transformed back into raw scores and were standardized by groups for analyses.

Raw scores in reading ranged from 90 to 235 on three levels; from 103 to 116 in level 1 (12 students), from 90 to 196 in level 2 (24 students) and from 140 to 235 in level 3 (33 students).[263] The mean score in level 1 was 110.25 and standard deviation 3.79, level 2, 161.46 standard deviation 21.90, and level 3 171.58, standard deviation 19.72.

Vocabulary scores ranged from 94 to 212; from 94 to 105 in level 1, 137 to 199 in level 2 and from 137 to 212 in level 3. The means were: level 1, 99.42 and standard deviation 3.45, level 2, 166.33 and standard deviation 14.26, and level 3, 170.21 and standard deviation 17.08.

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[263] This outlier score of 90 (in reading) was included in the sample, as provided by teacher records, although the vocabulary score for this student was within the normal range for level 2.

Reading power scores ranged from 98 to 223; from 98 to 110 in level 1, from 125 to 189 in level 2 and from 146 to 223 in level 3. Mean scores were: level 1, 102.92 and standard deviation of 3.45, level 2, 164.33 and standard deviation of 14.82, and level 3, 171 and standard deviation of 17.25.

Using ordinal scales for ranked data of SIV scores and interval data from tests in academic achievement scores, correlations of $p = .10$ were examined and significance was set at $p = .05$. Missing data eliminated individual scores so that out of a total of 69 students at New Trier, 64 had complete data. Classroom grouping included one group of students from levels 2 and 3 (23 and 29 students, respectively), with complete data, for a total of 52 in the regular group; and level 1, a tutored group, included 12 students, all with complete data. Standardized reading, vocabulary and reading power scores from the ISRT were correlated with scores from self evaluation questionnaires. Self evaluation scores were also correlated for relationships with each other. Correlations were examined by group, level of academic ability and gender.

The following tables show Pearson product-moment correlations with (r) relatedness and (p) significance:

TABLE 1

New Trier Correlations

Reading, Vocabulary and Reading Power

Total School   n = 64

	Reading		Vocabulary		Power	
	r	p	r	p	r	p
SE score	-.242	.045	-.142	.246	-.208	.087
S score	.277	.026	.318	.011	.318	.010
C score	-.267	.033	-.082	.519	-.217	.085
R score	.118	.354	.221	.080	.135	.289
I score	.168	.184	.185	.143	.219	.082
B score	-.067	.597	-.126	.320	-.089	.486
L score	.026	.841	-.246	.050	-.080	.530

Male   n = 31

	Reading		Vocabulary		Power	
SE score	-.053	.766	-.019	.917	-.044	.804
S score	.132	.498	.226	.222	.125	.502
C score	-.133	.477	-.069	.713	-.107	.568
R score	-.094	.616	.175	.347	-.058	.757
I score	.164	.380	.186	.316	.252	.171
B score	.103	.580	.031	.867	.092	.621
L score	.032	.864	-.365	.043	-.093	.619

Female   n = 33

	Reading		Vocabulary		Power	
SE score	-.440	.008	-.268	.120	-.383	.023
S score	.430	.013	.406	.019	.512	.002
C score	-.399	.022	-.091	.616	-.322	.068
R score	.385	.027	.282	.112	.369	.035
I score	.187	.297	.190	.290	.199	.266
B score	-.295	.096	-.321	.069	-.320	.069
L score	.010	.917	-.141	.437	-.071	.694

TABLE 2

Regular Group

	Reading		Vocabulary		Power	
	r	p	r	p	r	p
Total					n = 52 of 57	
Self Esteem	-.147	.275	-.066	.625	-.097	.473
S score	.257	.065	.349	.011	.322	.020
C score	-.295	.034	-.079	.580	-.241	.085
R score	.123	.385	.265	.057	.163	.248
I score	.211	.134	.177	.219	.243	.082
B score	-.056	.696	-.204	.146	-.097	.495
L score	-.009	.948	-.193	.171	-.096	.497
Male					n = 23	
Self Esteem	.210	.302	.189	.355	.248	.223
S score	.199	.364	.197	.367	.188	.389
C score	-.202	.56	-.040	.857	-.189	.389
R score	-.198	.366	.181	.410	-.125	.569
I score	.144	.513	.141	.521	.222	.308
B score	.204	.351	-.012	.956	.179	.413
1 score	.002	.994	-.270	.213	-.120	.586
Female					n = 29	
Self Esteem	-.436	.014	-.263	.153	-.377	.037
S score	.326	.085	.487	.007	.461	.012
C score	-.371	.048	-.102	.597	-.272	.154
R score	.473	.010	.348	.064	.454	.013
I score	.235	.220	.200	.300	.221	.248
B score	-.366	.051	-.382	.041	-.398	.033
L score	.047	.809	-.142	.462	-.049	.802

TABLE 3

Tutored Group

	Reading		Vocabulary		Power	
	r	p	r	p	r	p
Total					n = 12	
Self Esteem	-.691	.013	-.491	.105	-.720	.008
S score	.405	.191	.248	.437	.354	.259
C score	-.188	.559	-.146	.650	-.167	.605
R score	.098	.762	.053	.869	-.026	.937
I score	-.060	.854	.238	.456	-.091	.780
B score	-.117	.717	.254	.426	-.033	.918
L score	.116	.718	-.570	.040	-.007	.982
Male					n = 8	
Self Esteem	-.675	.066	-.545	.162	-.710	.049
S score	-.078	.845	.361	.399	-.020	.963
C score	-.019	.964	-.244	.561	.006	.988
R score	.242	.565	.179	.671	.146	.730
I score	.006	.988	.283	.497	.142	.737
B score	.005	.991	-.227	.588	.127	.765
L score	.005	.897	-.718	.045	-.133	.754
Female					n = 4	
Self Esteem	-.623	.377	-.418	.582	-.730	.270
S score	.763	.237	.062	.938	.616	.384
C score	-.271	.729	-.012	.988	-.330	.670
R score	-.482	.518	-.996	.004	-.809	.192
I score	-.234	.766	.056	.944	.017	.983
B score	.397	.603	.743	.251	-.720	.280
L score	-.198	.802	-.084	.916	-.321	.679

TABLE 4

Total School Correlations

	r	p
Vocabulary / Reading	.535	.0001
Reading / Power	.903	.0001
Vocabulary / Power	.810	.0001
Reading / Sscore	.277	.026
Reading / Cscore	-.268	.033
Reading / SE	-.242	.045
Vocabulary / Sscore	.318	.011
Vocabulary / Lscore	-.246	.050
Vocabulary / Rscore	.221	.080
Power / Sscore	.318	.010
Power / Sscore	-.217	.085
Power / Iscore	.219	.082
Power / SE	-.208	.087
Sscore / Cscore	-.499	.0001
Rscore / Bscore	-.549	.0001
Rscore / Sscore	.299	.017
Rscore / Cscore	-.248	.048
Rscore / Iscore	-.285	.022
Rscore / SE	-.367	.003
Bscore / Lscore	-.268	.032
Bscore / SE	.237	.059
Group / Cscore	-.223	.077
Grade / SE	-.209	.084
Age / SE	-.204	.093
Age / Iscore	.307	.014
Grade / Sex	-.278	.021
Level / Sex	-.285	.018
Age / Sex	-.297	.020

TABLE 5

Male Correlations

	r	p
Reading / Vocabulary	.475	.005
Reading / Power	.900	.0001
Vocabulary / Power	.762	.0001
Vocabulary / Lscore	-.365	.043
Sscore / Cscore	-.673	.0001
Rscore / Bscore	-.628	.0001
Rscore / SE	-.417	.020
Sscore / Rscore	.369	.041
Lscore / Bscore	-.438	.014
Rscore / Iscore	-.346	.057
Group / SE	.370	.031

Female Correlations

Reading / Vocabulary	.600	.0001
Reading / Power	.907	.001
Vocabulary / Power	.864	.0001
Vocabulary / Sscore	.406	.019
Vocabulary / BScore	-.321	.069
Vocabulary / Grade	.317	.063
Reading / Sscore	.430	.013
Reading / Rscore	.385	.027
Reading / SE	-.440	.008
Reading / Cscore	-.399	.022
Rscore / Bscore	-.411	.018
Iscore / Lscore	-.381	.029
Cscore / Rscore	-.356	.042
Cscore / Sscore	-.342	.051
Age / Sscore	-.348	.047

TABLE 6

Regular Group Correlations

	r	p
Reading / Vocabulary	.571	.0001
Reading / Power	.903	.0001
Vocabulary / Power	.848	.0001
Reading / Cscore	-.295	.034
Reading / Sscore	.257	.065
Vocabulary / Sscore	.349	.011
Vocabulary / Rscore	.265	.057
Rscore / Bscore	-.526	.0001
Sscore / Cscore	-.417	.002
Rscore / SE	-.408	.003
Sscore / Bscore	-.301	.030
Sscore / Rscore	.320	.021
Cscore / Rscore	-.303	.029
Cscore / Lscore	-.344	.012
Rscore / Iscore	-.258	.065
Iscore / Sex	-.304	.028
Grade / SE	-.331	.012
Grade / Sex	-.331	.012
Bscore / SE	.271	.052
Grade / Lscore	.253	.071
Age / Iscore	.297	.003
Age / Bscore	-.327	.018
Age / Lscore	.291	.036
Age / SE	-.318	.016

Tutored Group Correlations

Reading / Power	.905	.0001
Vocabulary / Power	.622	.031
Vocabulary / Lscore	-.570	.040
Reading / SE	-.691	.013
Sscore / Cscore	-.780	.003
Rscore / Bscore	.729	.007
Sscore / SE	-.566	.055
Bscore / Grade	.605	.037
Bscore / Age	.703	.011

TABLE 7

Level 2 Correlations

	r	p
Reading / Vocabulary	.397	.055
Reading / Power	.877	.0001
Vocabulary / Power	.750	.0001
Vocabulary / Sscore	.490	.018
Vocabulary / Lscore	-.589	.003
Sscore/ Cscore	-.491	.017
Rscore/ SE	-.701	.0001
Bscore/ SE	.518	.001
Iscore/ SE	.518	.011
Rscore/ Iscore	-.514	.012
Rscore/ Bscore	-.601	.002
Iscore/ Lscore	-.435	.038
Age/ Sex	-.398	.054
Grade/ Sex	.335	.110

Level 3 Correlations

	r	p
Reading / Vocabulary	.697	.0001
Reading / Power	.922	.0001
Vocabulary / Power	.917	.0001
Reading / Rscore	.486	.007
Reading / SE	-.348	.047
Iscore / Bscore	-.504	.005
Rscore / Bscore	-.498	.006
Cscore / Lscore	-.530	.003
Cscore / Sscore	-.370	.048
Cscore / Rscore	-.380	.042
SE / Iscore	-.316	.095
SE / Bscore	-.315	.095
SE / Grade	-.405	.019
Grade / Rscore	.398	.033
Age/ Rscore	.399	.032
Age/ Iscore	.467	.011
Age/ Bscore	-.471	.010
Age/ SE	-.406	.019
Age/ Cscore	-.324	.087

TABLE 8

Regular Group Male Correlations

	r	p
Reading / Vocabulary	.520	.006
Reading / Power	.901	.0001
Vocabulary / Power	.804	.0001
Sscore / Cscore	-.646	.001
Rscore / Bscore	-.640	.001
Rscore / SE	-.462	.026
Lscore / Grade	.496	.016
Lscore / Bscore	-.467	.025
Age / Lscore	.539	.008
Age / Bscore	-.502	.015

Tutored Group Male Correlations

	r	p
Reading / Vocabulary	NS	
Reading / Power	.884	.004
Vocabulary / Power	.697	.055
Reading / SE	-.475	.066
Vocabulary / Lscore	-.718	.045
Sscore / Cscore	-.884	.004
Bscore / Rscore	-.806	.016
Bscore / Grade	.742	.035

TABLE 9

Regular Group Female Correlations

	r	p
Reading / Vocabulary	.630	.0001
Reading / Power	.905	.0001
Vocabulary / Power	.896	.0001
Vocabulary / Sscore	.487	.007
Reading / SE	-.436	.014
Reading / Rscore	.473	.015
Reading / Cscore	-.371	.048
Reading / Bscore	-.366	.051
Vocabulary / Rscore	.348	.064
Vocabulary / Sscore	.487	.007
Vocabulary / Bscore	-.382	.041
Cscore / Rscore	-.440	.017
Cscore / Lscore	-.415	.025
Rscore / SE	-.397	.033
Bscore / Rscore	-.376	.044
Grade / SE	-.308	.092

Tutored Group Female Correlations

	r	p
Vocabulary / Rscore	-.996	.004
Cscore / Lscore	.989	.01

TABLE 10

Support

Total School

	r	p
Reading/ Sscore	.277	.026
Vocabulary / Sscore	.318	.011
Sscore / Cscore	-.499	.001
Sscore / Rscore	.299	.017
Sscore / Bscore	-.236	.061

Regular Group

	r	p
Reading / Sscore	.257	.065
Sscore / Cscore	-.417	.01

Tutored Group

	r	p
Sscore / Cscore	-.780	.003
Sscore / SE	-.566	.055

Females

	r	p
Sscore / Vocabulary	.406	.019
Sscore / Cscore	-.342	.051
Sscore / Bscore	-.293	.098
Sscore / Reading	.430	.013

Females   Regular Group

	r	p
SScore / Reading	.326	.085
Sscore / Vocabulary	.526	.01
Sscore / Power	.401	.031

Males

	r	p
Sscore / Cscore	-.673	.001
Sscore / Rscore	.369	.041

Males   Regular Group

	r	p
Sscore / Cscore	-.660	.001

Males   Tutored Group

	r	p
Sscore / Cscore	-.884	.01

Total School

Cognitive Variables and Self Evaluation Scores

Significant findings in the total school, 64 students, 34 males and 35 females, comparing cognitive variables, included the positive correlations between reading and vocabulary, r = .535, between reading and reading power, r = .903, and vocabulary and reading power, r = .864, all (p. = .000). Reading power scores reflected reading and vocabulary scores, since the two scores made up the reading power scores. Female correlations were found between reading and vocabulary, r = .600, between reading and reading power, r = .903 and between vocabulary and reading power, r = .864, all (p = .000). Male correlations were found between reading and vocabulary, r = .474 (p = .005), between reading and reading power, r = .408 (p = .017) and between vocabulary and reading power, r = .762 (p = .000).

Examining cognitive and self evaluation correlations in the total school, support was the most strongly correlated to reading, vocabulary and reading power. A significant correlation was found between reading and support, r = .277 (p = .026), and significant negative correlations between reading and conformity, r = -.267 (p = .033), and reading and self esteem, r = -.242 (p = .045). Vocabulary correlated negatively with leadership, r = -.246 (p =.05), and positively with support, r = .318 (p = .011). Reading power correlated positively with support, r = .318 (p = .01).

Male scores found no significance between reading and self evaluation scores and the only significant correlation between any cognitive and

self evaluation variable was a negative correlation between vocabulary and leadership, $r = -.365$ ($p = .043$). Comparing cognitive scores and self evaluation scores of females in the total school, significant positive correlations were found between reading and support, $r = .430$ ($p = .013$), and reading and recognition, $r = .385$ ($p = .027$), and significant negative correlations between reading and self esteem, $r = -.440$ ($p = .008$), and reading and conformity, $r = -.399$ ($p = .022$). While not at significant levels, reading and benevolence, $r = -.295$ ($p = .096$), was negatively correlated. In vocabulary correlations, females had a significant positive relationship between vocabulary and support, $r = .406$ ($p = .019$), and a nonsignificant correlation between vocabulary and benevolence, $r = -.321$ ($p = .069$).

Self Evaluation Variable Correlations

In the total school, correlations between self evaluation scores included support and conformity, $r = -.499$, and recognition and benevolence, $r = -.549$, negatively correlated at .000 level of significance. A significant positive correlation was found between support and recognition, $r = .299$ ($p = .017$), and significant negative correlations were found between conformity and recognition, $r = -.248$ ($p = .048$), independence and recognition, $r = -.286$ ($p = .022$), and benevolence and leadership, $r = -.268$ ($p = .032$). A significant negative correlation, $r = -.367$ ($p = .003$), between self esteem and recognition, and a positive nonsignificant correlation between self esteem and benevolence, $r = .237$ ($p = .059$), were also found. The total school found a nonsignificant correlation between support and benevolence, $r = -.236$ ($p = .061$).

Males in the total school found a negative correlation between recognition and benevolence, r = -.628 (p = .000), recognition and self esteem, r = -.417 (p = .020), support and conformity, r = -.673 (p = .001), and leadership and benevolence, r = -.438 (p = .014), and a significant positive correlation between recognition and support, r = .369 (p = 041). A nonsignificant negative correlation was found between recognition and independence, r = -.346 at .057.

Females found significant negative correlations between recognition and benevolence, -.411 at .018, independence and leadership, r = -.381 (p = .029), and conformity and recognition, r = -.356 (p = .042), and a nonsignificant negative correlation between support and conformity, r = -.342 (p = .051).

Age and grade were significantly and negatively related in the total school to sex, r = -.297 (p = .018), and r =- .278 (p = .021), respectively, with females older and in higher grade levels than males. Age was significantly and positively related to independence, r = .307 (p = .014), and nonsignificantly and negatively related to self esteem, r = -.204 (p = .093). All females found age and support negatively related, r = -.348 (p = .047).

Regular Group

In the regular group, which combined levels 2 and 3, the correlation between reading and vocabulary was .571 at .001 significance. Mean scores in reading and conformity correlated negatively and significantly, r = -.295 (p = .034), and reading and support correlated positively, approaching significance, r = .257 (p = .065). Vocabulary correlated

positively with support, r = .349 (p = .011), and positively with recognition, r = .265 (p = .057), approaching significance. While no significant correlations were found for males in the regular group between reading or vocabulary and any of the self evaluation scores, female scores were significant and negatively correlated between reading and self esteem, r = -.436 (p = .014), reading and benevolence, r = -.366 (p = .051), and reading and conformity scores, r = -.371 (p = .048), and positively correlated between reading and recognition scores, r = .473 (p = .015). Significant female correlations in the regular group between vocabulary and support, r = .487 (p = .007), were positive, and between vocabulary and benevolence, r = -.382 (p = .041), were negative. Although not significant, vocabulary and recognition, correlated positively, r = .348 (p = .064).

In the regular group, a significant negative correlation was found between recognition and benevolence r = -.526 (p = .000), with regular males, r = -.640 (p = .001), and regular females, r = -.376 (p = .044). Support and conformity correlated negatively r = -.780 (p = .003), and for regular males, r = -.646 (p = .001). Negative correlations between recognition and independence, r = -.259 (p = .065), and positive correlations between recognition and support, r = .320 (p = .021), and for regular group males, r = .363 (p = .089). A negative correlation was found between benevolence and leadership for the regular group, r = -.234 (p = .095), and for regular males, r = -.467 (p = .025). A significant negative correlation between support and benevolence, for the regular group, r = -.301 (p = .030), was due to regular group females, r = -.428 (p = .021), and no significance for males and conform-

ity and recognition, r = -.303 (p = .029), also due to females in the regular group, r = -.440 (p = .017); and conformity and leadership in regular group, r = -.344 (p = .012), due to regular group females, r = -.415 (p = .025), and not significant for males. Recognition and independence found a nonsignificant negative correlation for the regular group, r = -.259 (p = .065), and benevolence and leadership, r = -.234 (p = .095), which was significant for regular group males, r = -.467 (p = .025), but with no significance for regular group females. Self esteem and recognition scores was significant and negative for the regular group , r = -.408 (p = .003), regular group females, r = -.367 (p = .033) and regular group males, r = -.462 (p = .026). Also found was a positive significant correlation between self esteem and benevolence for the regular group, r = .271 (p = .052).

Tutored Group

In the tutored group, reading and vocabulary did not correlate significantly. Reading and reading power correlated positively, r = .905 (p = .000), and vocabulary and reading power correlated positively, r = .623 (p = .031). Male tutored students found reading and reading power significantly correlated, r = .884 (p = .004), and vocabulary and reading power nonsignificantly correlated, r = .679 (p = .055). Significant negative correlations were found between reading and self esteem at r = -.671 (p = .013), and vocabulary and leadership, r = -.570 (p = .04) level of significance. A significant negative correlation was found for males between vocabulary and leadership, r = -.718 (p = .045) and a nonsignificant negative correlation between reading and self esteem, r = -.675 (p = .066).

In the tutored group, a significant negative correlation was found between recognition and benevolence $r = -.729$ ($p = .007$); for tutored males, $r = -.806$ ($p = .016$). Support and conformity correlated negatively, $r = -.780$ ($p = .003$); for tutored males, $r = -.884$ ($p = .004$). Self esteem and support approached significance and correlated negatively, $r = -.566$ ($p = .055$).

In the tutored group, significant and positive correlations were found between grade and benevolence, $r = .605$ ($p = .037$), and age and benevolence, $r = .703$ ($p = .011$).

Summary of Groups

A significant negative correlation for the regular group in reading was found between reading and conformity, and a nonsignificant positive correlation between reading and support, $r = .257$ ($p = .065$). A significant positive correlation was found between vocabulary and support, and a nonsignificant positive correlation between vocabulary and recognition, $r = .265$ ($p = .057$). A significant positive correlation also was found between reading power and support.

Significant negative correlations for the tutored group were found between reading and self esteem, vocabulary and leadership, and reading power and self esteem.

Summary of Cognitive Correlations

Because both reading and vocabulary comprised the reading power score, the correlations between reading and reading power and vocabulary

and reading power were expectedly high. Significant positive correlations were found in the total school and in the regular group between reading and vocabulary, reading and reading power, and vocabulary and reading power. Males and females in the total school and regular group found the same correlations between reading and vocabulary. In the tutored group, however, there was no significant correlation between reading and vocabulary scores. A significant correlation between reading and reading power was greater than that between vocabulary and reading power. The tutored level vocabulary scores were lower than the reading scores and were less strongly correlated to reading power. Tutored males found the same correlations.

Summary of Reading and Self Evaluation Scores

Significant correlations between self evaluation scores and reading scores for the total school were found between reading and support, which were positive, and reading and self esteem and reading and conformity, which were negative.

Reading and support in the total school correlated positively, $r = .277$ ($p = .026$); for the regular group, $r = .257$ ($p = .065$), and for the tutored group, no significance was found. Regular group females correlated positively, $r = .326$ ($p = .085$), and males found no significance.

Reading and conformity at the total school level correlated negatively, $r = -.269$ ($p = .033$); the regular group correlated negatively at a significant level, $r = -.295$ ($p = .034$), with no significance for males, but for females, $r = -.371$ ($p = .048$).

For the total school, reading and recognition were not significantly correlated, due to males nonsignificance, but for females, a positive significant correlation between the two variables was found; $r = .385$ (p = .027), for total females, and for regular group females, $r = .473$ (p = .01).

The total school correlation between reading and benevolence correlations were not significant, nor were they for the regular group, but for females a nonsignificant negative correlation of $r = -.295$ (p = .096) and for regular group females, a negative correlation of $r = -.366$ (p = .051) was found.

The entire school correlations between reading and self esteem were significant and negative, $r = -.242$ (p = .045), and for the tutored group, $r = -.720$ (p = .008). While in the regular group, no significance was found, and regular group male scores were not significant, regular group female scores were significant and negatively related, $r = -.436$ (p = .014).

Summary of Vocabulary and Self Evaluation Scores

In the total school, significant and positive correlations were found between vocabulary and support, and significant and negative between vocabulary and leadership. Although not significant, a positive correlation was found between vocabulary and recognition. In the total school, a significant correlation was found between reading and conformity, however, no significant correlation was found between vocabulary and conformity.

In the total school vocabulary and support correlated positively, $r = .318$ (p = .011), and vocabulary and leadership, negatively,

$r = -.246$ (p = .050), and, nonsignificantly, vocabulary and recognition, $r = .221$ (p = .080), positively. The regular group found a significant positive correlation between vocabulary and support, $r = .349$ (p = .011), due to female scores, $r = .406$ (p = .019), especially females in the regular group where a positive correlation, $r = .487$ (p = .007) was found, with no significant correlation found for males.

In the total school a significant negative correlation was found between vocabulary and leadership, $r = -.246$ (p = .050), due to total males, $r = -.365$ (p = .043), and especially tutored level male scores, $r = -.718$ (p = .045). Regular group male or females scores were not significantly correlated between vocabulary and leadership. Reading and leadership was not found to be significantly correlated for any group.

At the total school level, although not significant, vocabulary and recognition were positively related, $r = .220$ (p = .08); not significant for males, and a nonsignificant positive correlation for females, $r = .348$ (p = .064). The regular group found a nonsignificant correlation between vocabulary and recognition of $r = .265$ (p.= .057). Regular group males found no significant correlation, however, regular group females found a positive correlation of $r = .348$ (p = .064), and tutored females found a negative correlation of $r = -.996$ (p = .004). This included only 4 females in the tutored group, however.

No significant correlation was found between vocabulary and benevolence at the total level, although females found a negative nonsignificant correlation, $r = -.321$ (p = .069), and no significant correlation was found for males; regular group females also found a significant negative correlation of $r = -.382$ (p = .041).

Summary of Reading Power and Self Evaluation Scores

Reading power reflected the totals of reading and vocabulary scores. The highest correlations between reading power and self evaluation scores for the total school were between reading power and support, $r = .318$ (p = .010), with regular group at $r = .322$ (p = .020). The scores in reading, vocabulary and reading power correlated significantly with support at the total school level, due to females scores on each, and with no significance found for males. For regular group females, reading power and support correlated, $r = .461$ (p = .012), reading power and recognition, $r = .454$ (p = .013), both positive, and reading power and benevolence correlated negatively, $r = -.398$ (p = .033). Reading power and independence were positively, although nonsignificantly related, $r = .243$ (p = .082). In the entire school, no significant correlations were found for males, nor for males in the regular group, however, the tutored group had a significant negative correlation between reading power and self esteem, $r = -.720$ (p = .008) due to males in the tutored group, $r = -.710$ (p = .049), which was largely reflective of the reading and self esteem score correlation.

Gender

Males had no significant correlations between reading and any self evaluation scores, and the only significant correlation found was between vocabulary and leadership for total males, $r = -.365$ (p = .043); with no significance for regular group males; and tutored group males,

$r = -.718$ (p = .045), negatively correlated. In the total school, the strongest correlations for females were between reading and support, $r = .430$ (p = .013), reading and recognition, $r = .385$ (p = .027), positive, and reading and self esteem, $r = -.440$ (p = .008), reading and conformity, $r = -.399$ (p = .022), negative. A significant positive correlation between vocabulary and support, $r = .406$ (p = .019), and a nonsignificant negative correlation between vocabulary and benevolence, $r = -.321$ (p = .069), also was found for all females.

Regular females found significant correlations between reading and recognition, $r = .473$ (p = .015), positive, and reading and conformity, $r = -.371$ (p = .048), reading and benevolence, $r = -.366$ (p = .051) and reading and self esteem. $r = -.346$ (p = .014), all negative. Vocabulary and benevolence were negatively correlated, $r = -.382$ (p = .041) and vocabulary and support were positively correlated, $r = .489$ (p = .007), both significantly. Vocabulary and recognition were correlated positively, $r = .348$ (p = .064), and nonsignificantly. With only four females in the tutored group, scores from this group were not examined.

The regular group found similar correlations between reading and vocabulary, reading and reading power and vocabulary and reading power for males and females. Males in the regular group found no significant correlations between any of the cognitive scores and self evaluation scores, however females found positive correlations between reading and recognition, $r = .473$ (p = .015) and negative correlations between reading and self esteem, $r = -.436$ (p = .014), reading and conformity, $r = -.371$ (p = .048), and reading and benevolence, $r = -.366$ (p = .051). For females in the regular group, positive correlations were found be-

tween vocabulary and support, r = .487 (p = .007) and vocabulary and recognition, r = .348 (p = .064), and negative correlations between vocabulary and benevolence, r = -.382 (p = .041).

The correlations between recognition and benevolence were negative for both males and females in the regular group; males, r = -.640 (p = .011), and females, r = -.376 (p = .044).

Highly significant negative correlations were found between benevolence and recognition; all males found a negative correlation, r = -.628 (p = .000) and regular males, r = -.640 (p = .001), with male tutored students, r = -.806 (p = .016). Females also found a negative correlation, r = -.411 (p = .018) and regular females, r = -.376 (p = .044).

In the total school, males accounted for the negative correlation between support and conformity, r = -.499 (p = .001), tutored group, r = -.780 (p = .003) and especially tutored males, r = -.884 (p = .004). No significant correlation was found for females or regular group females. Tutored males also found negative correlations between self esteem and support.

Age and Grade

In the total school, significant negative correlations were found between age and sex, which indicated that females were older and in higher grades than males. Age was significantly and positively related to independence, and nonsignificantly and negatively related to self esteem, r = -.204 (p = .093). The interaction of age and sex were related to this variable. Older students valued independence more than those who were younger, with females older and significantly higher in independence than males.

In the regular group, age was positively correlated with independence and leadership, and negatively correlated with benevolence and self esteem and age and conformity were negatively correlated, although not as strongly. Older students had higher scores in independence and leadership and lower scores in benevolence, self esteem and conformity.

In the tutored group, significant positive correlations were found between grade and benevolence and age and benevolence. Those students who were older and in higher grades scored higher on benevolence than those who were younger and in lower grades.

Age was not a primary factor with males in the total school, however, regular group males found age was related positively and significantly to leadership, and positively and negatively to benevolence. Females in the total school found age and support significantly and negatively correlated and regular group females found a nonsignificant and negative correlation between grade and self esteem, $r = -.308$ ($p = .092$).

The age difference points up the fact that gender and group should be examined very carefully on the variables which are affected by age, i.e., in the sample at New Trier, females are older than males and have higher independence scores. Thus, the difference may be due to an interaction of age and gender.

Self Evaluation Variable Correlations

The most significant correlations in SIV scores were found between recognition and benevolence at the total school level, which correlated negatively, $r = -.549$ ($p = .000$), regular group, $r = -.526$ ($p = .000$), and tutored group, $r = -.729$ ($p = .007$). Males correlations were

r = -.628 (p = .000), regular males, r = -.640 (p = .001), tutored

males, r = -.806 (p = .016). Females correlated negatively for total

school, r = -.411 (p = .018), regular, r = -.376 (p = .044), and the tu-

tored group females found no significance.

Support and conformity correlated negatively, r = -.499 (p = .000),

for total school, r = -.417 (p = .002) for regular group, and r = -.780

(p = .003), for tutored group. Total males correlated negatively,

r = -.673 (p = .001); regular males, r = -.646 (p = .001) and tutored

males, r = -.884 (p = .004). Females correlations were negative,

r = -.342 (p = .051).

Other significant correlations in the total school were: negative

correlations between recognition and independence, r = -.286 (p = .022),

especially in the regular group, r = -.259 (p = .065), due to total male

scores, r = -.346 (p = .057), and not significant for tutored males or

the tutored group; positive correlations between recognition and sup-

port, r = .299 (p = .017); regular group, r = .320 (p = .021), all

males, r = .369 (= 041), regular group males, r = .363 (p = .089), and

not significant for tutored group males, tutored group or all females,

and negative between benevolence and leadership, r = -.268 (p = .032);

regular group, r = -.234 (p = .095), all males, r = -.438 (p = .014),

regular males, r = -.467 (p = .025), and not significant for females or

tutored group.

The total school found significance between support and benevolence,

r = -.236 (p = .061); regular group, r = -.301 (p = .03), due to regular

group females, r = -.428 (p = .021), and no significance for males; to-

tal school on conformity and recognition, r = -.248 (p = .048), and reg-

ular group, r = -.303 (p = .029), also due to females in the regular group, r = -.440 (p = .017); total school on conformity and leadership in regular group, r = -.344 (p = .012), due to regular group females, r = -.415 (p = .025), and not significant for males; and recognition and independence in the total school, r = -.286 (p = .022), regular group, r = -.259 (p = .065), and all males, r = -.346 (p = .057). This was not significant for females. The total scores for all females were neg-atively significant correlations between independence and leadership, r = -.381 (p = .029) and conformity and recognition, r = -.356 (p = .042) and for all males, negatively significant between leadership and benevolence r = -.438 (p = .014). Total school found negative cor-relations between conformity and recognition, r = -.248 (p = .048), and between benevolence and leadership, r = -.268 (p = .032. Between benev-olence and leadership for the regular group found r = -.234 (p = .095), and regular group males, r = -.467 (p = .025), with no significance for regular group females.

The most significant correlations in the total school were the neg-ative correlations between recognition and benevolence, r = -.549 (p = .000) and between support and conformity, r = -.499 (p = .001).

Between the general self esteem score and the six area specific self concept scores, the strongest correlation was between self esteem and recognition scores, negative. At the total school level, this correla-tion was r = -.367 (p = .001), and regular group , r = -.408 (p = .003), with level 2, r = -.707 (p = .001), and no significance in level 3; males found r = -.417 (p = .020), and females, r = -.316 (p = .07), with regular group females, r = -.367 (p = .033), and regular group males,

$r = -.462$ (p = .026). Also found was a positive significant correlation between self esteem and benevolence in the total school, $r = .237$ (p = .059), and regular group, $r = .271$ (p = .052). Self esteem and independence in level 2 was positively related, $r = .518$ (p = .054) and in level 3 was negatively related, $r = -.315$ (p = .095), with no significance for level 1.

The only group finding any correlation between self esteem and support scores was the tutored group, with a negative correlation, $r = -.566$ (p = .055).

Levels

The tutored group, also level 1, found correlations between reading and self esteem, $r = -.691$ (p = .013), and vocabulary and leadership, $r = -.570$ (p = .040), significantly correlated and negative. Significant negative correlations were found between support and conformity, $r = -.780$ (p = .003), recognition and benevolence, $r = -.729$ (p = .007) and support and self esteem, $r = -.566$ (p = .055). Benevolence and grade of student was significantly and positively related, $r = .605$ (p = .037). The males in the tutored level reflected these same correlations. There were more males than females in this level, with only four females in the level.

As discussed, the regular group was comprised of level 2 and level 3. A significant negative correlation for the regular group in reading was found between reading and conformity, $r = -.295$ (p = .034), and a non-significant positive correlation was found between reading and support, $r = .257$ (p = .065). A significant positive correlation was found be-

tween vocabulary and support, r = .349 (p = .011), and a nonsignificant positive correlation between vocabulary and recognition, r = .265 (p = .057). A significant positive correlation also was found between reading power and support, r = .322 (p = .020).

In level 2, the lower of the two levels in the regular group, there were no significant findings between reading scores and any of the value scores, but a significant positive correlation between vocabulary and support, r = .490 (p = .018), and a significant negative correlation between vocabulary and leadership r = -.589 (p =.002), were found. Level 2 males found no significance between reading and self evaluation scores, but vocabulary and support were positively correlated, r = .636 (p = .015) and vocabulary and leadership were negatively correlated, r = -.666 (p = .009), both significantly. Females in level 2 found vocabulary and leadership significantly and negatively correlated, r = -.711 (p = .032). There were significantly more males in this group than females. Significant negative correlations were found between recognition and self esteem, r = -.701 (p = .000), support and conformity, r = -.491 (p = .017), recognition and independence, r = -.514 (p = .012), recognition and benevolence, r = -.601 (p = .002), and independence and leadership, r = -.435 (p = .038). A significant and positive relationship was found between independence and self esteem of r = .518 (p = .011).

The high level within the regular group, level 3, found reading and recognition correlated positively, r = .486 (p = .007), while reading and self esteem correlated negatively, r = -.348 (p =.047), at significant levels. No significance was found between vocabulary and any value

scores. Level 3 males found no significance between any cognitive
scores and self evaluation scores, however, females in level 3 found a
significant positive correlation between reading and recognition,
$r = .592$ (p = .008), and a significant negative correlation between
reading and self esteem, $r = -.496$ (p = .019). At nonsignificant lev-
els, reading and benevolence, $r = .404$ (p = .078) and reading and con-
formity $r = -.414$ (p = .062), correlated negatively. Level 3 females
also found vocabulary and support significantly and positively correlat-
ed, $r = .576$ (p = .001) and vocabulary and recognition nonsignificantly
and positively correlated, $r = .418$ (p = .067). Reading power was sig-
nificantly correlated positively with support and recognition and neg-
atively with benevolence and self esteem. Level 3 students found sig-
nificant negative correlations between conformity and leadership,
$r = -.530$ (p = .003), conformity and support, $r = -.370$ (p = .048), con-
formity and recognition, $r = -.380$ (p = .042), independence and benevo-
lence, $r = -.504$ (p = .005), and recognition and benevolence, $r = -.498$
(p = .006). Grade of student had a significant positive correlation
with self esteem, $r = .398$ (p = .033), and a significant negative corre-
lation with and recognition, $r = -.409$ (p = .019), i.e., the higher the
grade level of the student, the lower the self esteem score and the
higher the recognition score.

Summary of Levels

The lowest level found a significant negative correlation between
reading and self esteem and vocabulary and leadership. The middle level
found no significant correlations between reading and any value scores,

however, a significant positive correlation was found between vocabulary and support, and a significant negative correlation was found between vocabulary and leadership. Reading power and support were positively and significantly correlated and reading power and leadership were significantly and negatively correlated.

The middle level males found reading not significantly related to self evaluation scores, but those highest in vocabulary valued support, $r = .636$ ($p = .015$) and devalued leadership, $r = -.666$ ($p = .009$). Middle level females found no significance except that those who scored highest in vocabulary devalued leadership, $r = -.711$ ($p. = .032$).

Level 3 found reading and recognition significantly and positively correlated and reading and self esteem significantly and negatively correlated. No significant correlation between vocabulary and any self evaluation scores were found.

High level males found no significant correlations between reading, vocabulary or reading power and any of the self evaluation variables. Females in the high level who had highest reading scores valued recognition, $r = .592$ ($p = .008$), and devalued self esteem, $r = -.496$ ($p = .019$), significantly, and devalued benevolence, $r = -.404$ ($p = .078$), and conformity, $r = -.414$ ($p = .062$), nonsignificantly. Females in the high level who scored high in vocabulary valued support, $r = .576$ ($p = .001$), significantly, and recognition, $r = .418$ ($p = .067$), nonsignificantly, more than those who scored low in vocabulary. Highest females in reading power valued support and recognition, and devalued benevolence and self esteem.

Level 1 found significant negative correlations between reading and self esteem and vocabulary and leadership. Level 2 found no correlations between reading and any self evaluation scores but, between vocabulary scores a significant positive correlation with support was found, and with leadership, a significant negative correlation. Reading power and support correlated positively, and reading power and leadership, negatively, due to vocabulary correlations.

Of all the levels, level 3 found the least significant correlations with each of the self evaluation scores and reading; the highest correlation was between reading power and independence scores, due to female scores.

To further define the regular group, level 2 and level 3 were examined separately. Self esteem and benevolence variables were positively correlated for the regular group, $r = .237$ ($p = .059$), due to level 2, which found a significant and positive correlation of $r = .518$ ($p = .001$), although, level 3 found a nonsignificant negative correlation of $r = .315$ ($p = .095$), and no significance was found for level 1. Level 2 found benevolence and recognition significantly and negatively correlated, $r = -.601$ ($p = .002$), as did level 3, $r = -.498$ ($p = .000$). Level 2 found recognition and self esteem significantly and negatively related, $r = -.701$ ($p = .000$), while level 3 and tutored groups found no significant correlation.

In level 2, age and sex were related, $r = -.398$ ($p = .054$), as was grade and sex, $r = -.335$ ($p = .110$). That is, in the middle level, females were older than males, and in higher grade levels._

Level 3 found age positively related to recognition, $r = .399$

(p = .032), leadership, r = .345 (p = .067), and independence, r = .467
(p = .011), and negatively related to benevolence, r = -.471 (p = .01)
and self esteem, r = -.406 (p = .019). Age and conformity were related
negatively, r = -.324 (p = .087). Older students valued recognition,
leadership and independence and devalued benevolence and self esteem.
They also devalued conformity, although not significantly.

Within the highest reading group, level 3, positive and significant
correlations were found between reading and reading power and recogni-
tion, and a significant negative correlation between reading and self
esteem. Vocabulary scores and self evaluation scores were not signifi-
cantly related. Those in the lower grades valued self esteem signifi-
cantly more and those in the the upper grades valued recognition more.

Regression Correlations

Multiple regression equations were run with reading as the dependent
variable and self evaluation scores as independent variables. Using
backward elimination, with the saturated model, all scores in the equa-
tion accounted for 26% of the variance (p = .015). The removal of self
esteem scores resulted in 23% of the reading variable explained
(p = .019). Support accounted for 7.7%, conformity, 7.1%, and self es-
teem (negative relationships) accounted for 7.1%, when placed in the
equation alone. Independence and support together accounted for 13%,
and independence, support and leadership accounted for 15%, in a posi-
tive correlation, at significant levels. Self esteem and conformity,
negatively correlated, together accounted for 12% of the reading score
(p = .018). Adding the third negative variable, benevolence, resulted
in 12% of the total reading scores explained (p = .046).

Regressing on vocabulary as the dependent variable, all self evaluation variables accounted for 36% of the variance (p = .000). Removing self esteem, the variance held at 36%, and removing conformity and self esteem resulted in 33% of the vocabulary variable explained. Entered separately, support accounted for 10%, leadership for 6%, recognition, 5%, and independence, when entered alone was not significant, however, independence and support together accounted for 16% and independence and recognition accounted for 12% of the vocabulary variable.

With reading power as the dependent variable, in backward elimination on a saturated model, all independent variables accounted for 33%, which was significant (p = .002). Removing self esteem resulted in 31% (p = .002). Entering only support accounted for 10%, and entering independence and support accounted for 18% (p = .022).

Regressing on reading and reading power for all males found no significant correlations, and regressing on vocabulary found the saturated model accounted for 43% (p = .049). Removing leadership accounted for 43% (p = .025) and removing leadership and self esteem resulted in 42% of variance (p = .013). Leadership alone accounted for 13% of the vocabulary variance (p = .044).

Regressing on reading for females found, in the saturated model, 45% of the variance accounted for in reading (p = .024). Removing self esteem resulted in 43% of the variance accounted for (p = .015), and with self esteem and conformity removed, this variance was 41% (p = 015). Further, removing benevolence resulted in amount of variance of 41% (p = .004), and removing leadership, 35% (p = .005).

Regressing on vocabulary for all females found, in the saturated model, all self evaluation variables accounted for 47% (p = .016), removing self esteem resulted in 47% (p = .008), and support alone accounted for 16% (p = .019). Independence and support together accounted for 22% of the variance in vocabulary (p = .05).

Regressing on reading power scores for all females, the saturated model accounted for 53% (p = .004). Removing self esteem resulted in 53% of the variable accounted for (p = .018), and support alone accounted for 26% (p = .002).

Regressing on reading scores for the regular group found the saturated model accounted for 25% (p = .058), and with the removal of self esteem, the model contributed 25% (p = .039). Support alone accounted for 7%, conformity, 9%, independence and support, 14%, independence, support and conformity, 15%, independence, support and benevolence, 15%, and independence, support, recognition and benevolence, 19%.

Regressing on vocabulary for the regular group found all variables accounted for 37% of the variance (p = .003), and, with the removal of self esteem, accounted for 37% (p = .001). With self esteem and leadership variables removed, the amount of variance was 33% (p = .002). Support contributed 12%, recognition 7%, and, independence, while not separately significant, intercorrelated with support such that together they accounted for 18% of the variance in the vocabulary variable, and independence and recognition 13%, independence, support and recognition contributed 32%, and adding conformity brought this to 28%.

For the regular group, regressing on reading power, found the saturated model accounted for 34% (p = .008), and removing self esteem ac-

counted for 34% (p = .004). Support alone accounted for 10% of the variance (p = .02) and support and independence together accounted for 20% (p = .004).

The regular group males found no reading, vocabulary or reading power scores to be significant, although, regressing on reading, females in the regular group found self esteem accounted for 18%, benevolence 14%, conformity 14%, recognition 22%, support 11%, and independence and recognition together accounted for 33% (p = .006), independence and support, 19% (p = .067) and adding leadership increased this to 26% (p = .05).

The regular group female vocabulary scores found support accounted for 24% (p = .007), benevolence, 15%, recognition, 12%, independence and support, 31% and independence and recognition, 19% (p = .063). The saturated model accounted for 55% of the variance (p = .01) and removing self esteem, 54% (p = .005).

Regressing on reading power for females in the regular group found the saturated model accounted for 56% (p = .008), and removing self esteem accounted in 56% (p = .003). Support alone accounted for 21% (p = .012), and support and recognition together accounted for 33% (p = .006). Support, recognition and independence together accounted for 45% of the variance in reading power (p = .002).

Level 1, or the tutored group, regressing on reading found self esteem contributed 48% (p = .013), self esteem and conformity, 52% (p = .035), self esteem and recognition, 48% (p = .051) and self esteem, support and conformity, 58% (p = .065). Self esteem, leadership, independence, support and conformity accounted for 79% (p = .046), and self

esteem, independence, support and conformity accounted for 67% (p = .067). Except for recognition, all variables in a nearly saturated model accounted for 89% (p = .084).

The tutored group, regressing on vocabulary scores, found all variables except leadership accounted for 75% of the variance in vocabulary, self esteem accounted for 35%, leadership 36%, self esteem and independence 35%, further adding conformity accounted for 46% and adding support accounted for 54% of the total variance.

In reading power, all variables accounted for 96% (p = .014) and self esteem alone, 52% (p = .008). All variables except recognition accounted for 94% (p = .006); self esteem, independence, leadership, support and conformity accounted for 94% (p = .002). Group 1 males found no significance when regressing on reading, however, on vocabulary, leadership accounted for 52% (p = .049).

Summary

With reading as the dependent variable, and using all self evaluation scores as independent variables, with the exception of self esteem, all variances accounted for more variance in vocabulary than reading. The total school found in reading, all variances accounted for 26% (p = .015); in vocabulary, 36% (p = .000); and in reading power, 33% (p = .002). Regressions were stronger for females than males and strongest for vocabulary, especially for regular group females. All females found regressing all variables on reading accounted for 45% (p = .024), regressing all variables on vocabulary accounted for 47% (p = .016), and regressing all variables on reading power accounted for

53% (p = .004). Males found no significance when regressing on reading or reading power, and found, regressing on vocabulary, all variables accounted for 43% (p = .049). Regular group regressions on reading accounted for 25% (p = .058), vocabulary, 37% (p = .003) and reading power, 34% (p = .008). In the total school level, the highest correlations on reading were found in support, a positive correlation of 7.7%, conformity, positive correlation of 7.1%, and self esteem, a negative correlation of -7.1%.

Self Evaluation Mean Scores

The following tables show self evaluation mean scores of students by school, gender and group.

TABLE 11

Mean Scores - Total School

	Means	Standard Deviations
Support	59.52	25.54
Independence	58.66	25.66
Benevolence	48.58	30.32
Recognition	48.55	25.85
Leadership	48.30	27.58
Conformity	31.28	26.74
Self Esteem	18.19	14.35

TABLE 12

Groups

	Means	Standard Deviations
	Support	
Regular	61.83	24.86
Tutored	49.50	27.13
	Conformity	
Tutored	43.08	22.61
Regular	28.56	25.74
	Recognition	
Regular	48.75	29.90
Tutored	47.67	33.45
	Independence	
Tutored	64.25	22.77
Regular	57.37	26.54
	Benevolence	
Regular	50.92	27.85
Tutored	38.42	24.99
	Leadership	
Tutored	54.17	20.65
Regular	46.94	27.95
	Self Esteem	
Regular	19.51	13.81
Tutored	11.92	15.81

TABLE 13

Levels

	Means	Standard Deviations
Support		
Level 2	63.91	25.61
Level 3	60.17	24.59
Level 1	49.50	27.13
Conformity		
Level 1	43.08	22.61
Level 3	28.97	27.92
Level 2	28.04	23.30
Recognition		
Level 2	50.43	33.83
Level 1	47.67	33.45
Level 3	47.41	21.93
Independence		
Level 1	64.25	22.77
Level 3	59.09	25.41
Level 2	55.09	28.32
Benevolence		
Level 2	53.61	25.02
Level 3	48.79	30.17
Level 1	38.42	24.99
Leadership		
Level 1	54.17	20.65
Level 3	50.24	29.01
Level 2	42.78	26.60
Self Esteem		
Level 2	22.29	11.14
Level 3	17.48	15.31
Level 1	11.92	15.81

TABLE 14

Gender

	Means	Standard Deviations
Support		
Males	60.81	26.60
Females	58.30	24.86
Conformity		
Males	33.71	25.57
Females	29.00	25.92
Recognition		
Males	51.00	34.12
Females	46.24	26.60
Independence		
Males	52.42	27.75
Females	64.51	22.82
Benevolence		
Males	44.87	31.47
Females	52.06	23.32
Leadership		
Males	53.10	27.53
Females	43.79	25.57
Self Esteem		
Males	18.23	14.24
Females	18.14	14.65

TABLE 15

Regular Group

	Means	Standard Deviations
Support		
Males	61.70	28.50
Females	61.93	22.09
Conformity		
Males	31.35	27.43
Females	26.25	24.13
Recognition		
Males	51.96	33.21
Females	46.21	27.33
Independence		
Males	48.39	28.23
Females	64.48	23.20
Benevolence		
Males	49.61	32.78
Females	51.97	23.78
Leadership		
Males	51.52	29.39
Females	43.41	26.72
Self Esteem		
Males	20.35	12.68
Females	17.62	14.75

Findings

The highest means in the total school were found to be support and independence, at similar levels, followed by benevolence, recognition, and leadership, and lowest, conformity.

The regular group was higher than the tutored group on support, recognition, benevolence and self esteem, and the tutored group was higher than the regular group on conformity, independence and leadership.

In the total school, males were highest in support and lowest in conformity and females were highest in independence and also lowest in conformity. Regular group students found the male mean score was highest in support, which was similar to the female mean score. The female highest mean score was in independence, which was higher than males, and both male and female mean scores were lowest in conformity.

The self esteem mean score for males was higher than for females. Female scores were more extreme on odd and even scores, and although male scores were not as high on even nor as low on odd scores, the total difference scores of both sexes were relatively alike.

In the regular group, males valued most highly the self evaluation trait of support, at about the same level as females second choice, and also valued least conformity, although not as negatively as did females. Females valued the self evaluation trait of independence most highly, followed by support and valued least the trait of conformity.

Means, by levels found that support was highest for level 2, followed by level 3, and lowest for the tutored level. Highest mean scores in conformity were in tutored level, followed by level 2 and level 3, both

very similar. Recognition highest scores were in level 2 followed by level 3 and level 1, which were very similar. Independence rated highest at tutored level, with level 3 and level 2 following. Highest scores in benevolence were in level 2, followed by level 3 and the tutored level. Leadership scores were highest at tutored level followed by level 3 and lowest in level 2. Self esteem totals were highest in level 2, followed by level 3, and lowest in tutored level.

Significant Mean Differences

T-tests were used to test for significance between mean self evaluation scores. Groups, levels and gender were examined up to p = .10, with significance determined at p = .05.

Groups

Comparing the tutored group, 12 students, and the regular group, 52 students, nonsignificant differences were found in conformity, t = 1.80 (p = .077), self esteem, t = -1.69 (p = .096) and support, t = -1.52 (p = .133) with the tutored group scoring higher in conformity and the regular group scoring higher in self esteem and support.

Females in the regular group, 31 students, found significant difference from females in the tutored group, 4 students, in the area of support, t = -2.42 (p = .021), with regular group females valuing support more than tutored group. Tutored females were higher in conformity, t = 1.62 (p = .114), although this was not significant and could be spurious due to the large difference in numbers between the groups. While

grade levels were not significantly different between females in the tutored and the regular groups, females in the tutored group were older, t = 1.78 (p = .084) than females in the regular group. Males in the regular group, 23 students, differed from males in the tutored group, 8 students, although not significantly, on self esteem, t = -2.25 (p = .074), with males in the regular group valuing self esteem more than those in the tutored group.

Summary of Groups

In summarizing differences in students between groups, no significant differences were found between the tutored group and the regular group, althouogh the tutored group was slightly higher on conformity and the regular group was higher on self esteem. While not significant, males in the tutored group had lower self esteem scores than males in the regular group. Females in the regular group had significantly higher support scores than females in the tutored group and females in the tutored group were slightly higher in conformity than females in the regular group.

Gender

Differences between males and females in the total school, 34 males and 35 females, found significant differences in level, t = 2.43 (p = .018), grade level, t = 2.37 (p = .021) and age t = 2.38 (p = .020), and nonsignificance in independence, t = 1.91 (p = .061). Females were nonsignificantly higher in independence, and were in sig-

nificantly higher grades and were older than males. There were more fe-
males in higher levels than males.

Comparing regular group means by sex, 23 males and 29 females, found
females scored significantly higher in independence, t = 2.26
(p = .028), were in higher grades, t = 2.21 (p = .031), and in higher
levels, t = 2.24 (p = .029) and were older, t = 2.22 (p = .031), than
males.

Level 2 differences in sex, 9 males and 14 females, found significant
difference in the area of conformity t = -2.75 (p = .014), with males
higher. Level 3 differences between sexes, 20 females 9 males, found no
significant differences between self evaluation scores. Level 1, with 8
males and 4 females, found significant differences in reading power,
t = -2.26 (p = .049), with males higher. Tutored males were also higher
in the area of reading, t = -1.76 (p = .109), than tutored females, but
not significantly.

Summary of Gender

In summarizing differences between students by gender in the total
school, females were significantly older and in higher grades and levels
than males. While nonsignificant at the total school level, females
were higher on independence, t = 1.91 (p = .061). At the regular level
this difference in independence was significant between males and fe-
males. Females in the regular group were also significantly older and
in higher grades than males. Level 2 males were significantly higher in
conformity than females, while level 3 found no significant differences
between sexes. Level 1 found males higher in reading power than females
in this level.

Levels

Comparing level 1, 12 students, with level 3, 29 students, found dif-
ferences in conformity, t = 1.55 (p = .129), with level 1 higher, and
sex, t = 2.05 (p = .046), with more females in level 3 and more males in
level 1. Male differences in level 1, 8 students, and level 3, 9 stu-
dents, found the only differences were in self esteem scores, t = -1.71
(p = .105), with level 3 higher. Females were not compared.

Comparing level 1, lowest level, 12 students, with level 2, middle
level, 23 students, significant differences were found in self esteem,
t = -2.29 (p = .029). Conformity t = 1.83 (p = .076) and benevolence,
t = -1.71 (p = .097), were not significant. Differences were also found
between grade in school, t = 1.81 (p = .089) and age, t = 2.05
(p = .048). Differences in males between level 1, 8 students, and level
2, 14 students, found self esteem, t = -2.13 (p = .045) and benevolence,
t = -1.82 (p = .084), with level 2 higher. Significance in females in
level 1, 4 students, and level 2, 9 students, found only support,
t = 2.55 (p = .027), with level 2 females higher.

Comparing level 2, 23 students, and level 3, 29 students, found no
significant differences on self concept scores, but a significant dif-
ference was found on sex, t = 2.24 (p = .029), with more females in lev-
el 3, grade, t = -5.21 (p = .0001) and age, t = -3.76 (p = .0001), with
level 3 students in higher grade levels and older than students in level
2. Females in level 2, 9 students, and level 3, 20 students, found dif-
ferences in conformity, t = -2.38 (p = .025), with level 3 higher than
level 2, and self esteem, t = 1.66 (p = .110), with level 2 higher than

level 3. Males in level 2, 14 students, and level 3, 9 students, found significant differences only on age, t = -4.09 (p = .0001), with level 3 older.

Summary of Levels

Level 1 students had significantly lower self esteem scores and were significantly older than level 2 students. While not significant, level 1 had higher conformity scores and lower benevolence scores than level 2. Level 2 males had significantly higher scores in self esteem than males in level 1 and females in level 2 had significantly higher support scores than females in level 1.

Level 2 and level 3 had no significant differences in any self concept scores, however, there were significantly more females in level 3, and level 3 students were significantly older than level 2. Females in level 3 were significantly higher in conformity than females in level 2, and females in level 2 were higher in self esteem, although not significantly. Males in level 2 and level 3 found no differences except on age, with level 3 significantly older.

Comparing level 1 and level 3 found level 1 students were higher in conformity scores, although not significantly, with significantly more males in level 1 than in level 3, and significantly more females in level 3 than in level 1. Males in level 1 compared to level 3 found males in level 3 higher in self esteem, although not significantly. With only four females in level 1, comparing them to level 3 females was not considered important.

Summary

To review, from the sample of 69 students, 35 males and 34 females, 64 were used in analysis with complete data, 31 males and 33 females. The regular group consisted of levels 2 and 3 and included 57 students, 23 males and 29 females. Level 2 consisted of 23 students, 14 males and 9 females, and level 3 consisted of 29 students, 20 females and 9 males. Level 1 or group 1, (the tutored group), was made up of 12 students, 8 males and 4 females.

To more accurately assess the findings, groups were analyzed separately, where the regular group consisted of 23 males and 29 females. There were disproportionately more males in the tutored group, 8 males and 4 females. Level 1 and level 2 had twice as many males as females, while level 3 had more than twice as many females as males.

In the total school, and in the regular group, significant correlations were found between cognitive variables; reading and vocabulary, reading and reading power, and vocabulary and reading power. In the tutored group, however, reading and vocabulary were not significantly correlated.

In the total school a significant negative correlation was found between reading and conformity and reading and self esteem, due to female scores, and no significance for males. No significance was found between self esteem and vocabulary. Males in the tutored group had non-significant negative correlations between reading and self esteem, $r = -.675$ ($p = .066$), while males in the regular group found no significant correlations between self esteem and any of the cognitive scores.

A significant positive correlation was found between reading and support, also due to females, with no significance found for males. A significant negative correlation was found between vocabulary and leadership due to male scores, and for females, this was not significant. No significance was found between reading and leadership. A positive correlation between vocabulary and recognition, while nonsignificant, $(p = .080)$ was due to female scores, and male scores were not significant. Regular group found, approaching significance, reading and support were positively correlated, $(p = .065)$ and reading and self esteem were negatively correlated $(p = .057)$.

The regular group found reading and support positively, approaching significance, $(p = .065)$. Vocabulary and support were significantly and positively correlated, and vocabulary and recognition nonsignificantly and positively correlated, with reading and conformity significantly negatively correlated. These correlations were due to female scores only.

Females in the school found significant correlations between reading and recognition and reading and support, which were positive, and reading and conformity and reading and self esteem, which were negative. Reading and benevolence, while not significant for all females, was negatively correlated for regular group females, $r = -.366$ $(p = .051)$. Vocabulary and support correlated positively and significantly for all females, due to regular female scores. Vocabulary and benevolence were negative and not significant at the total female level, however, regular group females found a significant negative correlation between vocabulary and benevolence. Vocabulary and recognition were not significant

at the total female level but, for regular group females, a negative correlation, (p = .064) was found. Males did not find any significant correlations on any of the reading scores and self evaluation scores.

Tutored group students found reading and self esteem and reading power and self esteem significantly negatively correlated. Vocabulary and leadership was significantly and negatively correlated. Vocabulary and self esteem correlated negatively, (p = .105). Tutored male scores followed the same relationships, however, the only significant correlations were between vocabulary and leadership and reading power and self esteem. Reading and self esteem correlated negatively (p =.066) and vocabulary and self esteem, (p = .162). There were only four females in this group, and the only significant correlation was found between vocabulary and recognition, which was negative.

Females found many more significant correlations in cognitive variables and self evaluation scores than males. Female scores found reading significantly positively correlated with support and recognition, and negatively correlated with self esteem and conformity. Females with higher reading scores valued support, and recognition, and devalued conformity and self esteem more than those with lower reading scores. Vocabulary scores positively correlated with support and negatively with benevolence (although not significantly). Positive correlations were found between reading power and support and reading power and recognition and negative between reading power and conformity scores (not significant). That is, higher scoring females in reading, vocabulary and reading power valued support and recognition more than low scoring females.

Males found no significance on reading and self evaluations, the only significance being a negative correlation between vocabulary and leadership.

At significant levels, in the tutored group, or level 1, those who had the highest scores in reading and reading power had the lowest scores in self esteem and those highest in vocabulary had lowest leader-. ship scores. Tutored students in higher grades had higher benevolence scores than those in lower grades. Males in the tutored group mirrored these findings.

The middle level found reading not significantly correlated with any self evaluation score. Vocabulary and support were positively correlated (due to males) and vocabulary and leadership were negatively correlated. The top level found reading and recognition positively correlated (due to females) and reading and self esteem negatively correlated, while no vocabulary and self evaluation scores were found to be significantly related.

Of significance for total students, reading was most strongly correlated (positively) with support, the importance of the value of being treated with kindness, negatively with conformity, doing what is socially correct, and negatively with self esteem, the general self esteem score. Vocabulary scores and support were even more strongly (positively) related than reading and support scores, but no significance was found between vocabulary and conformity. Males found no significance on either, and the total significance found was due to high female correlations. Vocabulary and leadership was negatively significantly correlated due to male scores, and was not significant for females. Females

found positive correlations between reading and recognition, but male negative correlation on the same variables were not significant and total scores did not show any significance.

Level 2, the middle level, found no significance between reading and self evaluation scores, but between vocabulary scores, a significant positive correlation with support was found, and with leadership, a negative correlation. Reading power and support correlated positively, and reading power and leadership, negatively. The highest scoring students in vocabulary and reading power valued support and devalued leadership as their choice of importance at significant levels.

Level 2 males, 14 students, found reading not significantly correlated to self evaluation scores, but those highest in vocabulary significantly valued support, and devalued leadership. Level 2 females, 9 students, found no significance between reading and self evaluation scores, but those who scored highest in vocabulary also devalued leadership significantly.

Within the highest reading group, level 3, the highest scorers in reading and reading power valued recognition and devalued self esteem significantly. Vocabulary scores and self evaluation scores were not significantly related. Those in the lower grades valued self esteem more, while those in the upper grades valued recognition more than did those in the lower grades.

Level 3 found significant correlations between reading power and recognition, positive, and reading power and self esteem esteem, negative. Level 3 males, 9 students, found no significant correlations between reading, vocabulary or reading power with any of the self evaluation

variables. Level 3 females, 20 students, found highest readers valued recognition significantly and devalued self esteem significantly, and, while not at significant levels, they also devalued benevolence and conformity. Vocabulary high readers valued support significantly and recognition nonsignificantly more than low readers. Highest females in reading power valued support, recognition and devalued benevolence and self esteem at significant levels.

Eliminating the tutored group, regular group students who were high in reading were significantly low in conformity. The regular group was nonsignificantly higher in in support than the tutored group. A significant positive correlation existed between vocabulary and support and between vocabulary and recognition, a nonsignificant positive correlation of (p = .057). Regular group males and females reading, vocabulary and reading power scores were similar, however, males found no significant relationships between self evaluation scores and cognitive scores, while females found significance in reading and recognition to be positive, and the correlations between reading and self esteem, benevolence (p = .051) and conformity to be negative. The correlation between vocabulary and support was positive and significant, and between vocabulary and benevolence was negative. Vocabulary and recognition, although not significant, (p = .064) was positive. Reading power and benevolence and reading power and self esteem were significantly negatively correlated, and reading power and support and reading power and independence were significantly positively correlated for regular group females.

$\underset{\sim}{SIV}$ and Self Esteem Correlations

In the total school significant negative correlations were found between support and conformity, recognition and benevolence, recognition and conformity, recognition and independence, recognition and self esteem and benevolence and leadership. Positive significant correlations were found between benevolence and self esteem and recognition and support.

In the regular group significant negative correlations were found between support and conformity, support and benevolence, recognition and benevolence, recognition and self esteem, conformity and recognition and conformity and leadership, and positive between support and recognition.

The tutored group found significant negative correlations between support and conformity and support and self esteem, and positive correlations between recognition and benevolence. Also grade and benevolence correlated positively for the tutored group.

Highly significant negative correlations were found in the relationship between benevolence and recognition for all levels and groups. Level 2 found benevolence and recognition to be more strongly related, negatively, than did level 3. Support and conformity for the total school and all students were significantly negatively correlated. Recognition and independence also were negatively correlated at significant levels for all students, and for males in the regular group (P = .057), but not for the tutored group. Also, level 2 found recognition and self esteem negatively related, while level 3 and tutored groups found no significant correlation. Self esteem and benevolence variables were po-

sitively significant at the regular group level, for the total school, due to level 2, positively related, although less strongly related, negatively., for level 3 and not significant for level 1.

In the total school, negative correlation were found between self esteem and recognition for females and for males. Self esteem and conformity for females were positively correlated, while not significant for males.

Males in the total school found a significant negative correlation between recognition and benevolence, as did females. Support and conformity correlated significantly and negatively for males, and for females approached significance correlating negatively ($r = -.342$ ($p = .051$). For males, significant negative correlations were found between recognition and self esteem and leadership and benevolence and a significant positive correlation between recognition and support. A nonsignificant negative correlation was also found between recognition and independence, $r = -.346$ ($p = .057$), with no significance found for females. In the total school, significant negative correlations were found for females between conformity and recognition, and between independence and leadership, with no significant correlations found for males. males.

Regular group males found negative correlations between support and conformity and recognition and benevolence. This group found no significance between support and self esteem or between grade and benevolence.

Regular group females significant negative correlations between conformity and recognition, conformity and leadership, benevolence and recognition and recognition and self esteem. Grade and self esteem were

also negatively correlated, although not significantly. The tutored group females found conformity and leadership significantly positively correlated.

T-tests found no significant difference on self evaluation scores between males and females, although independence approached significance, (p = .061). Females were significantly older and in higher levels than males. In the regular group females were significantly higher in independence than males and were significantly older and in higher grades than males. Tutored level males found no significant difference on self evaluation scores from females. Middle level males were significantly higher in conformity than females in the same level and the high level found no significant differences between sexes.

Group differences were not significant, but comparing tutored level with the middle level, middle level males had significantly higher self esteem than males in the low level, and middle level females had significantly higher support scores than females in the low level. High level females were higher in conformity than females in the middle level. The middle level and the high level found no significant differences. Self evaluation scores were not significantly related to reading scores for males, but were very significant for females. Reading and self concept was much more importantly correlated for females than males. The ramifications of this will be discussed further in the findings in Chapter 5 and in the conclusions in Chapter 6.

Math scores were not used in this school, but were included in both Lane Technical and Cathedral High Schools.

In the analysis of these evaluations, it should be noted that New Trier is a selective school in the sense of having been chosen by parents for its reputation of academic excellence. While New Trier is a public school, it would tend to differ from other public schools and to be more similar to private schools, where parental involvement and concern for students' performance, higher SES background in education and income and higher educational goals for their children would be prevalent. Families choose to live in this area for the specific purpose that their children may have the opportunity to attend new Trier. The area is economically restrictive, in the sense of the high cost of homes, and represents families who are in the highest SES backgrounds and largely those in professional and highly responsible positions.

Two factors which might not be considered relevant in many lower SES schools, but which are important at NTHS, are the high degree of competition and the drive to be accepted at the more prestigious universities and colleges.

Self evaluation mean scores from students in New Trier will be compared to the mean scores of students in the other schools included in the sample in Chapter 5. Correlations between reading and self evaluation scores will be examined for significance between the schools as well.

LANE TECHNICAL HIGH SCHOOL

Lane Technical High School was chosen to represent an urban public, high performance school with a middle to low-middle SES level. Among public high schools in Chicago, Lane Technical has had a reputation for high academic achievements, holding the highest, or second to highest, scores in math and reading. A magnet type of school, located on the North side of Chicago. Lane Technical selects students from the entire Chicago area, based upon their academic achievements. The racial composition is mixed. The school is coed, although for many years Lane admitted only males. One of the older schools in Chicago, the spacious building has well lighted, open halls and stairways, and is in a well maintained physical condition.

Lane Technical has the highest achievement scores of all the city schools in math and reading.[264] Based upon the annual battery of tests administered to all Chicago public high schools, reading skills in Lane Technical found median reading scores at the seventy fourth percentile on the TAP scales in 1982, the seventy sixth percentile in 1983, and in 1986, at the eighty first percentile for seniors and seventy ninth percentile for freshman (based on median scores). In the next highest school, seniors scored at fifty two percentile.[265]

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[264] The School Report Card for Illinois Schools, Lane Technical High School, and Gary Orfield, "The Chicago Study," p.137-138; Chicago Board of Education: Test Scores and Selected School Characteristics, High Schools 1982-1983; Illinois Board of Education: 1982-1983 Public School Fall Enrollment and Housing Report.

[265] Orfield, "The Chicago Study", p.138.

Lane Technical has a higher academic level, graduation rate, college preparatory classes, and lower student mobility and lower low income enrollment than the subdistrict and the district in which it is located.[266]

The average minority at Lane was 27.3% and the number of low income students was 19.8% (See Appendix C).[267] Other Chicago schools having higher incomes and fewer minority students than Lane Technical had lower median scores in reading and math. A number of schools fell at the forty eighth percentile. Among them, Mather, with only 4.8% of low income students and a minority of 20.4%, Taft, with a minority of 23% and low income of 20.8%, Washington with a minority of 35.8% and low income of 39.3%, and Bogan with a minority of 34.2% and a low income of 22.7%, as well as other schools which have a larger number of minority and low income students than Lane Technical.[268] This difference in outcome could be explained by the fact that these represent community schools serving the neighborhoods in which the schools are located, whereas Lane Technical is academically selective and does not rely on the neighborhood composition.

According to the Illinois Report Card data in 1986, only four of the sixty four Chicago high schools performed above national norms in all six areas tested; Lane Technical, Young, Kenwood and Von Stuben, all of which are somewhat selective in admissions.[269]

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[266] The School Report Card for Illinois Schools.

[267] Ibid. Orfield, "The Chicago Study," p. 142.

[268] Students' test scores represent a national cross section, while 45% of Chicago public school come from poverty homes. Orfield, "The Chicago Study," pp. 140-142.

According to The Chicago Study, Lane Technical has the highest number of counsellors, with twelve, followed by Hyde Park Careers and Chicago Vocational Center, with nine. The number of counsellors in suburban schools range from one to as many as twenty eight in Cook County; from Maine Township, which has one, to Thornton Township and New Trier, with twenty six each. Suburban high schools have on average of 8.3 counsellors per school, or about two-thirds more than the average city school.[270]

In 1985-86, the first year that the Illinois Report Card data was available, the enrollment in Lane Technical was 4,665 students, with low income enrollment at 19.8%. For the subdistrict in which Lane Technical is located, low income enrollment was 35.6%; and for the district, 45%. The graduation rate for Lane Technical was 89%; for the subdistrict, 52.2%; and for the district, 51.9%. Student mobility for Lane Technical was 6.2%; for the subdistrict, 27.2%; and for the district, 31.3%. In college preparatory for senior class, Lane Technical was 100%; subdistrict 67.9%; district 64.9%; and statewide 55.9%. Students not promoted at Lane Technical was 3.5%; subdistrict 18.5; and district 8.6%. Data from the subdistrict and district in which Lane Technical is located are not representative of Lane Technical's student population since students are selected from the larger Chicago area. Another of the selected schools for this study, located in the same subdistrict as Lane Technical, draws students from the local community and has much lower income level and academic scores than Lane Technical.[271]

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[269] Ibid., p. 138.

[270] Orfield, "The Chicago Study," p. 129.

Procedure For Obtaining Data

After an interview with the principal, and a meeting with the English
director, the examiner administered the questionnaires during the class
periods to all students in the English classes. The students were found
to be very courteous and cooperative and there were no discipline prob-
lems. The racial distribution appeared to be evenly balanced between
white, Hispanic and black students.[272]

Lane Technical, where students are chosen by a criterion rule, gave
the obvious appearance of students who take pride in their school and
feel privileged to be there. Even though there is no tuition fee, as in
a private school, admittance required that students maintain a high av-
erage academic level, and there are added costs and effort required in
longer travel time to the school and transportation expenses that would
not have been incurred had the students attended their local high
schools. Parental concern, elementary school teacher's encouragement
and the effort to enroll at Lane Technical would, in itself, imply in-
terest in the future of the student's academic career and appreciation
for the value of the high standards of the school. Parents of the stu-
dents at Lane Technical are likely to be more concerned about the stu-
dent's education than parents of students in other public schools.

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[271] Schurz and Lane High Schools share the same subdistrict The School
Report Card for Illinois Schools (See Appendix A, Tables 45-47).

[272] The average minority population of Lane Technical was 27.3% accord-
ing to the Orfield Chicago Study obtained from Illinois Board of Educa-
tion Report, pp. 201-203.

That the school emphasizes excellence was reflected in the attitude of the administration and the staff, as well as the students. Students were interested and serious as they answered the questionnaires, adding comments as to what they planned to do when they completed high school with most aspiring to college. The school is 100% college preparatory and, given the low income of the student body, it is suspected that many of these students would not have had the opportunity to have the excellent education, curriculum, resources and teachers which are provided by Lane Technical, and it appeared to the examiner that these students were well aware of, and grateful for, these benefits.

The academic achievement scores for the students were obtained from school records based upon the Tests of Academic Progress (TAP),[273] an annual battery of tests which were administered between October and November, 1984, to all students in Chicago high schools by an outside testing group from the Chicago Board of Education. Profiles, giving percentile ranking scores on each student, were provided to the individual schools. The TAP battery, comprised of six tests; social studies, composition, science, reading, mathematics and literature. Only reading and mathematics scores were utilized for this study.

Population

Of the 66 students at Lane, 31 were female (47%) and 35 were male (53%). Freshman consisted of 27 students (40.9%), 21 sophomores (31.8%) and 18 juniors (27.3%). 34.8% were age 15, 25.8% were age 14, 25.8%

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[273] Tests of Academic Progress, Form S (Iowa City, Iowa: Houghton Mifflin, 1979-1982).

were age 16 and 10.6% were age 17. Students at Lane were separated into two classroom groups; 45 regular students, (68.2%) and 21 honors students (31.8%).

Of the 66 students selected, 65 had complete scores, 35 males and 30 females; 41 of the 45 in regular classes (68.2%), 27 males and 14 females; and eighteen of twenty one in the honors classes (31.8%), thirteen females and eight males.

Procedure For Treating Data

As described earlier, the examiner administered SIV and self esteem questionnaires during class periods.

Male and female totals were recorded as percentile scores from raw scores, from tables in the scoring manual of the SIV questionnaire based upon national norms of high school students. Reading scores from TAP tests used for academic achievement found raw scores in reading ranged from 108 to 249, with a mean of 206.5, on the 56 students with complete data. The mean in reading for the regular group, 38 students, was 202.79, with a standard deviation of 26.72 and a standard error or 4.34, and for the honors group, 18 students, the reading mean was 214.39, with a standard deviation of 18.67 and standard error of 4.40. Math scores ranged from 156 to 239, with a mean of 200.36. The mean in math for the regular group was 194.08, with a standard deviation of 16.56 and the mean math score for the honors group was 213.61, with a standard deviation of 13.82.

The ranked percentile scores from individual student's profiles were transformed back into raw scores from tables in the TAP manual and were

standardized for performing interval analysis. Standardized reading scores, ranged from -3.96 to 1.71 with a standard error of .134 and a skew of -1.09. Standardized math scores ranged from .99 to 2.52 with a standard error of .045.

Standardized reading and math scores from the TAP were correlated with scores from self evaluation questionnaires and self evaluation scores were also compared against each other. Using ordinal scales for ranked data of SIV scores and interval data from academic scores, using Pearson product-moment correlations, data were examined up to p = .10, with significance set at p = .05 level.

Missing data eliminated individual scores so that out of a total of 66 students at Lane Technical, 56 students had complete data and were used for correlations and multiple regression analysis. Multiple regression analyses were performed, using reading and math as dependent variables and the scores on the self evaluation scales as independent variables. Gender, classroom groupings, age and grade completed the independent variables. T-tests also examined for significant differences between gender, class groupings, grade in school and age.

Findings

The following tables show Pearson product-moment correlations with (r)

relatedness and (p) significance:

TABLE 16

Lane Correlations

Total School Correlations n = 65

	r	p
Reading / Math	.449	.001
Reading / Rscore	-.222	.103
Reading / Bscore	.202	.140
Reading / Group	-.220	.103
Reading / Grade	.324	.015
Math / Grade	.228	.091
Math / Group	-.508	.0001
Group / Sex	.204	.100
Group / Rscore	.206	.100
Grade / Cscore	-.201	.109
Sex / Iscore	-.247	.047
Sex / Cscore	.208	.096
Sex / Lscore	-.202	.106
Sscore / Lscore	-.556	.0001
Sscore / Bscore	-.362	.003
Sscore / Rscore	.456	.0001
Sscore / Cscore	-.238	.057
Sscore / SE	-.291	.019
Cscore / Iscore	-.492	.0001
Rscore / Iscore	-.312	.011
Rscore / Bscore	-.499	.0001
Rscore / Lscore	-.244	.050
Rscore / SE	-.314	.011
Lscore / SE	.254	.041

TABLE 17

Male Correlations n = 35

	r	p
Reading / Math	.470	.007
Reading / Rscore	-.326	.069
Group / Math	-.568	.001
Group / Reading	NS	
Grade / Reading	.431	.014
Group / Bscore	-.368	.030
Grade / Age	.598	.0001
Sscore / Cscore	-.329	.054
Sscore / Rscore	.559	.0001
Sscore / Bscore	-.403	.017
Rscore / Lscore	-.711	.0001
Cscore / Iscore	-.583	.0001
Sscore / SE	-.310	.070
Rscore / Bscore	-.547	.001
Rscore / Lscore	-.304	.076
Rscore / SE	-.270	.117
Lscore / SE	.310	.070

Female Correlations n = 30

	r	p
Reading / Math	.426	.038
Group / Math	-.559	.005
Grade / Age	.854	.0001
Grade / Cscore	-.307	.099
Age / Cscore	-.354	.055
Grade / Iscore	.430	.018
Sscore / Rscore	.311	.094
Sscore / Bscore	-.350	.058
Sscore / Lscore	-.351	.057
Sscore / SE	-.325	.080
Cscore / Lscore	-.357	.030
Rscore / Iscore	-.536	.002
Rscore / Bscore	-.442	.014
Rscore / SE	-.373	.042
Iscore / SE	.317	.088

TABLE 18

Regular Group Correlations n = 38

	r	p
Reading / Math	.303	.064
Grade / Reading	.366	.033
Grade / Math	.244	.140
Grade / Cscore	-.255	.095
Group / Reading	NS	
Sex / Math	.251	.130
Sex / Sscore	.244	.111
Sex / Lscore	-.287	.059
Reading / Rscore	-.302	.069
Sscore / Cscore	-.275	.071
Sscore / Rscore	.404	.007
Sscore / Bscore	-.368	.014
Sscore / Lscore	-.510	.0001
Cscore / Iscore	-.478	.001
Bscore / Iscore	-.375	.012
Rscore / Bscore	-.557	.0001
Rscore / SE	-.311	.040
Lscore / SE	.274	.071
Sscore / SE	-.270	.076

TABLE 19

Honors Group Correlations n = 18

	r	p
Reading / Math	.776	.0001
Reading / Cscore	.392	.108
Math / Bscore	.417	.085
Math / Lscore	-.394	.106
Math / Cscore	.582	.011
Math / Sex	.517	.028
Age / Iscore	-.577	.006
Age / Bscore	.570	.007
Age / Sex	.596	.004
Sex / Iscore	-.692	.001
Sex / Bscore	.566	.008
Sex / Cscore	.428	.053
Sscore / Rscore	.639	.002
Sscore / Bscore	-.360	.109
Cscore / Iscore	-.547	.010
Bscore / Iscore	-.376	.093
Rscore / Lscore	-.479	.030
Rscore / SE	-.368	.101
Sscore / SE	-.370	.081

TABLE 20

Regular Group Correlations n = 24

	r	p
Reading / Math	.346	.098
Reading / Grade	.475	.019
Math / Grade	.361	.083
Reading / Rscore	-.397	.055
Sscore / Rscore	.516	.006
Sscore / Bscore	-.409	.034
Sscore / Lscore	-.670	.0001
Cscore / Iscore	-.645	.0001
Rscore / Bscore	-.580	.002
Sscore / Cscore	-.365	.061
Sscore / SE	-.372	.056
Rscore / SE	-.323	.100

Regular Female Correlations n = 14

Reading / Math	NS	
Math / Lscore	.581	.037
Age / Grade	.894	.0001
Reading / Rscore	-.397	.055
Rscore / Iscore	-.548	.023
Rscore / Bscore	-.513	.035
Iscore / SE	.465	.060

TABLE 21

Honors Males Correlations n = 8

	r	p
Reading / Math	.800	.017
Age / Sscore	-.610	.108
Age / Bscore	.601	.115
Sscore / Rscore	.661	.074
Sscore / Lscore	-.830	.011
Rscore / Lscore	-.601	.115

Honors Females Correlations   n = 13

Reading / Math	.758	.011
Age / Rscore	.461	.113
Sscore / Rscore	.644	.018
Sscore / Lscore	-.569	.042
Cscore / Lscore	-.526	.065
Sscore / SE	-.636	.019
Rscore / SE	-.677	.011
Lscore / SE	-.569	.042

Total School

Cognitive Variables and Self Evaluation Scores

Significant correlations in the total school population sample of 65 students, 35 males and 30 females, were found between reading and math, r = .449, and group and math, r = .508, both at .001 level of significance, but between reading and group, the correlation was not significant, r = .220 (p = .103), indicating that students in this school were separated into groups according to their math ability, and reading was not significantly different between the groups.

No significance was found in the total school population between reading or math and any self evaluation scores, however, a nonsignificant negative correlation was found between reading and recognition, r = -.222 (p = .103), and a nonsignificant positive correlation between reading and benevolence, r = .202 (p = .14). The correlation between reading and grade, r = .324 (= .015), was significant, but was only slightly significant between math and grade, r = .228 at (p = .091).

Significant correlations for males in the total school, 35 students, were positive between grade and age, r = .598 (p = .000), reading and math, r = .470 (p = .007), and reading and grade, r = .431 (p = .014), with higher grades having higher reading scores. Males in the honors group were expectedly higher in math than those in the regular group, r = -.568 (p = .001), although reading was not significantly different for the two groups. Males in the honors group were significantly higher on benevolence than males in the regular group, r = -.368 (p = .030).

In total population of females, 30 students, reading and math corre-
lated significantly, r = .426 (p = .038). Females in the honors group
were also higher in math than those in the regular group. r = -.559
(p = .003). Older females were in higher grades, r = .845 (p = .000),
and those in higher grades valued independence, r = .430 (p = .018),
significantly more than females in lower grades. Younger females valued
conformity more than older females, r = -.354 (p = .055) and females in
lower grades also valued conformity more than those in higher grades,
r = -.307 (p = .099), although only slightly.

Self Evaluation Variable Correlations

In the total school, in the self evaluation variables, significant
negative correlations were found between self esteem and recognition,
r = -.314 (p = .011) and self esteem and support, r = -.291 (p = .019)
and positive between self esteem and leadership, r = .254 (p = .041). A
significant positive correlation was found between support and recogni-
tion, r = .456 (p = .000), and negative correlations between support and
benevolence, r = -.362 (p = .003), support and leadership, r = -.556
(p = .001), conformity and independence, r = -.492 (p = .000), benevo-
lence and recognition, r = -.499 (p = .000), recognition and indepen-
dence, r = -.312 (p = .011), and recognition and leadership, r = -.244
(p = .05). A negative correlation approaching significance was found
between and support and conformity, r = -.238 (p = .057).

Significant correlations between self evaluation scores for males in
the total school were found between support and recognition, r = .559

(p = .000), which was positive, and support and benevolence, r = -.403
(p = .017), conformity and independence, r = -.583 (p = .000), recognition and leadership, r = -.711 (p = .000), and recognition and benevolence, r = -.403 (p = .017), which were negative. A negative correlation approaching significance was found between support and conformity, r = -.329 (p = .054).

Correlations between self evaluation scores for females in the total school were found between recognition and independence, r = .536 (p = .002), which was positive, and conformity and leadership, r = -.357 (p = .03), recognition and benevolence, r = -.442 (p = .014), and recognition and self esteem, r = -.372 (p = .042). Nonsignificant negative correlations were found between support and benevolence, r = -.350 (p = .058), support and leadership, r = -.351 (p = .057), and independence and conformity, r = -.307 (p = .099).

A significant gender difference was found on independence, r = -.247 (p = .04), and nonsignificant differences on conformity, r = .208 (p = .096), and leadership, r = -.202 (p = .106), with females higher on independence and leadership and males higher on conformity.

Regular Group

The regular group consisted of 45 students with complete data on 38 students, 24 males and 14 females, on self evaluation and reading scores. In the regular group, reading and math correlated nonsignificantly, r = .303 (p = .064). Reading and grade correlated, r = .347 (p = .033), and no significant correlation was found between math and grade. Reading and recognition correlated nonsignificantly, r = -.302

(p = .069), and math did not correlate significantly with any of the self evaluation variables. Conformity and grade correlated nonsignificantly, r =.345 (p = .095), with students in lower grades valuing conformity more than those in the higher grades. Sex did did not correlate significantly with any of the variables, but males were higher in support, r = .244 (p = .111), and females were higher in leadership, r = -.287 (p = .059).

Males in the regular group, 27 students, found a positive significant correlation between reading and grade, r = .475 (p = .019), and positive nonsignificant correlations between reading and math, r = .346 (p = .098), and math and grade, r = .361 (p = .083). Reading and recognition correlated negatively, r = -.397 (p = .055).

Correlations for regular females, 17 students, found reading and math were not significantly correlated and no significant correlations between reading and any of the self evaluation scores were found, but math and leadership correlated significantly and positively, r = .581 (p = .037). Grade and age correlated r = .894 (p = .000).

In the regular group, a significant negative correlation was found between self esteem and recognition, r = -.311 (p = .040), and nonsignificant between self esteem and support, r = -.270 (p = .076). A positive nonsignificant correlation was found between self esteem and and leadership, r = .274 (p = .071). A significant positive correlation was found between recognition and support, r = .404 (p = .007), and negative between recognition and benevolence, r = -.557 (p = .000), and recognition and independence, r = -.375 (p = .012). Significant negative correlations were also found between support and leadership, r = -.510

(p = .000), support and benevolence, r = -.368 (p = .014), conformity and independence, r = -.478 (p = .001). A nonsignificant negative correlation was found between leadership and conformity, r = -.275 (p = .071).

Males in the regular group found a significant positive correlation between support and recognition, r = .516 (p = .006), and significant negative correlations between support and benevolence, r = -.409 (p = .034), support and leadership, r = -.670 (p = .000), conformity and independence, r = -.645 (p = .000), and recognition and benevolence, r = -.580 (p = .002). Nonsignificant negative correlations were found between support and conformity, r = -.365 (p = .061), support and self esteem, r = -.372 (p = .056), and self esteem and recognition, r = -.323 (p = .10).

Correlations for regular females found significant negative correlations between recognition and independence, r = -.548 (p = .023) and recognition and benevolence, r = -.513 (p = .035), and a nonsignificant positive correlation between self esteem and independence, r = .465 (p = .060).

Honors Group

The honors group, consisting of 21 students, of which 18 students, 13 females and 8 males, had complete data, found reading and math significantly correlated, r = .776 (p = .001). No significant correlations were found between reading and self evaluations, however, reading and conformity correlated r = .392 (p = .108). Math correlated significantly and positively with conformity, r = .582 (p = .011), and nonsignifi-

cantly with benevolence, r = .417 (p = .085), positively, and with leadership, r = -.394 (p = .106), negatively.

A significant correlation was found for honors level males. 8 students, between reading and math scores, r = .800 (p = .017). No significant correlations were found between reading or math and any self evaluation scores. Nonsignificant correlations were found between age and support, r = -.610 (p = .108), with older males not valuing support as much as younger males, and age and benevolence, r = .601 (p = .115), with older males valuing benevolence more than younger males.

A significant correlation existed for female honors students, 13 students, between reading and math scores, r = .758 (p = .011). No significance was found between reading or math and any of the self evaluation scores. Age and recognition correlated nonsignificantly, r = .461 (p = .113), with older females having higher recognition scores.

In the honors group, males were significantly higher than females in math, r = .517 (p = .028). Other significant differences were found on independence, r = -.692 (p = .001), leadership, r = -.649 (p = .001) and benevolence, r = .566 (p = .008), with females higher on independence and leadership and males higher on benevolence. Males were also higher than females on conformity, although nonsignificantly, r = .428 (p = .053). Males were significantly older than females, r = .596 (p = .004). Age was also significantly and negatively correlated with independence, r = -.577 (p = .006), and positively with benevolence, r = .570 (p = .007).

The honors group found significant self evaluation correlations between recognition and support, r = .639 (p = .002), positive, and recog-

nition and leadership, r = -.475 (p = .030), support and leadership, r = -.649 (p = .001) and conformity and independence, r = -.475 (p = .030), which were negative. Nonsignificant negative correlations were found between self esteem and leadership, r = -.389 (p = .081), self esteem and support, r = -.389 (p = .081), self esteem and recognition, r = -.368 (p = .101), and benevolence and independence, r = -.376 (p = .093).

A significant negative correlation for honors level males was found between support and leadership, r = -.830 (p = .011), and nonsignificant correlations between support and recognition, r = .661 (p = .074), which was positive; and and leadership and recognition, r = -.601 (p = .115), which was negative.

For honors group females, a significant positive correlation was found between support and recognition, r = .644 (p = .018), and negative between self esteem and support, r = -.636 (p = .019), self esteem and recognition, r = -.677 (p = .011), and support and leadership, r = -.569 (p = .042). A nonsignificant negative correlation was found between conformity and leadership, r = -.526 (p = .065).

A nonsignificant difference between regular and honors groups found more males in the regular group than in the honors group, and more females were in the honors group than males, r = .204 (p = .10). The regular group had lower reading and math scores than the honors group, which were significant for math scores, r = .508 (p = .000), but were not significantly different for reading scores, r = .206 (p = .10).

Summary

Significant correlations in the total school population sample of 65 students, 35 males and 30 females, were found between reading and math, and group and math, but between reading and group, the correlation was not significant. No significance was found in the total school population between reading or math and any self evaluation scores, however, a nonsignificant negative correlation was found between reading and recognition, $r = -.222$ ($p = .103$), and a nonsignificant positive correlation between reading and benevolence, $r = .202$ ($p = .14$). The correlation between reading and grade was significant, but was nonsignificant between math and grade, $r = .228$ ($p = .091$).

In the total school, significant negative correlations were found between self esteem and recognition and esteem and support, and significant positive correlations between self esteem and leadership. A significant positive correlation was found between support and recognition and significant negative correlations between support and benevolence, support and leadership, conformity and independence, benevolence and recognition, recognition and independence, and recognition and leadership. A nonsignificant negative correlation was found between and support and conformity, $r = -.238$ ($p = .057$).

A significant gender difference was found on independence, and nonsignificant differences on conformity, $r = .208$ ($p = .096$), and leadership, $r = -.202$ ($p = .106$), with females higher on independence and leadership and males higher on conformity.

In the total school males found significant positive correlations between reading and math, reading and grade, grade and age, and group and math, with males in the honors group higher than those in the regular group. Group and reading were not significantly different. Group and benevolence, found males in the honors group significantly higher than males in the regular group. Significant self evaluation score correlations for males in the total school were found between support and recognition, which was positive; and support and benevolence, conformity and independence, recognition and leadership and recognition and benevolence, which were negative. A nonsignificant correlation was found between support and conformity, $r = -.329$ ($p = .054$).

In total population of females, 30 students, reading and math and group and math were significantly correlated. Other significant correlations included grade and age and grade and independence, which were positive. Nonsignificant negative correlations were found between age and conformity, $r = -.354$ ($p = .055$), and grade level and conformity, $r = -.307$ ($p = .099$). Significant correlations between self evaluation scores included a positive correlation between recognition and independence, and negative correlations between conformity and leadership, recognition and benevolence and, recognition and self esteem. Nonsignificant negative correlations were found between support and benevolence, $r = -.350$ ($p = .058$), support and leadership, $r = -.351$ ($p = .057$), and independence and conformity, $r = -.307$ ($p = .099$).

The regular group consisted of 45 students with complete data on 38 students, 24 males and 14 females, on self evaluation and reading scores. In the regular group, reading and math correlated nonsignifi-

cantly, r = .303 (p = .064). Reading and grade correlated significant-ly, however, no significant correlation was found between math and grade. Reading and recognition correlated nonsignificantly, r = -.302 (p = .069), and math did not correlate significantly with any of the self evaluation variables. Conformity and grade correlated nonsignifi-cantly, r = -.255 (p = .095), with students in lower grades valuing con-formity more than those in the higher grades. Sex did did not correlate significantly with any of the variables, but males were higher in sup-port, .244 at .111, and females were higher in leadership, r = -.287 (p = .059).

In the regular group, a significant negative correlation was found between self esteem and recognition, and a nonsignificant negative cor-relation was between self esteem and support, r = -.270 (p = .076). A positive nonsignificant correlation was found between self esteem and and leadership, r = .274 (p = .071). A significant positive correlation was found between recognition and support, and significant negative cor-relations were found between recognition and benevolence, recognition and independence, support and leadership, support and benevolence and conformity and independence. A nonsignificant negative correlation was found between leadership and conformity, r = -.275 (p = .071).

Males in the regular group, 27 students, found a positive significant correlation between reading and grade, r = .475 (p = .019) and positive nonsignificant correlations between reading and math, r = .346 (p = .098) and math and grade, r = .361 (p = .083). Reading and grade correlated positively and significantly. at r = -.397 (p = .055). A significant positive correlation was found between support and recogni-

tion and which was positive; and significant negative correlations between support and benevolence, support and leadership, conformity and independence, recognition and benevolence and self esteem and recognition. Nonsignificant correlations were found between support and conformity, r = -.365 (p = .061) and support and self esteem, r = -.372 (p = .056), r = -.323 (p = .10), which were also negative.

Correlations for regular females, 17 students, found reading and math were not significantly correlated. No significant correlations between reading and any of the self evaluation scores were found, but math and leadership were significantly correlated. Grade and age also were significantly correlated. Significant correlations between self evaluation scores included negative correlations between recognition and independence and recognition and benevolence. A nonsignificant positive correlation was found between self esteem and independence, r = .465 (p = .060).

The honors group, consisting of 21 students, of which 18 students, 13 females and 8 males, had complete data, found reading and math significantly correlated. No significant correlations were found between reading and self evaluations, however, reading and conformity correlated, r = .392 (p = .108). Math correlated significantly and positively with conformity, and nonsignificantly and positively with benevolence, r = .417 (p = .085), and nonsignificantly and negatively with leadership, r = -.394 (p = .106).

In the honors group, males were significantly higher than females in math. Females were significantly higher on independence and leadership

and males were significantly higher on benevolence. Males were also higher than females on conformity, although nonsignificantly, r = .428 (p = .053). Males were significantly older than females. Age was also significantly and negatively correlated with independence and positively with benevolence.

The honors group found significant positive correlations between recognition and support and recognition and leadership and significant negative correlations between support and leadership, and conformity and independence. Nonsignificant negative correlations were found between self esteem and leadership, r = -.389 (p = .081), self esteem and support, r = -.389 (p = .081), self esteem and recognition, r = -.368 (p = .101) and benevolence and independence, r = -.376 (p = .093).

Significant correlation were found for honors level males, 8 students, between reading and math scores, but no significant correlations were found between reading or math and any self evaluation scores. Age and support correlated nonsignificantly, r = -.610 (p = .108), with older males not valuing support as much as younger males, and age and benevolence, r = .601 (p = .115), with older males valuing benevolence more than younger males, although not at significant levels. A significant negative correlation was found between support and leadership. A nonsignificant positive correlation was found between support and recognition , r = .661 (p = .074).

A significant correlation existed for female honors students, 13 students, between reading and math scores, but no significance was found between reading or math and any of the self evaluation scores. Age was not found to be a significant factor in any honors females scores. Sig-

nificant correlations between self evaluation scores included a positive correlation between support and recognition, and negative correlations between self esteem and support, self esteem and recognition and support and leadership. A nonsignificant negative correlation was found between conformity and leadership, $r = -.526$ ($p = .065$).

Regression Analysis Findings

In backward elimination, entering all self evaluation scores as independent variables, regressing on reading with complete data on 55 students for the entire school found no significance on the saturated model. Benevolence alone accounted for 4% ($p = .14$) and recognition alone accounted for 7% ($p = .066$). Regressing on math found no significant correlations on any of the self evaluations.

This lack of significance of variance through regression on reading or math confirms the lack of strength of bivariate relationships defined as a measure of linearity. Pearson produce-moment correlation examinations also confirmed that covariance was not significant and no association was found to exist. No correlation was found between cognitive scores and any of the self evaluation scores, as measured by the SIV or self esteem questionnaires, in the total population at Lane Technical, nor in groups, or by gender.

Mean Self Evaluation Score

The following tables show self evaluation mean scores of students by school, gender and group.

TABLE 22

Mean Scores - Total School

	Means	Standard Deviations
Support	60.38	27.04
Conformity	33.06	25.22
Recognition	50.11	29.68
Independence	46.20	26.53
Benevolence	47.29	25.51
Leadership	52.12	31.24
Self Esteem	18.36	16.38

TABLE 23

Groups

	Means	Standard Deviations
Support		
Regular	60.39	27.42
Honors	60.38	26.91
Conformity		
Regular	32.95	24.43
Honors	33.29	27.43
Recognition		
Regular	54.30	31.01
Honors	41.33	25.15
Independence		
Regular	43.50	26.99
Honors	51.86	25.24
Benevolence		
Regular	44.77	26.14
Honors	52.57	23.88
Leadership		
Regular	52.61	28.90
Honors	51.10	36.39
Self Esteem		
Regular	18.29	18.37
Honors	18.52	11.42

TABLE 24

Gender

	Means	Standard Deviations

Support

Males	62.80	28.88
Females	57.57	24.91

Conformity

Males	37.86	27.11
Females	27.43	21.95

Recognition

Males	50.06	30.90
Females	50.17	28.72

Independence

Males	40.17	26.82
Females	53.23	24.81

Benevolence

Males	50.86	27.77
Females	43.10	22.33

Leadership

Males	46.31	30.05
Females	58.90	31.73

Self Esteem

Males	20.94	14.69
Females	15.45	17.90

TABLE 25

Gender - Regular Group

	Means	Standard Deviations
	Support	
Males	65.63	27.22
Females	52.06	26.40
	Conformity	
Males	34.93	25.53
Females	29.82	22.98
	Recognition	
Males	53.04	31.58
Females	56.29	30.93
	Independence	
Males	43.15	29.06
Females	44.06	24.19
	Benevolence	
Males	45.41	27.76
Females	43.76	24.14
	Leadership	
Males	46.11	27.78
Females	62.94	28.40
	Self Esteem	
Males	20.56	15.58
Females	14.89	21.94

TABLE 26

Gender - Honors Group

	Means	Standard Deviations
	Support	
Males	53.25	34.14
Females	64.77	21.72
	Conformity	
Males	47.88	31.64
Females	24.31	21.00
	Recognition	
Males	40.00	28.00
Females	42.13	24.39
	Independence	
Males	30.13	14.42
Females	65.23	20.78
	Benevolence	
Males	69.38	19.39
Females	42.23	20.66
	Leadership	
Males	47.00	38.95
Females	53.62	36.12
	Self Esteem	
Males	22.25	12.01
Females	16.23	10.87

Findings

Of the self evaluation scores, the highest at Lane for the total school was support, followed by leadership, recognition, benevolence and independence, with the lowest on conformity.

Male means on self evaluation scores were highest in support, followed by recognition, benevolence, leadership and independence, with conformity last.

Female means on self evaluation scores were highest on leadership, followed by support, independence, recognition and benevolence, and least was conformity.

Males in the regular level were highest in support, followed by recognition, leadership, benevolence and independence, and conformity last. Females in the regular level were highest in leadership, followed by recognition, support, independence and benevolence, with conformity last.

Male honors students were highest in benevolence, followed by support, conformity, leadership and recognition, and independence last. Female honors scores were highest in independence and support, followed by leadership, recognition and benevolence, with conformity least.

The total sample of students found males scored higher than females in the areas of support, conformity, benevolence and self esteem, and females scored higher in independence and leadership. In the regular level, the same relationship between male and female scores were found, however, in the honors level, males were higher on conformity, benevolence and self esteem, and females were higher on support, recognition, independence and leadership.

Self Evaluation Mean Score Differences

Gender

T-tests results revealed significant differences between sexes. Alpha was examined to p = .10 and significantly determined at p = .05. Comparing self evaluation means of students in the total school by sex showed significant differences between males, 35 students, and females, 30 students. Significant findings for the total school population found females higher on independence, t = 2.03 (p = .047). While not significant, conformity, t = -1.69 (p = .096), found males higher than females , and leadership, t = .1.63 (p = .10), found females higher than males, with group differences, t = -1.67 (p = .10), showing more females in the honors group, 13 females and 8 males, and more males in the regular group, 14 females and 24 males.

Summary of Gender

In summary, significant differences were found between males and females in the total school on independence with females higher than males. Females were also higher on leadership (p = .10) and males were higher on conformity (p = .096). In the regular group no significant gender differences were found. Regular group females were higher than regular group males on leadership (p = .059). The honors group found males significantly higher on benevolence and females significantly higher on independence, with males significantly higher on math and older than females. Males were also higher on conformity (p = .053) than females.

Groups

Comparing the honors group, 21 students, and the regular group, 44 students, found recognition, t = -1.67 (p = .10), with regular group higher, sex, t = -1.67 (p = .10), with the regular group having more males and the honors group having more females, reading t = 1.66 (p = .103), and math, t = 4.34 (p = .000), with the honors group higher.

No significance was found between regular group males, 27 students, and females, 17 students, however, females were higher in leadership, t = 1.94 (p = .059) than males. Honors group males, 8 students, and females, 13 students, were significantly different in benevolence, t = -2.99 (p = .008), with males higher, independence, t = 4.18 (p = .000), with females higher, and age t = -3.24 (p = .004), with males older. Males also scored significantly higher on math, t = -2.42 (p = .028), and nonsignificantly higher on conformity, t = -2.06 (p = .053), than females in the honors group.

Males in the honors group, 8 students, and males in the regular group, 27 students, found significant mean differences between benevolence t = 2.27, (p = .030), and math t = 3.78 (p = .000), with the honors group higher and, at a nonsignificant level, independence, t = -1.72 (p = .098), with the regular group higher.

Females in the honors group, 13 students, and females in the regular group, 18 students, found significant mean differences in independence, t = 2.52 (p = .018), and math t = 3.15 (p = .005), with the honors group higher. Reading was not significantly different for males or females between the two groups.

Summary of Groups

Significant differences between the honors and the regular group were found in math scores, with the honors group higher. The regular group was older than the honors group. Although not significant, recognition was higher for the regular group (p = .10).

Differences between males in the honors and the regular group found males in the honors group significantly higher on benevolence and math and males in the regular group older. Independence was higher for males in the regular group (p = .10) Reading was not significantly different between males in each group.

Female differences between groups found the honors group females significantly higher on independence and math than the regular group females. Reading was not significantly different between females in each group.

Summary

The total number of students in the sample was 65, 33 males and 35 females. Math scores determined students' placement into regular and tutored level classrooms. Reading and math correlated significantly at the total school level and for the honors group, but not significantly for the regular group. In the total school, students in higher grades had significantly higher reading scores, however, math scores were not significantly different, (p = .14).

Neither males nor females at the total level had significant correlations between reading or math and any of the self evaluation variables.

A negative nonsignificant correlation between reading and recognition (p = .10) was found in the total school, due to males, who found a nonsignificant negative correlation between reading and recognition (p = .069), with no difference found for females. Reading and benevolence were not significantly correlated, with a positive correlation (p = .14) at the total school level. The regular group found a nonsignificant negative correlation between reading and recognition (p = .069), and males in the regular group found a nonsignificant negative correlation of (p = .055). The honors group found a significant positive correlation between math and and conformity, but a nonsignificant positive correlation between reading and conformity (p = .108). Math and benevolence correlated positively (p = .085).

Honors group males and honors females found math and reading scores were not significantly related to any self evaluation scores. Honors group females found reading and conformity positively correlated The honors group found math and leadership significantly and positively correlated. (p = .049).

In the total school, students in the higher grades were lower in conformity (p =.109) and higher in math (p = .091) than students in lower grades at nonsignificant levels. The regular group found grade and conformity negatively correlated (p = .095).

Females in the total school found correlations approaching significance on age and conformity, negatively, correlated (p = .055), grade and independence, significantly and positively correlated (p = .018), and grade and conformity slightly correlated, negatively (p = .099).

Males in the honors group were significantly higher on benevolence than males in the regular group. Age was also related to benevolence scores, with older students higher.

The honors group found age was negatively related to independence and positively related to benevolence, with older students scoring lower in independence and higher in benevolence. Significant correlations between age and sex, with males older; age and benevolence, with older students scoring higher; math and benevolence, positively related; and with sex and math significantly correlated, where males scored higher and were older; an interrelationship was found to exist between age, sex and math and benevolence. This interrelationship could also have accounted for the sex and age differences in independence, with age and independence negatively correlated, where females were higher in independence and were younger, implying that independence was also related to age and sex in this group of students. This was not significant for the regular group.

Means in self evaluation scores were compared and the findings were: in the total school, the highest mean was support, then leadership and recognition, followed by benevolence and independence, and least was conformity. Males' highest scores were in support, followed by benevolence and recognition and leadership, and lowest in conformity. Females' highest scores were in leadership and support, followed by independence and recognition and lowest in conformity.

Gender differences in the total school were found in independence, leadership and conformity, with females significantly higher on independence and nonsignificantly higher on leadership ($p = .106$), and males nonsignificantly higher on conformity ($p = .096$).

Males in the regular group were highest in support and recognition, followed by leadership, benevolence and independence and lowest in conformity. Females in the regular group were highest in leadership and recognition, followed by support and lowest in conformity.

No significant differences were found between sexes in the regular group, although females were higher on leadership, (p = .059).

Male honor students were highest in benevolence followed by support and lowest in independence. Female honor students were highest in independence and support, followed by leadership and lowest in conformity. Differences between sexes in the honors group found females were significantly higher on independence and males were significantly higher on benevolence. Males were higher on conformity (p = .053), although not significantly. Males were significantly older and significantly higher on math than females in the honors group.

Differences between the honors group and the regular group found no significance, but the regular group was higher on recognition (p = .10), and older (p = .10) than the honors group, with more males in the regular group than females. The honors group had more females than males, and more males were in the regular group than females. Reading and math were significantly higher in the honors group, with math higher than reading, due to selection for groups which were based upon math scores.

Differences between males in each group found the honors group males were significantly higher on benevolence than males in the regular group, while males in the regular group were higher on independence, although not significantly (p = .098). Math was significantly different between males in the honors and regular group, although reading was not. Regular group males were older than honors group males.

Differences between females in the regular group and females in the honors group found the honors group females were significantly higher in independence and math, with reading not significantly different between females in each group.

There was little relation between cognitive variables and self concept in Lane Technical, however, stronger correlations were found between reading than math in the total school. This may be due to the fact that the school includes a mixture of students from varied backgrounds and neighborhood communities, and while students share academic ability, they represent heterogeneous backgrounds. It can be assumed that students were chosen for their math ability more than reading ability and grouped on math score, thus, more homogeneity is evident in math scores.

This study did not attempt to report findings in bilingual data, however, based upon the initial findings, a plan for future research in this area would be useful.

The correlations found in Lane Technical will be compared to the other schools in the study in Chapter 5.

CATHEDRAL HIGH SCHOOL

Cathedral High School was selected for this study to represent a private, urban school of mixed racial composition. Located on the north side of Chicago near the Water Tower-North Michigan Avenue location, the school is operated by the diocese of Holy Name Cathedral on Chicago Avenue and State Streets. A large, well kept school, built around a center court next to the beautiful Cathedral, this is a well known Catholic school.

To assure equal opportunity for all races, Cathedral High School is deliberately structured on the basis of quotas, with equal numbers of of black, white and Hispanic students from the entire Chicago area. The quota reflects the proportion of the dioceses (parish). Tuition is charged, however, for those students who are unable to pay, the parish makes up the deficiencies. Holy Name Cathedral is a viable parish and is more able to make up this difference than many of the parishes in Chicago. Priority for selection are those students from Catholic background, such that the liturgy classes are appropriate. To complete the quota system, non-Catholic students who have been in attendance in Catholic elementary schools and are familiar with the liturgy of the Catholic Church and the disciplines expected of them in the schools are selected. These are primarily the black students who have attended Catholic elementary schools. In order to fill the Hispanic quota, students whose performance is below the usual acceptance level are included and some non-Catholic white students are accepted to complete the white

quota.[274]

85% of all students at Cathedral continue their education past high school; 50% go on to a four year college and 35% more go to post high school training, either to a two year college or vocational school. Of the current 115 entry students, 93 graduated. This did not represent the same students from freshman to senior level, however.[275]

As explained by Sister[276]A, the guidance counsellor of the school, many of the students' parents have jobs in the vicinity of the school and bring the students with them from their residential areas.

In the overall secondary Catholic schools in the Chicago area there are only seven parish schools, and forty seven private Catholic schools. The tuition and costs of running the schools is made up largely by the parishes. The average cost in elementary school is $1062 per child, with some secondary schools' cost at $1275 to $1325 per child.[277] These schools are operated autonomously. Although more data were not available from the Board of Education of Catholic Schools, they are currently being collected, according to Sister J, the director of statistics and data department.[278]

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[274] Sister A, guidance counsellor, Cathedral High School. Names have been omitted, but are available upon request.

[275] Ibid.

[276] Ibid.

[277] Sister J, Board of Education of Catholic Schools, Brother Michael O'Hearn, Superintendent of High Schools, 155 E. Superior Street, Chicago, Ill.

[278] Sister J, director of statistics and data department, Board of Education of Catholic Schools.

It has been suggested that Catholic school expenditures differ from public schools. While Catholic schools generally operate on less money per pupil and pupil/teacher ratio than the average school, they may actually be paying more for building maintenance and other resources than public schools.[279] These costs are often carried, not by the students in the Catholic schools, but by the local parishes, as is the case in Cathedral High School.[280]

Setting

The school was orderly and quiet and students appeared very disciplined. Student guards were seated in the halls with their study books to check student passes of those students who were in the halls between classes. The school was extremely neat and clean.

According the the Coleman, Hoffer and Kilgore[281] study, private schools were found to differ from public schools, with private schools able to exert more control over the students and to make more demands than public schools in areas of academic performance and discipline. Parents' tendencies to be more involved in their children's education and educational goals is also noticable when choices of schools are made and tuitions are paid to enable the student to attend these private schools. Students who attend schools which are not a part of the neighborhood are removed from the influence of their neighborhood environ-

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[279] Coleman, Hoffer, and Kilgore, High School Achievement: Public, Catholic and Private Schools Compared.

[280] Sister J, Board of Education of Catholic Schools

[281] Coleman, Hoffer, and Kilgore, High School Achievement: Public, Catholic and Private Schools Compared.

ment. In some cases where they do not share in the neighborhood association and social resources of local families, this can be detrimental to the students, especially if there are weak family relations.[282] It is suspected that many of the students were from low income neighborhoods representing underprivileged areas and that their acceptance into Cathedral High School offered them an opportunity to escape the handicaps of the local high schools in the inner city.

Population

The Cathedral High School sample consisted of 204 students, 75 (36.8%) males and 129 (63.2%) females. These included 104 sophomore students (51%) and 100 junior students (49%) with ages ranging from: age 15, 33.3%, age 16, 52.5%, and age 17, 12.3%. Of the 204 students selected, 193 had complete data, 69 males and 124 females.

Procedure for Obtaining Data

A formal request for participation of the school was sent to the principal of Cathedral. Sister A, the guidance counselor was placed in charge of overseeing the project. After a meeting with Sister A, it was decided that the teachers would administer the questionnaires to the sophomore and junior grades during class hours. Each questionnaire had an attached form with data from the student and reading and math grade point average from their previous report card in office records. Academic scores were listed from A+, A, A-; B+. B, B-, etc. with numerical

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[282] Coleman and Hoffer, Public and Private High Schools: The Impact of Community, pp. 215-216.

correlations provided. Three numerical scores represented each letter grade and the median score was used in statistical tabulations.

As described in Chapter 3, SIV and Self Esteem questionnaires were administered during class periods to all of the students in the sophomore and junior grades by Sister[283]A and classroom teachers. Individual academic scores in reading and math from school records were attached to each student's questionnaire data from school records. These scores were based upon the student's grade point average and not on a standardized test. Students provided data regarding sex, age, and bilingual ability.

Procedure for Treating Data

Academic scores were listed from A+, A, A-; B+. B, B-, etc. with three numerical scores for each letter grade. The median score was used in statistical tabulations. Because there were no tracks or levels separating the students in Cathedral, and, for analysis, it was decided to divide the students into three levels, based upon reading scores.

The low level, was made up of students with grades D and E (grades below 76), and included 87 students, 44 females and 43 males. The middle level of average or C students, included all students above the grade of D and below the grade of B, i.e., all students equal to and greater than the score of 76 and less than grade 85. This level included 73 students, 49 females and 24 males. The high level, included students who had grades A and B, grades equal to or greater than 86, and consisted of 41 students, 36 females and 5 males.

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[283] Names have not been used but are available upon request.

Scores ranged from 35 to 96 on reading, with a mean score of 77.34 and standard deviation of 11.19, and from 35 to 96 on math with a mean score of 74.67 and a standard deviation of 14.97.

In the low level, 87 students, reading scores ranged from 35 to 75; in the middle level, 73 students, scores ranged from 76 to 85; and in the high level, 57 students, scores ranged from 86 to 96.

The mean score in reading for the low level was 68.23 with a standard deviation of 11.83. Math scores were 68.61 with a standard deviation of 16.76. The middle level reading mean was 80.34 with a standard deviation of 2.02, and math scores were 76.23 with a standard deviation of 12.53. The high level reading mean was 89.22 with a standard deviation of 3.79, and math scores were 84.76 with a standard deviation of 6.84.

Raw scores were standardized for analysis within the school between levels and with other selected schools in the study. Standardized scores in reading ranged from -3.78 to 1.67, with a standard error of .071, and median .059. Standardized math scores ranged from -2.65 to 1.42, with a standard error of .071, and median of .222.

The female mean reading score was 79.66; standard deviation of 8.75 and the male mean reading score was 73.19; standard deviation 13.70. The mean standardized reading score for females was .207; standard error of .781 and for males was -.371; standard error of 1.22. Female mean math score was 76.25; standard deviation of 13.48 and male mean math score was 71.85; standard deviation of 17.08. The standardized mean score for females in math was .106; standard error of .902 and for males was -.372; standard error of 1.23.

Out of a total of 204 students at Cathedral 193 students had complete
data and were used for multiple regression analysis. The middle level,
consisting of 73 students had 71 students, 24 males and 47 females, with
complete data; the low level included 86 students, of which 82 students,
40 males and 42 females, had complete data; and the high level included
44 students of which 40 students, 5 males and 35 females, had complete
data. Reading and math scores were correlated with scores from self
evaluation questionnaires. Self evaluation scores were also correlated
for relationships with each other. Correlations were examined by level
and by academic ability. as well as by sex and age.

Using SIV and self esteem scores and grade point averages, correla-
tions up to $p = .10$ were examined and correlations of $p = .05$ were ac-
cepted as significant. Missing data were set to zero and not used.

The following tables show Pearson product-moment correlations with
(r) relatedness and (p) significance:

TABLE 27

Cathedral Correlations

Reading and Math Correlations

Total School n = 193

	Reading		Math	
	r	p	r	p
SE score	.117	.099	.093	.192
S score	.079	.274	.027	.706
C score	-.180	.012	-.174	.016
R score	-.007	.925	.050	.488
I score	.043	.552	.117	.106
B score	.046	.525	-.016	.828
L score	-.074	.304	-.019	.790

Male   n = 69

	Reading		Math	
SE score	-.012	.920	.026	.827
S score	.061	.619	-.059	.633
C score	-.193	.112	-.350	.003
R score	.013	.918	.118	.334
I score	-.112	.361	.116	.334
B score	.040	.746	-.093	.445
L score	-.140	.250	.010	.938

Female   n = 124

	Reading		Math	
SE score	.156	.081	.104	.244
S score	.137	.131	.105	.247
C score	-.177	.049	-.052	.565
R score	-.057	.529	-.002	.980
I score	.088	.331	.079	.383
B score	.203	.024	.091	.317
L score	-.124	.169	-.081	.372

TABLE 28

Total School Correlations n = 193

	r	p
Math / Reading	.545	.0001
Reading / Cscore	-.180	.012
Reading / SE	.117	.099
Math / Cscore	-.174	.016
Reading / Grade	.143	.043
Reading / Sex	-.278	.0001
Math / Sex	-.141	.046
Sex / SE	-.181	.010
Sex / Iscore	-.180	.012
Sex / Lscore	-.151	.034
Sex / Bscore	.237	.001
Sex / Grade	-.181	.010
Grade / SE	.117	.098
Grade / Cscore	.175	.014
Grade / Bscore	.171	.017
Grade / Rscore	-.173	.016
Age / Sex	.121	.087
Age / SE	.122	.084
Age / Rscore	-.168	.019
Age / Cscore	.155	.031
Age / Grade	.645	.0001
Sscore / Rscore	.340	.0001
Cscore / Bscore	.241	.0001
Bscore / Sex	.237	.0001
Sscore / Cscore	-.389	.0001
Sscore / Lscore	-.383	.0001
Cscore / Rscore	-.369	.0001
Cscore / Iscore	-.329	.0001
Rscore / Bscore	-.511	.0001
Rscore / SE	-.267	.0001
Bscore / Iscore	-.387	.0001
Bscore / Lscore	-.183	.010
Sscore / Iscore	-.120	.095
Sscore / Bscore	-.148	.038
Cscore / Lscore	-.166	.026
Rscore / Iscore	-.131	.066
Sscore / SE	-.160	.026
Cscore / SE	.163	.023

TABLE 29

Male Correlations n = 69

	r	p
Math / Reading	.520	.0001
Math / Cscore	-.350	.003
Reading / Cscore	-.193	.112
Reading / Grade	.280	.017
Grade / Age	.515	.0001
Grade / Rscore	-.206	.025
Grade / Cscore	.208	.079
Age / Rscore	-.265	.025
Age / SE	.226	.051
Sscore / Rscore	.287	.014
Sscore / Cscore	-.428	.0001
Sscore / Lscore	-.320	.006
Cscore / Rscore	-.236	.046
Cscore / Iscore	-.299	.011
Rscore / Bscore	-.362	.002
Rscore / Iscore	-.376	.001
Rscore / SE	-.199	.095
Bscore / Iscore	-.286	.015
Bscore / Lscore	-.305	.009

TABLE 30

Female Correlations n = 124

Math / Reading	.550	.0001
Reading / Bscore	.203	.024
Reading / Cscore	-.177	.049
Reading / SE	.156	.081
Age / Grade	.731	.0001
Age / Cscore	.170	.060
Grade / Cscore	-.156	.083
Grade / Rscore	-.156	.084
Grade / Bscore	.170	.059
Sscore / Cscore	-.369	.0001
Sscore / Rscore	.374	.0001
Sscore / Bscore	-.212	.018
Sscore / Lscore	-.425	.0001
Sscore / SE	-.209	.021
Cscore / Rscore	-.431	.0001
Cscore / Iscore	-.346	.0001
Cscore / Bscore	.270	.002
Cscore / Lscore	-.217	.015
Cscore / SE	.232	.010
Rscore / Bscore	-.583	.0001
Rscore / SE	-.335	.0001
Iscore / Bscore	-.404	.0001
Bscore / SE	.223	.014
Lscore / SE	-.149	.102

TABLE 31

Low Level Correlations n = 82

	r	p
Math / Reading	.474	.0001
Reading / Grade	.336	.001
Math / Grade	.268	.012
Math / Cscore	-.246	.026
Math / Rscore	.259	.019
Grade / Lscore	-.215	.012
Sex / Iscore	-.221	.046
Sex / Bscore	.373	.001
Sex / Lscore	.257	.020
Sex / Reading	-.174	.107
Age / Lscore	-.248	.025
Age / SE	.195	.073
Age / Grade	.540	.0001
Sscore / Rscore	.380	.0001
Rscore / SE	-.252	.024
Cscore / Bscore	.357	.001
Rscore / Bscore	-.490	.0001
Cscore / Iscore	-.409	.0001
Bscore / Iscore	-.471	.0001
Cscore / Sscore	-.290	.008
Sscore / Lscore	-.351	.001
Cscore / Rscore	-.336	.002
Bscore / Lscore	-.252	.022

TABLE 32

Low Level Male Correlations n = 40

	r	p
Math / Reading	.498	.001
Reading / Grade	.417	.005
Reading / Iscore	-.325	.041
Reading / Lscore	-.312	.050
Math / Cscore	-.266	.097
Math / Rscore	.275	.086
Math / Grade	NS	
Age / Grade	.421	.005
Age / SE	.408	.007
Grade / Lscore	-.299	.061
Sscore / Rscore	.312	.036
Rscore / SE	-.324	.041
Sscore / Cscore	-.355	.025
Rscore / Cscore	-.296	.064
Cscore / Iscore	-.353	.026
Bscore / Rscore	-.559	.0001
Bscore / Iscore	-.284	.076
Bscore / Lscore	-.265	.098

Low Level Female n = 42

	r	p
Math / Reading	.498	.001
Reading / Grade	.383	.010
Math / Grade	.241	.115
Reading / Cscore	-.384	.012
Age / Grade	.641	.0001
Age / Lscore	-.364	.019
Sscore / Rscore	.429	.005
Sscore / Lscore	-.464	.002
Sscore / Iscore	-.295	.058
Rscore / Cscore	-.366	.017
Cscore / Iscore	-.451	.003
Cscore / Bscore	.455	.002
Bscore / Rscore	-.463	.002
Bscore / Iscore	-.567	.0001

TABLE 33

Middle Level Correlations n = 71

	r	p
Math / Reading	NS	
Reading / Bscore	.234	.050
Reading / Iscore	-.204	.088
Sex / Bscore	.218	.068
Age / Bscore	.269	.023
Age / Rscore	-.330	.055
Age / Cscore	.217	.070
Grade / Cscore	.262	.027
Sscore / Cscore	-.559	.0001
Sscore / Rscore	.266	.025
Sscore / Lscore	-.275	.021
Sscore / SE	-.196	.103
Rscore / Cscore	-.336	.002
Cscore / Iscore	-.253	.033
Cscore / Bscore	-.520	.0001
Rscore / SE	-.298	.012
Bscore / Iscore	-.368	.002
Iscore / SE	-.298	.012

TABLE 34

Middle Level Male Correlations n = 24

	r	p
Math / Reading	NS	
Age / Rscore	-.555	.005
Grade / Age	.563	.004
Grade / Rscore	-.331	.115
Sscore / Cscore	-.470	.014
Cscore / Iscore	-.474	.019

Middle Level Female n = 47

Math / Reading	NS	
Reading / Grade	.274	.057
Reading / Bscore	.359	.013
Reading / Rscore	-.292	.047
Reading / Iscore	-.270	.067
Math / Rscore	-.256	.082
Grade / Cscore	.293	.046
Age / Grade	.710	.0001
Age / Cscore	.326	.025
Age / Bscore	.246	.096
Sscore / Cscore	-.595	.0001
Sscore / Lscore	-.270	.067
Sscore / Rscore	.314	.032
Cscore / Rscore	-.470	.001
Sscore / SE	-.389	.009
Cscore / SE	.406	.005
Rscore / SE	-.393	.007
Bscore / Rscore	-.589	.0001
Bscore / Iscore	-.417	.004

TABLE 35

High Level Correlations n = 40

	r	p
Math / Reading	.464	.002
Reading / Sscore	.354	.025
Math / Sex	.300	.056
Sex / SE	-.490	.001
Age / Bscore	.298	.062
Age / Rscore	-.388	.013
Grade / Bscore	.284	.076
Grade / SE	.263	.097
Sscore / Cscore	-.302	.059
Sscore / Rscore	.393	.012
Sscore / Lscore	-.606	.0001
Rscore / SE	-.284	.076
Rscore / Cscore	.487	.001
Cscore / Iscore	-.275	.086
Cscore / Lscore	-.258	.108
Bscore / Iscore	-.305	.056
Rscore / Bscore	-.551	.0001

TABLE 36

High Level Male Correlations n = 5

	r	p
Math / Reading	NS	
Sscore / Cscore	-.869	.056
Sscore / Bscore	.960	.010
Rscore / Iscore	-.940	.017
Bscore / Lscore	-.852	.067

High Level Female n = 35

	r	p
Math / Reading	.389	.019
Reading / Sscore	.333	.051
Age / Grade	.884	.0001
Age / Sscore	-.333	.051
Age / Rscore	-.338	.047
Age / Bscore	.292	.088
Grade / Sscore	-.364	.031
Grade / SE	.297	.079
Sscore / Rscore	.395	.019
Sscore / Bscore	-.374	.027
Sscore / Lscore	-.567	.0001
Cscore / Rscore	-.479	.003
Cscore / Iscore	-.483	.003
Cscore / Lscore	-.381	.024
Rscore / SE	-.369	.029
Bscore / Rscore	-.727	.0001

Findings

Total School

Cognitive Variables and Self Evaluation Scores

In the total school, 193 students with complete data, 69 males and 124 females, significant findings included the positive correlation between reading and math, r = .545 (p = .000) level of significance. Significant negative correlations were found between reading and conformity, r = -.180 (p = .012), and math and conformity, r = -.174 (p = .016). While not significant, reading and self esteem correlated, r = .117 (p = .099).

The correlations between reading and sex, r = -.248 (p = .000) and math and sex, r = -.141 (p = .046), indicated that female scores were significantly higher than male scores. Other significant gender differences included benevolence, r = .237 (p = .001), with males higher, and self esteem, r = -.181 (p = .001), independence, r = -.180 (p = .012), and leadership, r = -.152 (p = .034), with females higher. Sex and grade level, r = -.181 (p = .098), found females higher than males, although not significantly.

The correlation between age and recognition, r = -.168 (p = .019), indicated that older students did not value recognition as much as younger students. Significant correlations between age and conformity, r = .155 (p = .031), and age and grade level, r = .645 (p = .000), and nonsignificant correlations between age and self esteem, r = .122

(p = .084), indicated that older students valued conformity and self esteem more than younger students and were in higher grade levels than younger students. Age and sex correlated nonsignificantly, r = .121 (p = .087), with males older than females. The total school found significant positive correlations between grade level and conformity, r = .175 (p = .014), and grade level and benevolence, r = .171 (p = .017) and a significant negative correlation between grade level and recognition, r = -.173 (p = .016). Grade level and self esteem correlated positively and nonsignificantly, r = .117 (p = .098).

Males in the total school found no significant correlation between reading and any self evaluation score, although a nonsignificant negative correlation was found between reading and conformity, r = -.193 (p = .112), and a significant negative correlation between math and conformity, r = -.350 (p = .003).

Females in the total school found reading and benevolence significantly and positively correlated, r = .203 (p = .024), and reading and conformity significantly and negatively correlated, r = -.177 (p = .049). Reading and self esteem were correlated positively and nonsignificantly, r = .156 (p = .081). Math was not significantly correlated with any self evaluation scores for females.

Self Evaluation Variable Correlations

Self evaluation correlations for the total school included positive correlations between support and recognition, r = .340, and conformity and benevolence, r = .241, and negative correlations between support and conformity, r = -.389, support and leadership, r = -.383, conformity and

recognition, r = -.369, conformity and independence, r = -.329, recognition and benevolence, r = -.511, benevolence and independence, r = -387, and recognition and self esteem, r = -.267, all (p = .000). Significant negative correlations were found between benevolence and leadership, r = -.120, benevolence and support, r = -.148, conformity and leadership, r = -.166, and support and self esteem, r = -.160, and a significant positive correlation was found between conformity and self esteem, r = .163, all (p = .05).

Males in the total school found a significant positive correlation between support and recognition, r = .287 (p = .014), and significant negative correlations between support and conformity, r = -.428 (p = .000), support and leadership, r = -.320 (p = .006), conformity and independence, r = -.299 (p = .011), recognition and benevolence, r = -.362 (p = .002), recognition and independence, r = -.376 (p = .001), and benevolence and leadership, r = -.305 (p = .009), benevolence and independence, r = -.286 (p = .015), and conformity and recognition, r = -.236 (p = .046). Significant negative correlations were found between grade level and recognition, r = -.206 (p = .025), and age and recognition, r = -.265 (p = .025).

Females in the total school found a significant positive correlation between support and recognition, r = .374, and significant negative correlations between support and conformity, r = -.369, support and leadership, r = -.425, conformity and recognition, r = -.431, conformity and independence, r = -.346, recognition and benevolence, r = -.583, independence and benevolence, r = -.404, and recognition and self esteem,

$r = -.335$, all ($p = .000$). Positive correlations were found between conformity and benevolence, $r = .270$, and self esteem and benevolence, $r = .223$, and negative correlations between support and benevolence, $r = -.212$, support and self esteem, $r = -.209$, and conformity and leadership, $r = -.217$, all ($p = .05$). Age and conformity, $r = .170$ ($p = .060$), and grade level and benevolence, $r = .170$ ($p = .059$), correlated positively, although nonsignificantly.

Age and Grade Level Correlations

In the total school, age was significantly and negatively related to recognition and significantly and positively to conformity. A nonsignificant positive correlation was found between age and self esteem ($p = .084$), with older students scoring higher on self esteem. Age and grade level correlated positively and significantly.

In total school positive correlations were found between conformity and grade level and benevolence and grade level, and negative correlations between recognition and grade level.

Females were in significantly higher grade levels than males, and males were older than females, although not significantly, ($p = .087$).

The total male population found significant negative correlations between age and recognition and grade level and recognition.

The total female population found age and conformity correlated negatively ($p = .06$) and grade level and conformity correlated negatively ($p = .08$). Grade level and recognition correlated negatively, ($p = .084$), and grade level and benevolence correlated positively, ($p = .059$).

In the low level, age was significantly and negatively correlated with leadership, with younger students higher in leadership. Age and self esteem were nonsignificantly correlated, $r = .195$ ($p = .073$), with older students valuing self esteem more than younger students. Age and grade level correlated significantly. The low level also found a significant negative correlation between grade level and leadership.

Males in the low level found age and self esteem were significantly and positively correlated. Grade level and leadership correlated negatively, $r = -.299$ ($p = .061$).

Age and grade level were positively and significantly correlated for females in the low level, who also had significant negative correlations between reading and conformity and age and leadership.

The middle level of students had a significant negative correlation between age and recognition, and a significant positive correlation between age and benevolence. Age and conformity correlated positively, $r = .217$ ($p = .070$), and nonsignificantly. Grade level and conformity were positively and significantly correlated.

Males in the middle level had a significant negative correlation between age and recognition and a significant positive correlation between age and grade level. Grade level and recognition, while not significant, correlated negatively, $r = -.331$ ($p = .115$).

Females in the middle level had significant positive correlations between grade level and age, grade level and conformity, and age and conformity. Age and benevolence were not significant, but were positively related, $r = .246$ ($p = .096$).

The high level had a significant negative correlation between age and recognition, $r = -.388$ ($p = .013$), and, while not at significant levels, age and support, $r = -.263$ ($p = .102$) correlated negatively and age and benevolence, $r = .298$ ($p = .062$) correlated positively, with older students scoring lower on recognition and support and higher on benevolence than younger students. Grade level and recognition were significantly and negatively correlated, while grade level and benevolence, $r = .284$ ($p = .076$) and grade level and self esteem, $r = .263$ ($p = .097$) were positively correlated at nonsignificant levels.

High level males had no significant correlations between grade level or age and any of the self evaluation scores. High level females had a significant positive correlation between age and grade level and significant negative correlations between grade level and recognition, grade level and support, age and support, and age and recognition. A nonsignificant positive correlation existed between age and benevolence, $r = .292$ ($p = .088$), and a nonsignificant negative correlation existed between grade level and self esteem, $r = .297$ ($p = .079$).

Summary

Total School

Pearson product moment correlations, with complete data on 193 students found a significant correlation for the total school between reading and math. Both reading and math correlated significantly and negatively with conformity, and reading and self esteem correlated nonsignificantly and positively, $r = .117$ ($p = .099$). Reading and grade level were significantly correlated.

The total male population, 69 students, found no significant correlations between reading and self evaluation scores. Math and conformity correlated significantly and negatively, while reading and conformity were not significantly correlated (p = .112). Conformity was also related nonsignificantly to grade levels (p = .079). Significant negative correlations were found between age and recognition and grade level and recognition.

The total female population, 124 students, found positive significant correlations between reading and benevolence and reading and conformity, with no significance between math and conformity. Reading and recognition were positively correlated (p = .081). Age and conformity correlated negatively, (p = .06) and grade level and conformity correlated negatively, (p = .08). Grade level and recognition correlated negatively, (p = .084) and grade level and benevolence correlated positively, (p = .059).

Females scored significantly higher in reading and math than males, with reading more strongly correlated than math. Significant differences were found between sexes, with females scoring higher on independence, leadership and self esteem and males scoring higher on benevolence.

The total school found significant positive correlations between conformity and grade level and benevolence and grade level, and negative between recognition and grade level. Females were in significantly higher grade levels than males.

Age was significantly related to recognition and conformity scores, where older students scored higher on conformity and lower on recogni-

tion than younger students. Older students also scored nonsignificantly higher on self esteem. Males were older than females, although not significantly, (p = .087).

Significant positive correlations were found between conformity and benevolence, support and recognition, and conformity and self esteem, and significant negative correlations between conformity and support, support and leadership, conformity and recognition, conformity and independence, recognition and benevolence, recognition and self esteem and independence and benevolence, benevolence and leadership, support and benevolence, conformity and leadership and support and self esteem.

For the total male population, significant positive correlation was found between support and recognition and significant negative correlations were found between support and conformity, support and leadership, conformity and recognition, conformity and independence, benevolence and recognition, benevolence and leadership, benevolence and independence and recognition and independence.

For the total female population, significant positive correlations were found between support and recognition, conformity and benevolence, conformity and self esteem and benevolence and self esteem. Significant negative correlations were found between support and conformity, conformity and recognition, conformity and independence, recognition and benevolence, recognition and self esteem and independence and benevolence, support and benevolence, conformity and leadership, support and leadership and support and self esteem.

Levels

Low Level

In the low level, grades under 75, 82 students, 40 males and 42 fe-
males, had complete data. Significant correlations were found between
reading and math, $r = .474$ ($p = .000$), reading and grade level, $r = .336$
($p = .001$), math and grade level, $r = .268$ ($p = .012$), and grade level
and leadership, $r = -.215$ ($p = .012$). Math and conformity correlated
significantly and negatively, $r = -.246$ ($p = .026$), and math and recog-
nition correlated positively and significantly, $r = .259$ ($p = .019$).

Significant differences between sexes in this level found females
were significantly higher on independence, $r = -.221$ ($p = .046$), and
males were significantly higher on benevolence, $r = .373$ ($p = .001$), and
leadership, $r = .257$ ($p = .020$). No significant differences were found
between sexes on reading, although females were higher, $r = -.174$
($p = .107$). Age was significantly correlated with leadership, $r = -.248$
($p = .025$), with younger students higher in leadership. Age and self
esteem were nonsignificantly correlated, $r = .195$ ($p = .073$), with older
students valuing self esteem more than younger students. Age and grade
level correlated, $r = .540$ ($p = .000$). Grade level was also signifi-
cantly and negatively correlated with leadership, $r = -.215$ ($p = .012$).

Significant correlations between self evaluation scores included sig-
nificant positive correlations between support and recognition, $r = .380$
($p = .000$), and conformity and benevolence, $r = .357$ ($p = .001$), and
significant negative correlations between self esteem and recognition,
$r = -.252$ ($p = .024$). At ($p = .000$), negative correlations were also

found between conformity and independence, r = -.409, recognition and benevolence, r = -.490, and independence and benevolence, r = -.471, as well as between conformity and support, r = -.290 (p = .008), support and leadership, r = -.351 (p = .001), conformity and recognition, r = -.336 (p = .002), and benevolence and leadership, r = -.252 (p = .022).

Males in the low level, 40 students with complete data, found reading and math correlated, r = .498 (p = .001), and age and grade level correlated, r = .421 (p = .005). Grade level and reading correlated, r = .417 (p = .005), while grade level and math were not significantly correlated. Significant negative correlations were found between reading and independence, r = -.325 (p = .041), and reading and leadership, r = -.312 (p = .050). At nonsignificant levels, a negative correlation was found between math and conformity, r = -.266 (p = .097), and a positive correlation between math and recognition, r = .275 (p = .086). Age and self esteem were significantly and positively correlated, r = .408 (p = .007), with students who were older scoring higher on self esteem. Grade level and leadership correlated negatively, r = -.299 (p = .061). Self evaluation scores found a significant positive correlation between support and recognition, r = .312 (p = .036), and significant negative correlations between self esteem and recognition, r = -.324 (p = .041), support and conformity, r = -.355 (p = .025), conformity and independence, r = -.353 (p = .026), and recognition and benevolence, r = -.559 (p = .000). Nonsignificant negative correlations were found between independence and benevolence, r = -.284 (p = .076), conformity and recognition, r = -.296 (p = .064), and benevolence and leadership, r = -.265 (p = .098).

Females in the low level, 42 students with complete data, found significant correlations between reading and math, $r = .498$ ($p = .001$), and between reading and grade level, $r = .383$ ($p = .010$). Math and grade level were not significantly correlated, $r = .241$ ($p = .115$). Age and grade level were significantly correlated, $r = .641$ ($p = .000$), with older students in higher grade levels. Significant negative correlations were found between reading and conformity $r = -.384$ ($p = .012$), and age and leadership, $r = -364$ ($p = .019$). Significant positive correlations were found between conformity and benevolence, $r = .455$ ($p = .002$), and support and recognition, $r = .429$ ($p = .005$), and significant negative correlations between support and leadership, $r = -.464$ ($p = .002$), conformity and recognition, $r = -.366$ ($p = .017$), conformity and independence, $r = -.451$ ($p = .003$), recognition and benevolence, $r = -.463$ ($p = .002$) and benevolence and independence, $r = -.567$ ($p = .000$). Nonsignificant negative correlations were found between self esteem and leadership, $r = -.281$ ($p = .075$) and support and independence, $r = -.295$ ($p = .058$), and positive between self esteem and benevolence, $r = .257$ ($p = .105$).

Middle Level

In the middle level of students, C grades, above grade 75 and below grade 86, which included 71 students, 24 males and 47 females, no significant relationship was found between reading and math. Reading and benevolence correlated significantly and positively, $r = .234$ ($p = .05$), and reading and independence correlated nonsignificantly and negatively, $r = -.204$ ($p = .088$). Math was not significantly correlated with any of

the self evaluation scores. Males were significantly higher than fe-
males on benevolence, r = .218 (p = .068), in the middle level. Corre-
lations between age and recognition, r = -.330 (p = .005), age and be-
nevolence, r = .269 (p = .023), and age and conformity, r = .217
(p = .070), found older students had significantly higher benevolence
scores and significantly lower recognition scores than younger students,
and older students also had higher conformity scores, although not sig-
nificantly. Grade level and conformity were positively and significant-
ly correlated, r = .262 (p = .027). Significantly correlated self eval-
uations included a positive correlation between support and recognition,
r = .266 (p = .025), and negative correlations between support and con-
formity, r = -.559 (p = .000), support and leadership, r = -.275
(p = .021), conformity and recognition, r = -.336 (p = .002), conformity
and independence, r = -.253 (p = .033), conformity and benevolence,
r = -.520 (p = .000), recognition and self esteem, r = -.298 (p = .012),
independence and benevolence, r = -.368 (p = .002), and independence and
self esteem, r = -.298 (p = .012).

Males in the middle level, 24 students, found no significance between
reading and math. Significant negative correlations were found between
age and recognition, r = -.555 (p = .005), support and conformity,
r = -.470 (p = .014), and conformity and independence, r = -.474
(p = .019). Age and grade level were significantly correlated, r = .563
(p = .004), and grade level and recognition, while not significant, cor-
related negatively, r = -.331 (p = .115).

For females in the middle level, 47 students, reading and math were
not significantly related. While grade level and reading correlated,

$r = .274$ (p = .057), grade level and math were not significantly correlated. Grade level and age correlated positively, $r = .710$ (p = .000). Age and conformity, $r = .326$ (p = .025), were significantly and positively related. Age and benevolence were not significant, but were positively related, $r = -.246$ (p = .096). A significant and positive correlation was found between reading and benevolence, $r = .359$ (p = .013), and a negative correlation between reading and recognition, $r = -.292$ (p = .047). While not significant, reading and independence, $r = -.270$ (p = .067), and math and recognition, $r = -.256$ (p = .082), correlated negatively. Grade level and conformity were significantly and positively correlated, $r = .293$ (p = .046). Significant self evaluation correlations found positive correlations between support and recognition, $r = -.314$ (p = .032), and conformity and self esteem, $r = .406$ (p = .005), and negative correlations between support and conformity, $r = -.595$ (p = .000), recognition and benevolence, $r = -.589$ (p = .000), independence and benevolence, $r = -.417$ (p = .004), recognition and conformity, $r = -.470$ (p = .001), recognition and self esteem, $r = -.393$ (p = .007), and support and self esteem, $r = -.389$ (p = .009). A nonsignificant correlation was found between support and leadership, $r = -.270$ (p = .067).

High Level

The high level, 40 students, 5 males and 35 females, made up of A and B grades, scores above grade 75, had a significant positive correlation between reading and math, $r = .464$ (p = .002). Reading and support, $r = .354$ (p = .025), correlated significantly and positively. Females

were significantly higher than males on self esteem scores, r = -.490 (p = .001), and males scored higher than females in math, at levels approaching significance, r = .300 (p = .056). While not at significant levels, correlations between age and recognition, r = -.300 (p = .060), age and support, r = -.263 (p = .102), and age and benevolence, r = .298 (p = .062), found older students scored lower on recognition and support and higher on benevolence. Grade level and recognition were significantly and negatively correlated, r = -.388 (p = .013), while grade level and benevolence, r = .284 (p = .076), and grade level and self esteem, r = .263 (p = .097), found higher grade levels scored higher on benevolence and self esteem at nonsignificant levels. Significant positive correlations were found between conformity and recognition, r = .487 (p = .001), and support and recognition, r = .393 (p = .012), and significant negative correlations between benevolence and recognition, r = -.551 (p = .000), and support and leadership, r = -.606 (p = .000). Nonsignificant negative correlations were found between conformity and independence, r = -.275 (p = .086), benevolence and independence, r = -.305 (p = .056), support and conformity, r = -.302 (p = .059), self esteem and recognition, r = -.284 (p = .076), and leadership and conformity, r = -.258 (p = .108).

High level males, 5 students, had no significant correlation between reading and math scores, nor any significant correlations between reading or math and any of the self evaluation scores. Of the self evaluation scores, a significant positive correlation was found between support and benevolence, r = .960 (p = .01), and a significant negative correlation between recognition and independence, r = -.940 (p = .017).

Nonsignificant negative correlations were found between support and conformity, r = -.869 (p = .056), and benevolence and leadership, r = -.852 (p = .067).

High level females, 35 students, had significant correlations between reading and math, r = .389 (p = .019), and age and grade level, r = .884 (p = .000). Age and benevolence, r = .292 (p = .088), and reading and support were positively correlated, r = .333 (p = .051), at near significant levels. Significant negative correlations were found between grade level and recognition, r = -.433 (p = .008), grade level and support, r = -.364 (p = .031), age and support, r = -.333 (p = .051), and age and recognition, r = -.338 (p = .047), and a nonsignificant positive correlation was found between grade level and self esteem, r = .297 (p = .079). Significant self evaluation correlations included a positive correlation between support and recognition, r = .395 (p = .019), and negative correlations between self esteem and recognition, r = -.369 (p = .029), support and benevolence, r = -.374 (p = .027), support and leadership, r = -.567 (p = .000), conformity and recognition, r = -.479 (p = .003), conformity and independence, r = -.483 (p = .003), conformity and leadership, r = -.381 (p = .024), and recognition and benevolence, r = -.727 (p = .000).

Summary of Levels

To review, levels were devised to separate students into three groups, based upon reading scores. In the low level, 82 students, a significant negative correlation was found between math and conformity, and a positive correlation between math and recognition. Between read-

ing and self evaluation scores, no significant correlations were found. Age and leadership correlated significantly and negatively.

Males in the low level found reading and independence and reading and leadership significantly and negatively correlated. Math and conformity were negatively correlated (p = .097), and math and recognition positively correlated (p = .086). Age and self esteem were significantly and positively correlated, with older males higher in self esteem. Grade level and leadership corrleated negatively, (p = .06). . Females in the low level found significant and negative correlations between reading and conformity and age and leadership.

The middle level, 71 students, found reading and math not significantly related. Reading and benevolence correlated significantly and positively, but math was not significantly correlated with any self evaluation positively. Reading and independence correlated negatively and nonsignificantly (p = .088). Sex and benevolence correlated (p = .06), with males higher than females. Grade level and conformity and age and conformity correlated positively and age and recognition correlated negatively. A significant positive correlation was found between support and recognition and significant negative correlations between support and conformity, conformity and benevolence, support and leadership, conformity and recognition, conformity and independence, recognition and self esteem, independence and benevolence and independence and self esteem.

Males in the middle level had no significant correlation between reading and math. A significant negative correlation existed between age and recognition, but a nonsignificant negative correlation existed

between grade level and recognition (p = .115). Conformity and support and conformity and independence were significantly and negatively correlated.

Females in the middle level had no significant correlation between reading and math. Reading and recognition were negatively correlated and reading and benevolence were positively correlated at significant levels. Reading and independence (p = .067) and math and recognition (p = .08) correlated negatively. Grade level and reading correlated (p = .057), nonsignificantly and no significance was found between math and grade level. Age and conformity and grade level and conformity were positively correlated at significant levels. Age and benevolence correlated positively (p = .10).

The high level, 40 students, found reading and math significantly correlated. Reading and support were significantly and positively correlated. Math was not significantly correlated with any self evaluation scores. A significant negative correlation was found between age and recognition, with younger students scoring higher on recognition, and a positive nonsignificant correlation between age and benevolence (p = .062). Grade level and benevolence correlated positively and nonsignificantly (p = .08). Males were nonsignificantly higher in math (p = .056) and females were significantly higher in self esteem. Significant positive correlations were found between conformity and recognition and support and recognition, and significant negative correlations between benevolence and recognition and support and leadership. A nonsignificant negative correlation was found between benevolence and independence (p = .056).

Male correlations in the high level found no significant correlations between reading or math. Reading nor math were related to any self evaluation scores. Females in this level found reading and math significantly correlated. Reading and support correlated positively (p = .051). Age and recognition were negatively and significantly correlated and age and benevolence, were positively correlated (p = .088) and age and support were negatively correlated (p = .051), although not significantly. Support and grade level were significantly and negatively correlated. Grade level and age were significantly correlated. A significant positive correlation was found between support and recognition and significant negative correlations were found between support and leadership, recognition and benevolence, support and benevolence, support and grade level, conformity and recognition, conformity and independence, and conformity and leadership.

Summary of Cognitive and Self Evaluation Scores

In the total school, of 204 students, 193 had complete data. Reading and math correlated significantly and positively. Significant negative correlations were found between reading and conformity and math and conformity. A nonsignificant positive correlation was found between reading and self esteem, r = .117 (p = .099). Reading and grade level were significantly correlated.

Male correlations found no significant correlations between reading and any self evaluation scores. The total male population, 69 students, found only reading and conformity to be correlated nonsignificantly,

(p = .112), positively. Math was significantly correlated to conformi-
ty. Conformity was also nonsignificantly related to grade level,
(p = .079).

The total female population, 124 students, found significant positive
correlations between reading and benevolence and reading and conformity,
with no significance between math and conformity. Reading and self es-
teem were nonsignificantly and positively correlated at .081 level.

Summary of Levels

In the low level, grades under 76, 82 students, 40 males and 42 fe-
males, had complete data. Significant positive correlations were found
between reading and math, reading and grade level and math and grade
level. Math and conformity were significantly and negatively correlated
and math and recognition were positively and significantly correlated.

Males in the low level, 40 students with complete data, found signif-
icant positive correlations between reading and math and age and grade
level. Grade level and reading correlated significantly, but grade lev-
el and math were not significantly correlated. Significant negative
correlations were found between reading and independence and reading and
leadership. Math and conformity correlated negatively, r = -.266
(p = .097), and math and recognition correlated positively, r = .275
(p = .086), at nonsignificant levels.

Females in the low level, 42 students with complete data, found a
significant correlation between reading and math. A significant neg-
ative correlation was found between reading and conformity. Although
not significant, correlations were found between reading and grade lev-
el, r = .383 (p = .010), and math and grade level, r = .241 (p = .115).

In the middle level of students, above grade 76 and below grade 85, 71 students, 24 males and 47 females, no significant relationship was found between reading and math. Reading and benevolence were significantly correlated positively, and reading and independence, nonsignificantly and negatively correlated, r = -.204 (p = .088). Math was not significantly correlated with any of the self evaluation scores.

Neither males, 24 students, nor females, 47 students, in the middle level, found any significance between reading and math. Females found grade level and reading positively correlated, r = .274 (p = .057), grade level and math not significantly correlated. A significant positive correlation was found between reading and benevolence and a significant negative correlation was found between reading and recognition. While not significant, reading and independence, r = -.270 (p = .067), and math and recognition, r = -.256 (p = .082), correlated negatively.

The high level, 40 students, 5 males and 35 females, made up of A and B grades, found a significant correlation between reading and math. Reading and support were positively and significantly correlated. High level males, 5 students, found reading and math were not significantly correlated and there were no no significant correlations between reading or math and any of the self evaluation scores. High level females, 35 students, found a significant correlation between reading and math. Reading and support were positively correlated, r = .333 (p = .051), although not significantly.

Summary of Self Evaluation Correlations

In the total school, positive significant correlations were found between conformity and benevolence and support and recognition, and negative significant correlations between conformity and support, support and leadership, conformity and recognition, conformity and independence, recognition and benevolence, recognition and self esteem and independence and benevolence, all at .0001 level of significance. At the .05 level, a positive correlation was found between conformity and self esteem, and negative correlations were found between benevolence and leadership, support and benevolence, conformity and leadership and support and self esteem.

For all males, support and recognition were positively correlated and support and conformity, support and leadership, conformity and recognition, conformity and independence, benevolence and recognition, benevolence and leadership, benevolence independence and recognition and independence were negatively and significantly correlated.

For all females, significant correlations between self evaluation scores were found at the .0001 level, a negative correlation between support and conformity, conformity and recognition, conformity and independence, recognition and benevolence, recognition and self esteem and independence and benevolence, and a positive correlation between support and recognition. At the .05 level, negative correlations were found between support and benevolence, conformity and leadership and leadership and self esteem and positive correlations between support and self esteem, conformity and benevolence, conformity and self esteem and benevolence and self esteem.

In the low level, significant correlations between self evaluation scores included positive correlations between support and recognition and conformity and benevolence, and negative correlations between conformity and independence, recognition and benevolence, independence and benevolence, all at .0001 level of significance. At the .05 level, negative correlations were found between conformity and support, support and leadership, conformity and recognition, benevolence and leadership and self esteem and recognition.

For males in the low level, a significant positive correlation was found between support and recognition, r = .312 (p = .036), and significant negative correlations between self esteem and recognition, support and conformity, conformity and recognition, conformity and independence and recognition and benevolence. Nonsignificant correlations were found between independence and benevolence, r = -.284 (p = .076) and benevolence and leadership, r = -.265 (p = .095).

Females in the low level found a positive significant correlation between support and recognition, and significant negative correlations between support and leadership, conformity and recognition, conformity and independence, conformity and benevolence, recognition and benevolence, and benevolence and independence. Nonsignificant negative correlations were found between self esteem and leadership r = -.281 (p = .075), and support and independence, r = -.295 (p = .058), and a positive correlation self esteem and benevolence, r = .257 (p = .105).

Middle level students found a significant positive correlation between support and recognition, and significant negative correlations between support and conformity, support and leadership, conformity and

recognition, conformity and independence, conformity and benevolence, recognition and self esteem, independence and benevolence, independence and self esteem.

Males in the middle level found significant negative correlations between support and conformity and conformity and independence.

Females in the middle level found significant positive correlations between support and recognition and conformity and self esteem, and significant negative correlations between support and conformity, recognition and benevolence, independence and benevolence, recognition and conformity, recognition and self esteem and support and self esteem, and a nonsignificant correlation between support and leadership.

The high level found significant positive correlations between conformity and recognition and support and recognition, and significant negative correlations between benevolence and recognition and support and leadership. Nonsignificant negative correlations were found between conformity and independence, $r = -.275$ ($p = .086$), and benevolence and independence, $r = -.305$ ($p = .056$), support and conformity, $r = -.302$ ($p = .059$), self esteem and recognition, $r = -.284$ ($p = .076$), and leadership and conformity, $r = -.258$ ($p = .108$).

High level males found a significant positive correlation between support and benevolence, and a significant negative correlation recognition and independence. Nonsignificant negative correlations were found between support and conformity, $r = -.869$ ($p = .056$), and benevolence and leadership, $r = -.852$ ($p = .067$).

High level females found a significant positive correlation between support and recognition, and significant negative correlations between

self esteem and recognition, support and benevolence, support and leadership, conformity and recognition, conformity and independence, conformity and leadership, and recognition and benevolence.

Multiple Regression Analysis

To determine the amount of relationship between cognitive scores and self evaluation scores, regression analysis was utilized. Because many self evaluation scores were interrelated and appeared to be redundant on the traits which they were measuring, regression analysis was useful in measuring these multivariate relationships.

Regressing on reading, 193 students, the full or saturated model accounted for 7.3% (p = .049). Removing self esteem accounted for 5.5% (p = .10) and removing benevolence, the variables accounted for 5.5% (p = .058), and removing support and benevolence, 5.3% (p = .036). Leadership, recognition and conformity together accounted for 5% (p = .02). Removing support, recognition, independence and benevolence, i.e., including conformity, leadership and self esteem, resulted in 6.6% (p = .005). Removing all except self esteem and conformity, the contribution to the reading variable was 5.7% (p = .004). Leadership and conformity accounted for 4.3% (p = .015) and conformity alone accounted for 3.2% (p = .012).

In the low level, scores below C, regressing on reading found all scores, excluding self esteem, accounted for 12.6% (p = .111). Removing recognition resulted in 11.3% (p = .098) and leadership, independence and conformity together accounted for 7.7% (p = .099). Leadership and conformity accounted for 5.6% (p = .103) and leadership alone was not significant.

Regressing on reading for the middle level found no significance on the full model. Benevolence alone accounted for 5.5% (p = .050), independence alone accounted for 4.1% (p = .088) and recognition, independence and support together accounted for 9.2% (p = .089).

Regressing on reading for the high level found no significance on the full model. Benevolence and support entered together accounted for 13.3% (p = .071), and support alone accounted for 12.5% of the variance (p = .025).

Regressing on math for the total school, 191 students, with self evaluation scores as independent variables, and omitting self esteem, found all variables accounted for 5.4% at (p = .17) and were not significant. Removing leadership resulted in 5.2% (p = .122) and with support and leadership removed, the remaining variables accounted for 5.2% (p = .075). Removing support, recognition and leadership, the remaining variables, conformity, independence, benevolence and self esteem, accounted for 4.9% (p = .054). With support, independence and conformity in the equation, the amount of variance accounted for in math was 4.7% (p = .028), and with support and conformity, 4.6% (p = .012). Conformity alone accounted for 3.1% (p = .016).

In the low level, regressing on math, the full model, with the exception of self esteem, accounted for 14.9% (p = .054). Removing independence resulted in 14.8% (p = .029), and removing independence and leadership accounted for 14.4% (p = .017) for the remining variables. With only recognition and conformity, 9.6% (p = .019) was accounted for, and recognition, support and conformity together accounted for 12.3% (p = .016). Recognition alone accounted for 6.7% (p = .019).

Regressing on math for the middle level found, with all self evalua-
tion scores except self esteem, the full model nor partial models were
significant. Recognition alone accounted for 3.3% (p = .13) and recog-
nition and benevolence together accounted for 6.6% (p = .097). Regress-
ing on math for the high level found no significance on the full or par-
tial models, and support alone accounted for 5.2% (p = .158). Thus, no
significant amount of variance was accounted for between any of the self
evaluation scores and math for the middle or high level.

Summary of Regression Analysis

The total school found, when regressing on reading, the full model
accounted for 7.3%, and all variables except support and benevolence ac-
counted for 5.3% at significant levels. Self esteem and conformity ac-
counted for 5.7% and leadership and conformity accounted for 4.3% at
significant levels. Leadership, recognition and conformity accounted
for 5% of the variance at a significant level. The low level found no
significant levels for the variables regressed on reading. The middle
level found benevolence accounted for 5.5% at a significant level. The
high level found support alone accounted for 12.5% at a significant lev-
el.

Regressing on math, the total school found support, independence and
conformity accounted for 4.7%, support and conformity, 4.6% and conform-
ity alone accounted for 3.1% at significant levels. The low level found
removing self esteem and independence, the remainder accounted for
14.9%, removing independence and leadership accounted for 14.4% and re-
moving only independence, the remaining variables accounted for 14.8% of

the variance. Recognition and conformity accounted for 9.6%, support and conformity accounted for 12.3% and recognition alone accounted for 6.7%, at significant levels. The middle and the high levels found that no self evaluation variables contributed significantly to the math variable.

Self Evaluation Mean Scores

The following tables show self evaluation mean scores of students by school, gender and group.

TABLE 37

Total School

	Means	Standard Deviations
Support	45.70	27.05
Conformity	42.87	25.82
Recognition	41.27	27.35
Independence	55.56	25.61
Benevolence	49.26	26.96
Leadership	49.14	25.55
Self Esteem	19.68	13.01

TABLE 38

Levels

	Means	Standard Deviations
		Support
Low	46.38	28.20
Middle	44.32	26.53
High	48.68	26.02
		Conformity
Low	47.32	23.97
Middle	41.21	27.37
High	36.65	26.35
		Recognition
Low	44.04	26.04
Middle	37.96	27.75
High	41.45	29.58
		Independence
Low	52.73	27.35
Middle	54.48	23.52
High	62.93	25.12
		Benevolence
Low	46.76	28.14
Middle	50.39	27.09
High	51.95	25.36
		Leadership
Low	46.20	26.74
Middle	53.70	23.57
High	46.26	26.40
		Self Esteem
Low	17.58	13.08
Middle	13.21	13.21
High	21.12	11.95

TABLE 39

Gender - 72 Males, 124 Females

	Means	Standard Deviations
Support		
Males	46.58	28.48
Females	45.19	26.29
Conformity		
Males	44.01	24.93
Females	42.21	26.40
Recognition		
Males	39.22	24.91
Females	42.46	28.70
Independence		
Males	49.54	26.01
Females	59.06	24.81
Benevolence		
Males	57.61	25.01
Females	44.40	26.96
Leadership		
Males	44.08	25.69
Females	52.07	25.11
Self Esteem		
Males	16.63	13.94
Females	21.49	12.13

TABLE 40

Gender - Low Level - 40 Males, 42 Females

	Means	Standard Deviations
Support		
Males	47.90	28.17
Females	44.93	28.50
Conformity		
Males	49.08	24.06
Females	45.64	24.06
Recognition		
Males	42.48	24.10
Females	45.52	27.97
Independence		
Males	46.58	26.30
Females	58.59	27.35
Benevolence		
Males	57.45	26.70
Females	36.57	25.87
Leadership		
Males	39.20	25.65
Females	52.86	26.33
Self Esteem		
Males	15.79	14.75
Females	19.37	11.05

TABLE 41

Gender - Middle Level - 24 Males, 47 Females

	Means	Standard Deviations
Support		
Males	44.75	29.00
Females	44.11	25.50
Conformity		
Males	39.96	26.02
Females	41.85	28.29
Recognition		
Males	33.21	29.55
Females	40.38	23.70
Independence		
Males	51.13	23.59
Females	56.19	23.55
Benevolence		
Males	58.58	23.46
Females	46.21	28.08
Leadership		
Males	51.08	23.07
Females	55.04	23.96
Self Esteem		
Males	20.33	12.29
Females	22.04	13.74

TABLE 42

Gender - High Level - 5 Males, 35 Females

	Means	Standard Deviations
		Support
Males	60.80	14.02
Females	46.94	4.27
		Conformity
Males	23.20	9.59
Females	38.57	4.51
		Recognition
Males	40.60	16.84
Females	41.57	4.89
		Independence
Males	59.20	17.42
Females	63.45	3.94
		Benevolence
Males	56.00	13.63
Females	51.37	4.23
		Leadership
Males	38.00	16.43
Females	47.14	4.24
		Self Esteem
Males	5.60	2.69
Females	23.78	1.83

Findings

Using self evaluation scores for comparisons, the highest score for the total school was found to be in the area of independence. The next scores in order of value were benevolence and leadership, followed by support, conformity and recognition.

Male means on self evaluation scores were highest on benevolence and lowest on recognition and female mean scores were highest on independence and lowest on conformity.

In support, the high level scored highest and the middle lowest; in conformity, the low level scored highest and the high level lowest; in recognition, the low level scored highest and the middle level lowest; in independence, the high level scored highest and the low level lowest; in benevolence, the high level scored highest and the low level lowest; in leadership, the middle level scored highest, with the low and high levels very similar; and in self esteem, the high level scored highest and the middle lowest.

Comparing sexes in the low level, males were higher than females on support, conformity and benevolence, and females were higher than males on recognition, independence, leadership and self esteem. In the middle level, males were higher than females on benevolence, and females were higher than males on conformity, recognition, independence, leadership and self esteem. There was no difference on support between sexes. In the high level, males were higher than females on support and benevolence, and females were higher than males on conformity, recognition, independence, leadership and self esteem.

Gender

Using t-tests, data were examined to alpha p = .10 and significance was determined at p = .05.

Comparing aggregate mean scores of students by sex, 72 males and 124 females, significant differences were found at the total school in independence, t = 2.54 (p = .012), self esteem, t = 2.60 (p = .01), and leadership, t = 2.13 (p = .034), with females higher, and benevolence, t = -3.39 (p = .001), with males higher. Females were significantly higher than males on reading scores, t = 3.61 (p = .000), and nonsignificantly higher on math scores, t = 1.88 (p = .062). Age was not significantly different, t = -1.72 (p = .087), although males were older than females.

In the low reading level, 40 males and 42 females, significant differences in gender were found in the areas of benevolence, t = -3.60 (p = .001), with males higher, and leadership, t = 2.38 (p = .020), and independence, t = 2.03 (p = .046), with females higher. Reading at t = 1.62 (p = .111), found females scoring higher than males, although not significantly.

Of the gender differences in the middle level, 24 males and 49 females, which included reading scores above 76 and below 85, the only difference in self evaluation scores found was nonsignificant, in the area of benevolence, t = -1.96 (p = .068), with males scoring higher.

In the high reading level, 5 males and 36 females, gender differences were found on self esteem, t = 3.51 (p = .001), with females higher, and math scores, at t = -1.97 (p =.056), with males higher.

In the group of students above the low level, i.e., combining A, B and C grades, 29 males and 84 females, no significant differences were found between sexes, although females were higher on self esteem, $t = 1.76$ ($p = .081$) and in reading, $t = 1.72$ ($p = .087$), and males were higher on benevolence, $t = -.1.72$ ($p = .088$).

Summary of Gender Differences

In the total school females scored significantly higher in reading and in math than males. Significant differences were found between sex and independence, leadership, benevolence and self esteem, with female scores higher on independence, leadership and self esteem and males higher on benevolence. Females were in higher grade levels than males, $t = -1.81$ ($p = .098$, and males were older than females, $t = 1.21$ ($p = -.087$, although not significantly.

In the low level, significant differences between sexes found females were significantly higher on independence, and males were significantly higher on benevolence and leadership. No significant differences were found between sexes on reading, although females were higher, $t = -1.74$ ($p = .107$).

Middle level students found males were nonsignificantly higher than females on benevolence, $t = 2.18$ ($p = .068$).

The high level found sex differences with females significantly higher in self esteem scores, than males and males nonsignificantly higher in math than females, $t = 3.00$ ($p = .056$). A gender comparison of all students above the low level found no significant differences between sexes.

Levels

Significant differences between high level, 40 students, and low level, 82 students, were found on conformity, t = 2.23 (p = .027), with the low level highest, and independence, r = -1.98 (p = .050), with the high level highest, age, t = 3.37 (p = .001), with the low level older, and sex, t = 4.32 (p = .000), with more females than males in the high level. The high level was higher than the low level in reading, t = -14.29 (p = .000) and math, t = -7.73 (p = .000). Because students were separated for this study based upon their reading scores, reading strongly correlated with levels, and math correlated about half as strongly as reading.

Male differences from the low level, 43 students, and the high level, 5 students, found self esteem, t = 2.90 (p = .014) and conformity, 2.29 (p = .027), with the low level highest, and age, t = 2.52 (p = .015), with low level older. The high level had higher academic scores than the low level, with reading scores, t = -8.53 (p = .000), higher than math scores, t = -5.42 (p =.000). Differences between females in the high level, 36 students, and low level, 44 students, found females in the high level scoring significantly higher than females in the low level on benevolence, t = -2.54 (p =.013), reading, t = -12.74 (p = .000) and math t = -5.66 (p = .000). Females in the low level were significantly older than females in the high level, t = 2.28 (p = .026).

Differences between the low level, 82 students, and the middle level, 71 students, were found on self esteem, t = -1.85 (p = .066), leadership, t = -1.83 (p =.069) and grade level, t = -2.14 (p = .034), with

the middle level higher, and sex, t = 2.13 (p = .035), with more fe-
males in the middle level than in the low level. The middle level had
higher scores than the low level on reading t = -8.62 (p = .000) and
math t = -3.29 (p = .001).

Male differences in the low level, 40 students, and the middle level,
24 students, found the middle level higher on leadership, t = -1.91
(p = .061), math, t = -1.77 (p = .082) and reading, t = -5.81
(p = .000). Female differences in the low level, 43 students, and the
middle level, 48 students, found the middle level females higher, al-
though not significantly, on benevolence, t = -1.66 (p = .097), and
reading, t = -7.20 (p = .000), and math, t = -2.62 (p = .011), which
were significantly higher.

Differences between the middle level, 73 students, and the high lev-
el, 41 students, found the high level higher on independence, t = 1.77
(p = .079). Sex differences, t = -2.73 (p = .007), found more females
in the high level. Significant differences were found between reading,
t = 13.95 (p = .000), and math, t = 4.70 (p = .000), with the high level
scoring over twice as high on reading than on math over the middle lev-
el. The middle level students were in higher grade levels, t = -2.90
(p = .005), and were older, t = -3.56 (p = .001), than those in the high
level.

Differences between males in the middle level, 24 students, and the
high level, 5 students, found males in the middle level higher on self
esteem, t = -2.59 (p = .015), than males in the high level. The middle
level males were in higher grade levels, t = -1.77 (p = .088), and the
high level males were older, t = 6.09 (p = .037). Males in the high

level had higher reading scores, t = 6.09 (p = .003), and higher math scores, t = 2.36 (p = .026), than males in the middle level.

Females in the middle level, 48 students, and females in the high level, 36 students, found no significant difference between any self evaluation scores. Middle level females were in higher grade levels t = -2.33 (p = .022), and older t = -2.69 (p = .009), than the females in the high level. Females in the high level were significantly higher in reading, t = 12.47 (p = .000), and in math, t = 3.53 (p = .001), than the middle level. This academic difference was expected as levels were based upon reading scores.

Summary of Level Differences

Differences between levels, found the low level significantly higher on conformity than the high level and the high level significantly higher on independence than the low level. Between the low level and the middle level and the middle level and the high level, no significant differences were found.

Differences between males in the low level and the high level found the males in the low level were significantly higher on self esteem and conformity and were significantly older than males in the high level. Females in the high level were significantly higher on benevolence and older than females in the low level.

No significant differences were found between males or females in the low level and the middle level. Between the middle level and the high level, males in the middle level were higher on self esteem than males in the high level. Females in these two levels found no significant differences.

Summary

The reading scores in Cathedral were skewed toward low scores, with a larger number of students in the the low level. The low level included equal numbers of males and females, however, the middle level and the high level included more females than males.

In the total school, significant negative correlations were found between reading conformity and math and conformity. Comparing correlations between cognitive scores and self evaluation scores of students by gender in the total school, 72 males and 124 females, no significant correlations were found for males between reading and any self evaluation scores, however, math and conformity were negatively and significantly correlated. Age and recognition was significantly and negatively correlated and age and self esteem was significantly and positively correlated for males. For females, reading and benevolence was significantly and positively correlated, and reading and conformity was significantly and negatively correlated, while reading and self esteem was positively and nonsignificantly correlated (p = .081). Age and conformity correlated nonsignificantly and positively (p = .06).

In the low level, reading was not significantly correlated with any of the self evaluation scores, but math and conformity correlated negatively and significantly and math and recognition correlated positively and significantly. Significant positive correlations were found between grade level and math and between age and grade level, and a significant negative correlation was found between age and leadership. Age and self esteem correlated positively (p = .073).

Males in the low level found significant negative correlations between reading and independence and reading and leadership. Negative nonsignificant correlations were found between math and conformity, (p = .097), math and recognition, (p = .086), and grade level and leadership, and a positive nonsignificant correlation between age and self esteem. Females in the low level found a significant positive correlation between grade level and reading and a significant negative correlation between age and leadership.

In the middle level, a significant positive correlation was found between reading and benevolence, and a nonsignificant negative correlation between reading and independence (p = .088). Reading and math were not significantly correlated. Positive significant correlations were found between grade level and conformity and age and benevolence. Age and conformity were nonsignificantly and positively correlated, (p = .07).

Males in the middle level found no significant correlations between reading or math and any of the self evaluation scores. Age and recognition correlated significantly and negatively.

Females in the middle level found a significant negative correlation between reading and recognition and a significant positive correlation between reading and benevolence. Nonsignificant negative correlations were found between reading and independence (p = .067) and math and recognition (p = .082). Significant positive correlations were found between age and conformity grade level and conformity and a nonsignificant positive correlation between age and benevolence (p = .096).

The high level reading students found reading and support were positively and significantly correlated. Grade level and recognition were

significantly negatively correlated. Nonsignificant positive correlations were found between grade level and benevolence (p = .08), grade level and self esteem (p = .097) and age and benevolence (p = .062). Negative nonsignificant correlations were found between age and recognition (p = .06).

No significant correlations were found between reading or math and any self evaluation scores for high level male students. High level female students found a positive correlation between reading and support (p = .051). Significant negative correlations were found between age and recognition and grade level and recognition; a nonsignificant negative correlation between age and support (p = .088), and a positive nonsignificant correlation between grade level and self esteem (p = .079).

In the total school, significant differences between sexes were found on benevolence, independence, self esteem and leadership with females higher on independence, leadership and self esteem and males higher on benevolence. Females also had significantly higher reading and math scores, and males were significantly older than females and in higher grade levels.

In the high level, 5 males and 36 females, females were significantly higher on self esteem and males were nonsignificantly higher in math scores (p = .056). In the middle level, 24 males and 49 females, males were nonsignificantly higher on benevolence (p = .068), and in the low level, 40 males and 42 females, males were significantly higher on benevolence and females were significantly higher on leadership, independence and reading scores. In all students above the tutored level, no significant differences were found between the sexes.

Differences between the low and the high levels, apart from the reading and math scores, found the low level had significantly higher scores on conformity and were significantly older than the high level. The high level had significantly higher independence scores, and had more females than did the low level. Males in the low level were significantly higher on conformity and self esteem and were older than males in the high level; females in the high level were significantly higher on benevolence and were significantly older than those in the low level.

Comparing the low level with the middle level found no significant differences on self evaluation scores. The middle level was higher on self esteem (p = .069) and leadership (p = .066) than the low level. The middle level students were in higher grade levels and there were more females in the middle level than in the low level.

There were no significant differences between males or females in the low level and the middle level, however, males in the middle level were higher on leadership than males in the low level (p = .061) and females in the middle level were higher on benevolence than females in the low level (p = .097).

Comparing the middle level, 71 students, and the high level, 40 students, found no significant differences, although independence was non-significantly higher (p = .079) for the high level. There were also significantly more females than males in the high level. The middle level was significantly older and in higher grade levels than the high level and the high level was significantly higher in reading, t = 13.95 and math t = 4.70 than the middle level, both (p = .000).

Males in the middle level were significantly higher than males in the high level on self esteem. Males in the high level were significantly higher on reading and math, males in the middle level were in higher grade levels, although nonsignificantly, (p = .088), and males in the high level were significantly older than males in the middle level.

No significant differences on self evaluation scores were found, but females in the middle level were in significantly higher grade levels and were significantly older than females in the high level. Females in the high level were significantly higher in reading and math scores.

Findings in Cathedral High School will be compared to scores from the other schools in the study in Chapter 5.

SCHURZ HIGH SCHOOL

Schurz High School represents an urban school of low-middle SES and low-middle performance level. The primary purpose in choosing this school was to compare tutored levels of students from a low performance, low SES school with a high performance, high SES school, suburban school tutored level of students, i.e., New Trier.

Schurz High School, a public high school, consisting of students from the immediate neighborhood area, is located on the North side of Chicago. The building, typical of older schools in the city, is in fairly good repair. The neighborhood is made up of apartment buildings and three flat type buildings in one of Chicago's older areas. Businesses, snack shops and automobile service stations are interspersed between the apartment buildings. The local area is racially mixed and includes many low income families. The larger area also includes students from white, middle class families who live in the Forest Glen and Edgebrook areas, which are composed of primarily single family homes.

Student guards are seated in the hallways at the school to control any discipline problems and check on outsiders who do not belong on the premises. All visitors are sent to the office for written permit slips, and, along with students, must present these passes if they are in the hallways between class periods.

Schurz shares the same district as Lane Technical, also included in this study, however, based upon data from the Illinois State Board, there are large differences within these two subdistricts.[284] Lane Tech-

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[284] 1985-1986 Illinois School Report Card Data, The School Report Card for Illinois Schools.

nical selects students from the larger Chicago area, while Schurz draws students from the immediate neighborhood. In the 1986 data, there were 3,459 students in Schurz, of which 28.5% were low income. Student mobility was 34.5%, and non-promotions were 34.5%. The graduation rate was 53.5%, which is lower than the state average of 76.3%. The attendance rate was 80%. Twenty nine percent of the students took the ACT tests with average scores of 12.2, while the state level is 19.1. English scores were 13, State, 19.1 and math scores were 9.9, State, 18.9. Schurz did not report scores for SAT tests in the Illinois Report Card Data, implying that few of their students were involved in the testing program.

Resource data were given only by district, which reflects both Lane and Schurz subdistricts. Annual instruction expenditures were $25.2, for the district, and $20.3, for the State. The administration, teacher/student ratio was $19.8, for the district, compared to the State, $18.3. The average teacher's salary in the district was listed at $31,050, compared to the State, $27,014. Per pupil expenditure for the district was $4,182 and for the State, $3,526. Per capita tuition for the district was $ 3,318, and for the State, $3,071. Percentage of expenditures which were used for operating expenses in the district was 88.2%, and for the state, 77.%.

The students who were selected to be in the sample were from the remedial reading classes of Teacher A,[285] who expressed interest in the welfare of her students and was eager to help them to be able to read up to their level of ability, although this required much patience. Stu-

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[285] To protect the identity of the participants, names have not been used, however, they are available upon request.

dents were reading the classics to adhere to the curriculum guide of selected authors. These students had great difficulty reading at the suggested level and Teacher A read with and to them as a group in order that they could cover the books suggested in the class objectives. The slower groups were expected to cover certain classics throughout the school term. Basic reading skills were taught, and students' weak points were addressed throughout the program. Teacher A gave evidence of being a caring, sensitive teacher who was supportive and interested in each student's progress.

Whether these students will finish high school, or students like them, whether they will go on to a vocational school or college, is often highly dependent upon people like Teacher A and their skills at helping the student learn the basic skill of reading. Skilled teachers are more important to these students than those who do not have the same problems with reading. The examiner felt these students were fortunate to have a remedial program incorporated into reading classes with a teacher who had their welfare as her highest priority. She had expectations of having her students meet the demands of the goals in covering certain levels of specific areas in the school year. Her theory was that everyone could improve, but some move at a slower pace than others in reading classes, and no one was a "hopeless case" in Teacher A's classes. Teacher A's concept of teaching was that of meeting the student at his or her level of ability and moving on from there. Most of the students in the tutored level were males and studies have shown that more male students have reading problems than females.

While some of these students may not go beyond the level of high school education, these teachers expect a level of achievement for these students at grade level, i.e., the "floor" or minimum requirement, which is the minimum level of acceptable student learning by the teacher. These may well be students who have had many past failures and few successes in the classrooms in elementary school and their self concept may be low as a result. These could be called the more fragile students, those who may border on being dropouts, and who are more in need of caring and supportive teachers. Studies have suggested that the better qualified teacher in these conditions and with this kind of student is crucial. The need for trained teachers with experience, compassion and caring qualities is most important for these students.

Much oppositions has been voiced concerning the segregation of students by those who feel that placing students into homogeneous academic groups deters the development of the lower academically inclined student, and that these students would benefit more from being placed in heterogeneous groupings with students of higher academic abilities. Those who disagree argue that students placed in homogeneous classrooms have more opportunity to learn the basic skills which they would not have if they were placed in heterogeneous classrooms. Here they may receive specific attention and development of skills in their weak areas, and teachers have more time to work directly with students who would be apt to fall behind in regular reading class levels. The embarrassment at failing in reading at the level of the higher achieving students has been shown to have negative effects upon their self concept of their ability to achieve. This poor performance may lead to becoming lost in

the class and playing a low key role of nonparticipation, becoming a discipline problem or even dropping out.

Population

The sample from Schurz included twenty one students, nineteen males and two females. Reading scores represented tutored levels, but no academic scores were recorded, and only self evaluation scores from the question-naires were obtained. Teacher A administered the questionnaires during class periods. Of twenty one students, all self evaluation scores in the SIV test were complete, with seventeen complete on the self esteem questionnaire.

Because of the few females in the sample in both New Trier and Schurz, a separate analysis was made of males only. This group was also compared to the low level students in Cathedral; all students and males only.

Self Evaluation Mean Scores

As shown in the preceding tables, total mean scores at Schurz, in or-der of value from highest to lowest were: leadership, recognition, sup-port, benevolence, conformity, and independence. Male scores were high-est in recognition and leadership, followed by support, conformity, benevolence and independence.

TABLE 43

Schurz Correlations

Mean Scores - Total School   n = 21

	Means	Standard Deviations
Support	45.29	24.74
Conformity	44.52	28.23
Recognition	53.95	30.55
Independence	43.62	30.51
Benevolence	45.14	28.42
Leadership	54.33	22.90
Self Esteem	10.82	11.36

Male   n = 19

	Means	Standard Deviations
Support	47.11	23.71
Conformity	44.89	26.58
Recognition	56.47	30.13
Independence	40.32	30.19
Benevolence	44.32	29.77
Leadership	52.47	23.33
Self Esteem	12.19	10.19

Findings

Significant correlations between self evaluation scores on 21 students at Schurz were found between: self esteem and leadership, $r = -.472$ ($p = .056$), support and leadership, $r = -.592$ ($p = .005$), conformity and independence, $r = -.505$ ($p = .019$), and recognition and benevolence, $r = -.383$ ($p = .087$).

Significant correlations for males only at Schurz were found between: support and leadership, $r = -.605$ ($p = .006$), conformity and independence, $r = -.608$ ($p = .006$), recognition and self esteem, $r = -.438$ ($p = .090$), benevolence and recognition, $r = -.403$ ($p = .087$), benevolence and self esteem, $r = .441$ ($p = .087$) and leadership and self esteem, $r = -.445$ ($p = .084$).

There were no significant differences between sexes at Schurz, however, since there were only two females and nineteen males, this would not have been an important consideration.

No reading scores were obtained from Schurz, and the self evaluation scores were compared to those of tutored levels in New Trier and to the lowest group of students at Cathedral, those scoring under 75, i.e., the D and E level students.

Comparing all New Trier tutored group, 12 students, with all of Schurz, 21 students, found significance only in the area of independence, $t = 2.04$ ($p = .05$). Of the 19 males in Schurz and 8 in New Trier, the study found New Trier males to be higher on support, independence and leadership scores and Schurz males higher on conformity, recognition, benevolence and self esteem, however, the only variable significantly different was independence, $t = 1.96$ ($p = .061$).

There were 87 students in the lowest group at Cathedral, 43 males and 43 females, with complete data on 42 females and 40 males. Comparing this group of 86 students to all 21 in tutored level in Schurz found significant differences in self esteem only, t = 1.99 (p = .05), with Cathedral students higher. Comparing males only from this lowest group in Cathedral, 40 students, with tutored males in Schurz, 19 students, found significant differences in recognition, t = 1.92 (p = .06), and leadership, t = 1.91 (p = .061), where Schurz students scored higher in both areas.

Summary

As is commonly found, there were more males than females in the remedial reading group at Schurz High School. Also, studies have shown that lower socioeconomic areas reflect values of students which are higher in conformity and lower in independence, as do students who perform a lower levels of achievement. Males have been found to score higher on benevolence and leadership than females.[286] This would agree with the findings in this study. More about this will be discussed in Chapter 5.

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[286] Gordon, _Survey of Interpersonal Values Manual_, p. 9.

ANALYSIS OF THE DATA -

Introduction

This chapter contains an analysis and presentation of the data rele-
vant to the hypotheses. The major purpose of this study was to deter-
mine whether a relationship existed between self concept, as measured by
the SIV Scale and the self esteem scales, and reading ability, as meas-
ured by standardized reading tests and GPA, in a selected group of sec-
ondary students.

The second purpose was to determine whether classroom grouping had a
significant effect on self concept of students. The third purpose was
to determine whether gender had a significant effect upon self concept.
The fourth purpose was to determine whether school effects made a sig-
nificant difference on self concept of students. School effects includ-
ed contextual, compositional and climate effects.

Students were classified by gender and classroom group or level of
academic achievement. Schools were classified by level of academic per-
formance, SES, and racial composition.

The selected group of students consisted of 360 individuals enrolled
in a large metropolitan district in four different secondary schools.
Tests were administered to students in each school using the standard-
ized SIV scale and the unstandardized self esteem scale; schools provid-

ed academic achievement scores, and the data presented are descriptive of the results obtained from the administration of these instruments and students' academic achievement scores. The scope of the study included immediate data on students from questionnaires, in addition to information provided by the student and teachers relative to students' grade level and academic scores.

To test the hypothesis that significant contextual differences existed between the schools, a composite representation of schools was used. Schools were defined by SES levels and performance levels, and the composition of students within schools was determined by the racial mixture.

Schools were identified relative to the SES of the neighborhood in which the schools were located, which, although not the only criterion used to define school context, has been used in numerous studies to indicate the social class composition of the school.[287] The school composition construct was used to include measures of income and socio-economic background, with racial composition forming a part of composition, and academic performance level, and resources of the school completing the composite representations.

Aggregate measures were used to determine the composition of the school. The racial composition of Lane, Cathedral and Schurz was mixed, while New Trier was predominately white. New Trier represented a high SES/high performance school; Lane represented a middle SES/high performance school; Cathedral represented a low-middle SES/middle performance

[287] Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," pp. 836-845; Herriott, "Some Determinants of Educational Aspirations," pp. 157-177; Brookover, et. al., Schools Can Make a Difference, p.229.

school; and Schurz represented a low-middle SES/low performance school.

Students' mean self evaluation scores were examined by gender and group within schools and between schools. Interactions of gender and group were also examined. A descriptive analysis appears in the case study of each school, as found in Chapter 4.

The case study method was chosen to examine each school in depth, utilizing available data within the individual school. In New Trier, the cognitive variables included reading and vocabulary, where classes were separated into tutored and regular classroom groups, determined by the reading scores. The regular group included reading levels two and three and the tutored group was made up from level one, with separate norms for each level.

Lane was divided into classes based upon math achievement, with academic scores normed on one level. Students in Lane in the sample were from honors and regular classes.

Cathedral had no classroom grouping divisions and, for purposes of analysis, the researcher separated students into levels, based upon the reading grade point average; the high group consisted of students with A and B grades, the middle group, of C grades and the low group, of D and E grades, as recorded on their report cards. Schurz selection of students was from the tutored level of reading only.

Schurz students were selected to represent a remedial group of readers in an urban, low SES, low performance school.

Reading levels and groups were examined within schools and between schools; math scores were used in Cathedral and Lane Technical only. Schools were compared, as were equivalent groups based upon academic

achievement from each school; high level students at New Trier, honors group at Lane Technical and the high level at Cathedral; tutored groups from New Trier and Schurz and the lowest group from Cathedral; all students above the tutored level, i.e., the regular group in New Trier, students in the middle and high levels in Cathedral and all of Lane Technical; the middle level at New Trier, the regular group at Lane Technical and the middle level at Cathedral; and the regular groups at New Trier and Lane Technical with all above the low level at Cathedral. Gender was examined in all four schools, however, because the tutored level in New Trier included four females, and Schurz included two females, only males scores were examined between schools for tutored groups.

Summaries of the four case studies, as found in Chapter 4, will be presented in this chapter. Correlations between cognitive and self evaluation variables, and gender and group differences of student's self concept variables within and between schools will also be presented, followed by an analysis of the findings, and a summary.

Population

As described in Chapter 3, the sample included all students in the reading classes from sophomore through senior grades at New Trier, students in the English classes at Lane Technical and all students in sophomore and junior levels at Cathedral High School. Schurz students were from freshman remedial reading classes.

The total sample population consisted of 360 students; 69 from New Trier; 35 males and 34 females, 66 from Lane Technical; 35 males and 31 females, 204 from Cathedral; 75 males and 129 females, and 21 from Schurz; 19 males and 2 females, for a total of 163 males (45.3%) and 197 females (54.7%).

For each school, the sample included: New Trier, 1 freshman, 24 sophomores, 35 juniors and 9 seniors; Lane, 27 freshmen, 21 sophomores and 18 juniors; Cathedral, 104 sophomores and 100 juniors; and Schurz, all 21 were freshmen and tutored. The grade levels consisted of 49 freshman (13.6%), 149 sophomores (41.6%), 153 juniors (42.5%) and 9 seniors (2.5%). The ages of the students were: 14 years, 17 (5%), 15 years, 115 (33.8%), 16 years, 145 students (42.6%), 17 years, 39 (11.5%) and and 19 years, 5 (1.5%). The mean age was 15.67.

New Trier consisted of 57 students from regular reading classes and 12 from tutored classes; Lane included 21 students from honors and 45 from regular classes; Cathedral was not designated by groups so all 204 were considered to be regular class grouping, and in Schurz all 21 were from tutored classes. In the total school sample, regular class level totaled 305 (84.7%), tutored level totaled 34 (9.4%) and honors level totaled 21 (5.8%). Multiple regression analyses were run on 340 students, with complete data, 186 females (54.7%) and 154 males (45.3%). From New Trier, 64 of the 69 students had complete data on the self evaluation and reading scores (18.8%), Lane Technical had 56 total scores (19.1%), Cathedral had 194 total scores (57.1%), and Schurz had 21 scores on SIV and 17 on SE test, (5%). Students with complete data included 44 freshman, (12.9%), 145 sophomores,(42.6%), 142 juniors (41.8%), and 9 seniors (2.6%).

Procedure for Treatment of Data

There were two major thrusts in this study. First, the interrelations among self evaluation scores and academic performance were systematically examined through Pearson product-moment correlations and regression analysis. Second, the combined contribution of gender, group and school context on students' self concept was assessed by analysis of variance, t-tests and multiple regression analysis procedures.

To assess the relationship between students' self evaluations of self esteem and academic performance, several stepwise multiple regression analyses were performed. Predictor variables included in the analyses were: six subconstructs of self concept, as measured by the SIV scale, and one construct, as measured by the self esteem scale; and cognitive variables, as measured by school tests and records. The study also looked at interactions of academic achievement and self concept by gender within schools, and the interaction of schools, academic achievement and gender on self concept between schools. Multiple regression analyses were run using Gordon's SIV subscales[2**] of personality characteristics and the self esteem score as the dependent variables and school, gender age, sex, group, grade and level, and the interactions of these variables as independent variables. Models also used cognitive scores as dependent variables and entered self concept scores and the remaining variables as independent variables. Partial correlations were computed to analyze the relationship between the variables.

[2**] Gordon, _Survey of Interpersonal Values_, p. 9.

To examine correlations between student values and academic scores, hypotheses were tested through the computation of Pearson product-moment correlations. Correlations were tested for statistical significance at the p = .05 level, and all correlations were examined for slight correlation up to p = .10. Regressions were applied with 2 way interactions, which included school by gender, school by group and school by reading; and with 3 way interactions which included school by gender by reading and school by gender by group.

To determine self concept mean differences between schools, Manovas were performed, and through application of the Duncan Multiple Range Test, each self evaluation score was examined at the .05 level for significance. Subsequently the coefficients were tested through application of the t-test and multiple regression analyses. Results were tested for statistical significance at the .05 alpha level and all were examined for approaching significance up to the .10 level. SPSS-X statistical algorithms with an IBM 3090 mainframe computer were utilized in analysis of the data.[289] Standardized scores in reading and math were used to compare subpopulations in schools. Dummy variables provided information on variables, as described in Chapter 3.

Missing data were set to zero and not used, and analysis was performed only on those students for whom data on all tests and school scores were complete.

Case studies of schools will be summarized in the next section, followed by an analysis of self evaluation mean scores compared by schools, groups, gender and subgroups.

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[289] Nie, Hull, Jenking, Steinbrenner and Bent, Statistical Package for the Social Sciences.

Case Studies

New Trier High School

As previously described in Chapter 4, students at New Trier had a significant positive relationship between reading and support, and a significant negative relationship between reading and conformity and reading and self esteem. The school correlations were due to the female scores. Vocabulary and support were positively correlated and vocabulary and leadership were negatively correlated at significant levels.

Significant correlations for females in the total school were found between reading and support and reading and recognition, which were positively correlated and between reading and self esteem and reading and conformity, which were negatively correlated. Vocabulary and support were positively correlated. For males in the total school no significant relationships were found between reading and any of the self evaluations, but a significant negative correlation was found between vocabulary and leadership.

A significant negative correlation was found in the regular reading group between reading and conformity, and a slight positive correlation between reading and support (p = .065). Significant positive correlations were found between vocabulary and support, and a positive correlation approaching significance between vocabulary and recognition (p = .057). A positive correlation for females in the regular group was found between reading and recognition, while reading and self esteem and

reading and conformity were significantly negatively correlated. Reading and benevolence correlated negatively at levels approaching significance ($p = .051$). Vocabulary and support were positively correlated and vocabulary and benevolence were negatively correlated at a significant level. Vocabulary and recognition were slightly positively correlated ($p = .064$). No significant correlations were found for males in this group between any of the cognitive variables and self evaluation scores.

The tutored group had a slight negative correlation between reading and self esteem ($p = .066$) and a significant correlation between vocabulary and leadership. Male scores reflected the same correlations as female scores, but with only four females in the tutored group, data were considered to be unimportant.

Examining the two levels which made up the regular group, in level 2, the middle level, reading was not significantly related to any self evaluation scores but a positive significant correlation was found between vocabulary and support and a negative significant relation between vocabulary and leadership; and in level 3, the high level, a significant positive correlation was found between reading and recognition and a significant negative correlation between reading and self esteem. No significant correlations were found between vocabulary and any of the self evaluations in the high level.

The middle level males found reading was not significantly related to self evaluation scores, but those highest in vocabulary valued support significantly and those lowest in vocabulary valued leadership significantly. Middle level females had no significant correlations between self evaluation scores and cognitive scores, except that those who scored lowest in vocabulary valued leadership significantly.

self evaluation scores and cognitive scores, except that those who scored lowest in vocabulary valued leadership significantly.

High level males had no significant correlations between any cognitive scores and self evaluation scores, however, females in the high level had a significant positive correlation between reading and recognition and a significant negative correlation between reading and self esteem. At nonsignificant levels, reading and benevolence, $r = .404$ ($p = .078$) and reading and conformity $r = -.414$ ($p = .062$) were negatively correlated. High level females also found vocabulary and support significantly and positively correlated and vocabulary and recognition nonsignificantly and positively correlated, $r = .418$ ($p = .067$).

Age and Grade

In the total school, age correlated significantly and positively with independence and leadership and negatively with benevolence and self esteem. Females were older and in higher grades than males. A positive significant correlation was found between age and independence. The total female population found age and support were significantly and negatively correlated. Age was not a significant factor for males in the total school.

In the regular group, age correlated significantly with independence, benevolence, leadership and self esteem. Females had significantly higher independence and lower self esteem scores and were older and in higher grades than males. Older students had higher independence and leadership scores and lower self esteem and benevolence scores than younger students. Males were older than females in this group. Males

had a significant positive correlation between age and leadership, and a significant negative correlation between age and benevolence.

The tutored level had a significant positive correlation between age and benevolence and grade and benevolence. The middle level of the regular group had no significant correlations between age and any self evaluation scores. Females were older and in higher grades than males. In the high level, significant negative correlations were found between grade and self esteem, age and self esteem and age and benevolence and age and independence, and a significant positive correlation between age and recognition. More females were in the high level and more males in the low level. Older students had high scores on independence and leadership and lower scores on benevolence, self esteem and conformity.

Groups

No significant differences were found between groups, although the tutored group was higher on conformity (p = .077) and the regular group was higher on self esteem (p = .096). Females in the regular group were significantly higher on support (with only four females in the tutored group) and no significant differences were found between males in the two groups.

Gender

In the total school females were in higher grades and were older than males, with more females in higher level of reading. There were significant differences between ages and grades for males and females. A difference approaching significance was found on independence, with females higher (p = .061) than males. Independence and age were also positively related.

In the regular group, females were significantly higher on independence, were in higher grades and levels, and were older than males. In the middle level, males were significantly higher on conformity than females. In level 3, no significant differences were found between sexes.

Levels

Comparing levels, level 1 students had significantly lower self esteem scores and were significantly older than level 2 students. Level 1 had higher conformity scores and lower benevolence scores than level 2 at nonsignificant levels. Level 2 males had significantly higher scores on self esteem than males in level 1 and females in level 2 had significantly higher support scores than females in level 1.

Level 2 and level 3 had no significant differences on any self concept scores, however, there were significantly more females in level 3, and level 3 students were significantly older than level 2. Females in level 3 were significantly higher on conformity than females in level 2, and females in level 2 were higher on self esteem, although not significantly. Males in level 2 and level 3 had no differences except on age, with level 3 significantly older.

Comparing level 1 and level 3 found level 1 students were higher on conformity scores, although not significantly, with significantly more males in level 1 than in level 3, and significantly more females in level 3 than in level 1. Males in the low level compared to males in the high level found males in the high level higher on self esteem, although not significantly. With only four females in level 1, comparing them to level 3 females was not considered important.

Lane Technical High School

In the population examined at Lane, no significant correlations were found between reading and self evaluation scores. No significance was found for males or females in the total sample between reading and any self evaluation scores.

All females found age and conformity negatively correlated at levels approaching significance ($p = .055$). No significant correlations were found for the regular group or the honors group or males and females in these groups. In the regular group, reading and recognition were negatively correlated ($p = .069$).

Math was not significantly related to any of the self evaluation variables in the total school, nor in the regular group. In the honors group, a significant positive correlation was found between math and conformity, whereas a nonsignificant positive correlation ($p = .108$) was found between reading and conformity. Also in the honors group, math and benevolence were positively correlated ($p = .085$).

No significant differences were found between regular and honors males in reading, but math was higher for honors males. Males in the honors group were significantly higher on benevolence than the regular group males, and males in the regular group were significantly older and nonsignificantly higher on independence higher than males in the honors group (.098). Differences between females in the honors and regular groups found females in the honors group significantly higher on independece and math, but not significantly higher on reading, than the regular group.

Differences between sexes in the total school found females were significantly higher on independence than males and, although not at significant levels, males were higher on conformity (p = .096).

No significant differences were found between sexes in the regular group on any of the self evaluation measures, however, females were higher on leadership (p = .059) than males.

In the honors group, males were significantly higher on benevolence and nonsignificantly higher on conformity (p = .053) than females, and females were significantly higher than males on independence. Males in this group were significantly higher than females in math and were also significantly older than females.

Cathedral High School

Students in Cathedral had significant negative correlations between reading and conformity and math and conformity. Reading and self esteem

(p = .099) correlated positively, but nonsignificantly. For females, a significant correlation was found between reading and benevolence, and negative between reading and conformity. Reading and self esteem (p = .08) and reading and recognition correlated positively (p = .081) and nonsignificantly. Age and conformity also correlated positively (p = .06) for female students. Age and conformity and age and recognition were negatively correlated at significant levels. Reading and math correlated significantly at the .0001 level. Males had no significant correlations between reading and self concept although they had a significant negative correlation between math and conformity. Reading and conformity correlated nonsignificantly and negatively (p = .112).

Students were divided into three levels, based upon reading scores, for purposes of analysis. In the low level, D and E reading scores, math and conformity were significantly and negatively correlated and math and recognition were significantly and positively correlated.

Males in the low level had significant negative correlations between reading and independence and reading and leadership, and a nonsignificant negative correlation between math and conformity (p = .097). Females in this level found reading and conformity and age and leadership negatively and significantly correlated.

In the middle level, C reading scores, reading and benevolence were positively and significantly correlated, and reading and independence nonsignificantly and negatively correlated (p = .088). Math was not significantly correlated with any of the self evaluation scores.

Males in the middle level had no significant correlations between reading or math and any of the self evaluations, however, age and recog-

nition were significantly correlated. Females found reading and recognition significantly and negatively correlated and reading and benevolence significantly and positively correlated. A nonsignificant negative correlation between reading and independence was found (p = .067). Age and conformity and grade and conformity were significantly and positively correlated for females in the middle level.

In the high level, reading and support were significantly and positively correlated and age and support were negatively and nonsignificantly correlated (p = .102).

Males in the high level had no significant correlations between reading or math and any of the self evaluation scores, however, females had significant positive correlations between reading and support, and significant negative correlations between age and support and age and recognition. Grade and recognition were negatively and significantly correlated. Age and benevolence were nonsignificantly and positively correlated (p = .088).

The low level was significantly higher on conformity and older than the high level and the high level was significantly higher on independence and also included more females than males. Males in the high level were significantly higher on self esteem than males in the low level while males in the low level were significantly higher on conformity and significantly older than males in the high level. Females in the high level were significantly higher on benevolence than females in the low level and females in the low level were significantly older than those in the high level.

Comparing the low and the middle levels, the middle level students were nonsignificantly higher on self esteem (p = .066) and leadership (p = .069) and were in higher grades, with significantly more females in the middle level than in the low level. Middle level females were nonsignificantly higher on benevolence than the low level (p = .097) and middle level males were nonsignificantly higher on leadership than males in the low level (p = .097).

Comparing the middle and the high levels, no significant difference was found between the middle and high levels, the high level was nonsignificantly higher on independence (p = .079). Students in the middle level were significantly older and in higher grades than those in the high level. There were significantly more females in the high level. Males in the middle level were significantly higher on self esteem than males in the high level and the high level males were significantly older than the middle level males. Females in the middle level were significantly older and in higher grades than females in the high level, but no significant differences on self evaluations were found between females in the two groups.

In the total school, males were significantly higher than females on benevolence and females were significantly higher than males on independence, self esteem and leadership. Males were older than females (p = .087), although females were in higher grades than males (p = .098). Females were significantly higher in reading and math than males.

In the low level, males were significantly higher on benevolence than females, and females were significantly higher on leadership and inde-

pendence than males. Females were nonsignificantly higher in reading than males (p = .107).

In the middle level, males were slightly higher on benevolence than females (p = .068). The high level females were significantly higher than males on self esteem and males were slightly higher on math than females (p = .056).

Schurz High School

Students at Schurz were all from the tutored group, which included 19 males and 2 females. The highest self evaluation scores in the entire school were found on leadership and recognition and lowest on independence. Male scores were reflective of the total tutored level scores.

An examination of SIV and self esteem mean scores compared by school, gender, group and the interactions of these scores will follow (See Appendix B, Tables 48-60).

Findings

Manovas were performed to determine significant differences between the schools on self evaluation variables at at the 95% confidence level and slight differences at the 90% confidence level. F tests for homogeneity and subsequent t-tests (pooled or separate) were used to determine significance.

Schools

Comparing New Trier, 64 students, and Cathedral, 196 students, New Trier was significantly higher on support, t = 3.60 (p = .000) and non-significantly higher on recognition, t = 1.80 (p = .073) and Cathedral was significantly higher on conformity t = -3.12 (p = .002). Students in New Trier were in higher grades t = 2.90 (p = .005) and there were more males in New Trier than in Cathedral, t = 1.84 (p = .067).

Comparing New Trier and Lane, 65 students, New Trier was significantly higher on independence, t = 2.70 (p = .008), in higher grades, t = 6.81 (p = .000) and older, t = 3.27 (p = .001) than Lane students.

Comparing Lane and Cathedral, Lane was significantly higher than Cathedral on support, t = 3.79 (p = .000) and recognition, t = 2.21 (p = .028), and Cathedral was higher on conformity, t = -2.67 (p = .008) and independence, t = -2.53 (p = .012). Cathedral students were older, t = -3.24 (p = .002) and in higher grades, t = -5.86 (p = .000) than Lane students. There were also more males in Lane, t = 2.35 (p = .019) than in Cathedral.

Comparing Cathedral and Schurz, 21 students, significant mean differences were found on self esteem, t = 2.72 (p = .007) and independence, t = 1.99 (p = .048), with Cathedral higher, and recognition, t = -2.00 (p = .047) with Schurz higher.

Comparing New Trier and Schurz, New Trier was higher on support, t = 2.23 (p = .028), self esteem, t = 1.97 (p = .052), and independence, t = 2.21 (p = .049) and Schurz was higher on conformity, t = -2.00 (p = .049). Comparing Lane and Schurz, Lane was significantly higher

on support, t = 2.27 (p = .026) and nonsignificantly higher on self es-
teem, t = 1.79 (p = .078), and Schurz was nonsignificantly higher on
conformity, t = -.1.76 (p = .082).

Gender

Comparing males at New Trier, 31 students, and Lane, 35 students, New
Trier was nonsignificantly higher on independence, t = 1.82 (p = .073),
and in significantly higher grade levels, t = 3.34 (p = .001) than Lane.

Comparing males at New Trier and Cathedral, 72 students, New Trier
was higher on support, t = 2.37 (p = .020), and recognition, t = 1.73
(p = .09), and Cathedral was higher on conformity t = 1.91 (p = .059),
and benevolence, t = 2.19 (p = .031).

Comparing males at Lane and Cathedral, Lane was higher on support,
t = 2.75 (p = .007), and recognition, t = 1.95 (p = .054), and Cathedral
was higher on independence, t = 1.73 (p = .086), and older, t = 2.70
(p = .008).

Comparing females at New Trier, 33 students, and Lane, 30 students,
New Trier was higher on independence 1.88 (p = .065), and Lane was high-
er on leadership t = 2.09 (p = .041). New Trier females were also older
than Lane females, t = 4.96 (p = .000).

Comparing females at New Trier and Cathedral, 124 students, New Trier
females were higher on support, t = 2.58 (p = .011), and Cathedral fe-
males were higher on conformity, t = 2.56 (p = .011), and leadership,
t = 1.68 (p = .095). New Trier females were also older, t = 2.59
(p = .011), and were in higher grades, t = 3.89 (p = .000), than Cathe-
dral females.

Comparing females at Lane and Cathedral, Lane students were higher on support t = 2.34 (p = .021), and Cathedral students were higher on conformity, t = 2.84 (p = .005), and self esteem, t = 1.78 (p = .083). Cathedral females were in higher grades, t = 4.81 (p = .000), than Lane females.

Groups

Comparing tutored groups at Schurz, 21 students, and New Trier, 12 students, New Trier was higher on independence , t = 2.04 (p = .05). Comparing tutored groups at New Trier and Cathedral, 82 students, New Trier was also significantly higher than Cathedral on independence, t = 2.04 (p = .05).Between tutored groups at Cathedral and Schurz, Cathedral was significantly higher than Schurz on self esteem, t = 1.99 (p = .05).

Of the males in the tutored groups at Cathedral, 40 students, and Schurz, 19 students, Schurz was higher on recognition, t = -1.92 (p = .06), and leadership, t = -1.91 (p = .06), and Cathedral was higher on benevolence, t = 1.70 (p = .094). Between males in the tutored groups at New Trier, 8 students, and Schurz, New Trier was higher on independence, t = 1.96 (p = .061). Between males in the tutored groups at New Trier and Cathedral, New Trier was higher on independence, t = 1.73 (p = .09), and leadership, t = 1.89 (p = .065), and Cathedral was higher on benevolence, t = 2.57 (p = .013).

Regular Groups

Excluding the tutored group and lowest level at Cathedral, 111 students, and New Trier, 52 students, significant differences existed on support, $t = 3.67$ ($p = .000$), conformity, $t = -2.46$ ($p = .015$), recognition, $t = 1.97$ ($p = .051$), and grade level, $t = 2.26$ ($p = .026$). New Trier was higher on support and recognition and Cathedral was higher on conformity. New Trier students were in higher grades than Cathedral, but were not significantly older and there were more males at New Trier than at Cathedral, $t = 2.70$ ($p = .008$). Comparing males from these sectors, New Trier, 26 students, and Cathedral, 29 students, New Trier was higher on recognition, $t = 2.13$ ($p = .038$), and support, $t = 1.75$ ($p = .087$). Comparing the females, New Trier, 31 students, and Cathedral, 82 students, Cathedral females were higher on conformity, $t = -.2.45$ ($p = .016$), and New Trier females were higher on support, $t = 3.14$ ($p = .002$). New Trier females were older, $t = 2.28$ ($p = .025$), and in higher grades, $t = 2.58$ ($p = .001$), than Cathedral females.

Comparing New Trier, all individuals above tutored level, 52 students, to all of Lane, 65 students, a significant difference was found on independence, $t = 2.26$ ($p = .026$), with New Trier higher. New Trier students were also in higher grades, $t = 6.61$ ($p = .000$), and older, $t = 3.04$ ($p = .003$), than Lane students. There were no significant differences between males in this group on self concept scores, at New Trier, 23 students, and Lane, 35 students, but New Trier males were in higher grade levels, $t = 3.04$ ($p = .004$), than Lane males. Comparing females, New Trier, 29 students, and Lane, 30 students, New Trier was

higher on independence, t = 1.80 (p = .078), and Lane was higher on leadership, t = -2.04 (p = .046). New Trier females were also in higher grades, t = 6.37 (p = .000), and were older, t = 4.64 (p = .000), than females at Lane.

Comparing all individuals above the tutored level at Cathedral, 111 students, and all of Lane, 65 students, Lane students were significantly higher than Cathedral students on support, t = 3.47 (p = .001), and recognition, t = 2.42 (p = .017). Cathedral was significantly higher than Lane on independence, t = -2.88 (p = .004), and older, t = -5.87 (p = .000), and in higher grades, t = -2.85 (p = .006). In these groups, males at Lane, 35 students, were significantly higher than males at Cathedral, 29 students, on support, t = 2.07 (p = .041), and recognition, t = 2.16 (p = .035), and Cathedral was nonsignificantly higher than Lane on independence, t = -1.85 (p = .068). Cathedral males were in higher grades, t = -3.60 (p = .001) and older, t = -1.77 (p = .083). There were also significantly more bilingual males at Cathedral, t = 2.67 (p = .01), than at Lane. Females at Lane, 30 students, were significantly higher on support, t = 2.28 (p = .025), than females at Cathedral, 82 students, and Cathedral females were significantly higher on self esteem, t = -2.04 (p = .048). Cathedral females were also significantly older, t = -3.67 (p = .001), and in higher grades, t = -4.82 (p = .000).

Comparing students in the regular group from Lane, 44 students, and all of Cathedral students above the tutored level, 111 students, significant differences were found on support, t = 3.06 (p = .003), recognition, t = 2.91 (p = .004), independence, t = -3.13 (p = .002), age,

t = -3.47 (p = .001), and grade, t = -6.03 (p = .000). Lane was higher on support and recognition and Cathedral was higher on independence. Cathedral students were older and in higher grades than Lane. There were also more males at Lane than Cathedral, t = 4.32 (p = .000).

Between males in these groups, Lane, 27 students, and Cathedral, 29 students, Lane was higher on on support, t = 2.38 (p = .021) and recognition, t = 2.41 (p = .019) than Cathedral males. Cathedral males were nonsignificantly higher on benevolence, t = -1.83 (p = .072). Cathedral males were older, although not significantly, t = -1.18 (p = .085) and were in higher grades, t = -3.06 (p = .004).

Comparing females in these groups, Lane, 18 students, and Cathedral, 84 students, significant differences were found on independence, t = -2.41 (p = .018) grade level, t = -2.58 (P = .002) and age, t = -2.58 (p = .018), and nonsignificant differences on recognition, t = 1.96 (p = .052) and leadership, t = 1.67 (p = .098). Cathedral females were significantly higher on independence, and Lane females were nonsignificantly higher on recognition and leadership. Cathedral females were also significantly older and in higher grades than Lane females.

Comparing all students in the regular group at Lane, 44 students, to students in the middle group at Cathedral, 71 students, Lane was higher on support, t = -3.12 (p = .002) and recognition, t = -2.93 (p = .004), and Cathedral was higher on conformity, t = 1.64 (p = .104) and independence, t = 2.30 (p = .032). Lane had more males than Cathedral, t = -2.97 (p = .004) and Cathedral students were in higher grade levels than Lane, t = 5.15 (p = .000).

Comparing males in the middle group at Lane, 27 students, and Cathedral, 24 students, Lane was higher on support, t = -2.65 (p = .011) and recognition, t = -2.51 (p = .015) and Cathedral was higher on benevolence, t = 1.82 (p = .075). Cathedral males were in higher grade levels, t = 3.35 (p = .002) and were older, t = 2.05 (p = .049) than Lane males in these groups.

Comparing females in the middle group at Lane, 17 students, to the middle level at Cathedral, 47 students, Lane was higher on recognition, t = -1.88 (p = .065), and Cathedral was higher on independence, t = 1.81 (p = .076), at nonsignificant levels.

High Groups

Comparing the high groups, level 3, at New Trier, 29 students, and the honors group, at Lane, 21 students, no significant differences were found except for age t = 4.36 (p = .000) and grade level, t = 11.30 (p = .000) with New Trier older and in higher grades.

Males of the same groups from New Trier, 11 students, and Lane, 8 students, found nonsignificant differences on benevolence, t = -1.41 (p = .081) with Lane higher and grade, t = 5.68 (p = .000) with New Trier higher.

No significant differences existed between females in these groups from New Trier, 20 students, and Lane, 14, except for grade level, t = 9.99 (p = .000) and age, t = 5.62 (p = .000) with New Trier higher.

Comparing the high group at New Trier, 29 students, to the high group at Cathedral, 40 students, New Trier students were higher on support, t = 1.85 (p = .068), older, t = 4.41 (p = .000), and in higher grades

levels, t = 6.72 (p = .000) than Cathedral. There were also more males
at New Trier than Cathedral, t = 2.24 (p = .028).

Males in these groups from New Trier, 11 students, and Cathedral, 5
students, found significant differences on self esteem, t = 2.26
(p = .04), grade level, t = 3.21 (p = .006) and age, t = 2.59
(p = .022), with New Trier males higher on self esteem, older and in
higher grades than Cathedral males.

Comparing females in these groups from New Trier, 20 students, and
Cathedral, 35 students, New Trier females were significantly older,
t = 3.58 (p = .001), and in higher grade levels, t = 5.64 (p = .000).
New Trier females were nonsignificantly higher on support, t = 1.72
(p = .091), and Cathedral females were higher on self esteem, t = -1.92
(p = .063).

Comparing Lane honors group, 21 students, and Cathedral high level,
40 students, Lane was higher on support, t = 1.65 (p = .104) and Cathe-
dral was higher and independence, t = -1.63 (p = .108), although not
significantly. Lane had more females, t = 1.50 (p = .040), and Cathe-
dral students were in higher grade levels, t = -3.25 (p = .002) than
Lane.

Males in these groups at Lane, 8 students, and Cathedral, 5 stu-
dents, had significant differences on self esteem, t = 2.85 (p = .016),
with Lane higher. Females in these groups from Lane, 13 students, and
Cathedral, 35 students, had significant differences on support, t = 2.25
(p = .029), with Lane higher, and nonsignificant differences on self es-
teem, t = -1.99 (p = .052) and conformity t = -1.73 (p =_.090), with Ca-
thedral higher. Females in Cathedral were in higher grades, t = -2.65
(p = .001) and were older, t = -2.11 (p = .041) than Lane females.

Comparing the regular level, at New Trier, 52 students, and the high level at Cathedral, 40 students, New Trier students were higher on support, t = 2.46 (p = .016), with more males in New Trier, t = 3 96 (p = .016), and with students in higher grade levels, t = 3.49 (p = .001) and older, t = 2.57 (p = .012) than students in Cathedral. Of males in these groups, New Trier, 23 students, and Cathedral, 5 students, New Trier was higher on self esteem, t = 2.65 (p = .013). Of females in these groups, New Trier, 29 students, and Cathedral, 35 students, New Trier was higher on support, t = 2.50 (p = .015) and Cathedral was higher on conformity, t = -1.90 (p = .061), although not significantly. New Trier females were in higher grades, t = 4.09 (p = .000) and were older t = 3.12 (p = .003) than Cathedral females in these groups.

Comparing students in the regular group at Lane, 44 students, and the high level at Cathedral, 40 students, a significant difference was found on support, t = 2.0 (p = .048), and a nonsignificant difference on recognition, t = 1.94 (p = .056), with Lane higher, and a significant difference on independence, t = 3.40 (p = .001), with Cathedral higher. Cathedral students were also in higher grade levels, t = -3.27 (p = .002) than Lane, and Lane had more males, t = 5.30 (p = .000), than Cathedral.

Comparing males in these groups; Lane, 17 students, and Cathedral, 5 students, Lane males were significantly higher on self esteem, t = 3.71 (p = .002). Comparing females from Lane, 17 students, and Cathedral, 35 students, Lane females were significantly higher on leadership, t = 2.04 (p = .047), and nonsignificantly higher on recognition, t = 1.68

(p = .098). Cathedral females were significantly higher on independence, t = -2.78 (p = .008) and were older, t = -1.70 (p = .103) and in higher grades, t = -2.86 (p = .009) than Lane females in this comparison group.

Summary

Schools

At the total school level, between New Trier and Cathedral, significant differences were found on support and conformity. Recognition was not significant, but differences were found at p = .073. New Trier students were significantly higher on support and nonsignificantly higher on recognition and Cathedral students were significantly higher on conformity. New Trier students were in significantly higher grade levels than Cathedral.

Lane and Cathedral had significant differences on independence, support, recognition and conformity. Lane students scored higher on support and recognition and Cathedral higher on conformity and independence. Cathedral students were older and in higher grades than Lane. Comparing New Trier and Lane, New Trier students scored significantly higher on independence, were older and were in higher grades than Lane students. Thus, at the total school level, Cathedral and New Trier were higher than Lane on independence and Lane and New Trier were higher on support than Cathedral. Lane was significantly higher on recognition than Cathedral and New Trier was nonsignificantly higher (p = .073) on recognition than Cathedral.

Including Schurz in the total school comparisons, Lane was significantly higher on support than Schurz; Schurz was significantly higher than New Trier on conformity; Cathedral was significantly higher than Schurz on independence; New Trier and Cathedral were significantly higher than Schurz on self esteem; and Lane was nonsignificantly higher (p = .078) than Schurz on self esteem.

Gender

Significant differences by school were found between males in the sample. New Trier and Lane males were higher on support than Cathedral males; Lane males were higher on recognition than Cathedral males, while New Trier males were nonsignificantly higher on recognition than Cathedral males (p = .09); Cathedral males were higher than New Trier on benevolence and nonsignificantly higher on conformity (p = .059); New Trier males were nonsignificantly higher on independence than Lane (p = .073), as were Cathedral males (p = .086). Cathedral males were older than Lane males, and New Trier males were older and in higher grades than Lane males.

Significant differences by school were also found for females in the sample. New Trier and Lane females were higher on support than Cathedral; Cathedral females were higher on conformity than Lane or New Trier; New Trier females were nonsignificantly higher on independence than Lane females (p = .065); Cathedral females were nonsignificantly higher on self esteem than Lane (p = .083); and Lane females were higher on leadership than New Trier females (p = .095). New Trier females were older than Lane or Cathedral females. Cathedral females were in significantly higher grades than Lane females.

Groups

Significant differences between the tutored groups at New Trier and Schurz, and the low level at Cathedral, existed on independence, with New Trier higher than Schurz and Cathedral, and Cathedral higher than Schurz on self esteem.

Between males in the tutored groups at New Trier and Schurz and the low level at Cathedral, Cathedral males were significantly higher than New Trier males and Schurz males on benevolence. New Trier males were significantly higher on independence than Schurz males and nonsignificantly higher than Cathedral males (p = .09).

Comparing the regular group from Lane with only the high level of Cathedral, Lane was significantly higher on support and a nonsignificantly higher on recognition (p = .056), and Cathedral was higher on independence. Lane males were significantly higher on self esteem than Cathedral males. Lane females were higher on leadership, and Cathedral females were higher on independence. Grade level was higher for Cathedral, and for Cathedral females, but was not significantly different for males. There were more females in Cathedral in this top level than in Lane.

Comparing Lane honors group with the high group at Cathedral, Cathedral was nonsignificantly higher on independence (p = .10). Lane students were in higher grades than Cathedral. Cathedral had more females in the top group than Lane. Males in the honors group at Lane were significantly higher on self esteem than males in the high level at Cathedral, and females at Lane were significantly higher on support than females in the high level at Cathedral. Cathedral females in the high

level were nonsignificantly higher on self esteem than females at Lane
(p = .052). Cathedral females were higher on conformity, but not sig-
nificantly, and were significantly older and in higher grades than Lane
females in the top group at Lane.

No significant differences existed between the high level at New Tri-
er and the honors level at Lane nor between males or females in these
groups.

No significant differences existed between the high levels at New
Trier and Cathedral. although New Trier was nonsignificantly higher on
support (p = .068). New Trier males were significantly higher than Ca-
thedral males on self esteem and Cathedral females were nonsignificantly
higher on self esteem (P = .063).

Thus, in the top levels at three schools, there were no significant
differences between students at New Trier, Cathedral, and Lane, although
nonsignificant differences were found, with New Trier higher on support
than Cathedral; Lane higher on support and recognition than Cathedral;
Cathedral higher on independence than Lane. New Trier and Lane had no
significant differences in the high levels, even up to the .10 level of
significance.

Between males in the high levels, both Lane and New Trier males were
higher on self esteem than Cathedral males, however, between New Trier
and Lane males in the high levels, there were no significant differenc-
es.

For females in the high levels, Lane females were significantly high-
er on support than Cathedral females. There were no significant differ-
ences between New Trier and Cathedral females. Cathedral females were

nonsignificantly higher on self esteem than Lane females (p = .052) and New Trier females (p = .063) and also were nonsignificantly higher on conformity than Lane females (p = .09). New Trier females were significantly older and in higher grades than Cathedral and Lane, and Cathedral females were significantly older and in higher grades than Lane females.

Comparing all students above tutored levels, i.e., the regular group at New Trier and all above the tutored level at Cathedral, New Trier was significantly higher on support and nonsignificantly higher on recognition, (p = .051) and Cathedral was significantly higher than New Trier on conformity.

Males in New Trier were significantly higher on recognition and nonsignificantly higher on support than males at Cathedral. Females at Cathedral were significantly higher on conformity and New Trier females were significantly higher on support, and were older and in higher grades than females in Cathedral.

Comparing all students above tutored level, i.e., the regular group at New Trier with all of Lane, New Trier was significantly higher than Lane on independence. New Trier students were in higher grades and older than Lane students. No significant difference existed on self evaluation scores for males, although males at New Trier were in higher grades than males at Lane. Females were significantly higher at Lane than New Trier on leadership. New Trier females were nonsignificantly higher on independence (p = .078) and were significantly older and in higher grades than Lane females.

Between the regular group at Lane and all students above the tutored group at Cathedral, Lane was significantly higher on support and recog-

nition and Cathedral was significantly higher on independence than Lane.
Cathedral students were significantly older and in higher grades than
Lane and there were significantly more females in Cathedral than in
Lane. Males in Lane were significantly higher on support and recogni-
tion than males in Cathedral, and Cathedral males were nonsignificantly
higher on benevolence than Lane males. Cathedral males were in signifi-
cantly higher grades and nonsignificantly older (p = .085) than Lane
males. All females above the low level at Cathedral and the regular
group at Lane found Cathedral females significantly higher on indepen-
dence than Lane females, and Lane females nonsignificantly higher on
recognition (p = .052) and leadership (p = .098) than Cathedral females.

Grade and Age

Comparing grade levels and age in all schools New Trier students were
in higher grade levels than Cathedral and Lane, and Cathedral students
were in higher grade levels than Lane. Both New Trier and Cathedral
students were significantly older than Lane students. New Trier females
were older than Lane and Cathedral. Males were older at Cathedral than
at Lane. Both New Trier and Lane had significantly more males than Ca-
thedral. New Trier males were in significantly higher grade levels than
Lane, and Cathedral males were significantly older than males in Lane.

Comparing schools by gender, all schools had more females than males
in the high levels and more males in the tutored groups than females.
There were significantly more females in Cathedral than males. Indepen-
dence was related to age and grade, with older students and higher
grades also higher on independence. With this variable also related to

females, spurious conclusions could result, if care is not taken in the analysis. A more complete discussion of these findings will follow in Chapter 6.

Multiple Regression Analysis

Multiple regression analyses were performed using self evaluation variables as dependent variables. Various models were made of the independent variables; gender, group, school, reading scores and the interactions of these variables. Using dummy variables for schools, gender, groups and interactions of these factors, regressions were run on with self evaluation variables as the dependent variables. Regressions on reading as the dependent variable were also run, entering the independent variables, group, gender, age, and their interactions. Backward analyses were performed, isolating each variable while entering all others. Correlations by schools are shown in the following table, more correlations on self evaluations of subgroups may be found in Appendix B, Tables 61-64.

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┌─────────────────────────────────────────────────────────────────┐
│                          TABLE 44                               │
│                                                                 │
│                   Correlations by School                        │
│                                                                 │
│            New Trier     Lane     Cathedral     Schurz          │
│                                                                 │
│               r           r           r           r             │
│                                                                 │
│  Support      .148       .165      -.221        .053            │
│  Conformity  -.063      -.014       .098        .054            │
│  Recognition  .058       .085      -.150        .079            │
│  Independence .090       .136       .083        .096            │
│  Benevolence  .001      -.022       .023        .032            │
│  Leadership  -.028      -.041      -.031        .034            │
│  Self Esteem -.019      -.012       .080       -.127            │
│                                                                 │
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Multiple Regression Results

Support

Using Support as the dependent variable, and entering all schools, all schools together accounted for 6.4% of the variance, (p = .000), and New Trier and Lane, 6.4% (p = .000). Lane alone accounted for 2.7% of the variance (p = .002) and Cathedral alone, 4.9% (p = .000), t = -4.20. Entering separately reading X schools, found significance for New Trier, t = 1.98 (p = .049), accounting for 1.2%. Also significant were females at Cathedral, t = -2.96 (p = .003), accounting for 2.5% of the variance in Support. Males at Lane accounted for 2%, t = 2.71 (p = .007). Males at New Trier accounted for 1.45% (p = .03), t = 2.16.

Conformity

Regressing on Conformity, entering New Trier, Lane and Cathedral, found that all accounted for 4.1% of the variance at .003, and eliminating Cathedral, the model accounted for 4.1% (p = .000). New Trier, Lane and Schurz accounted for 4.1% (p = .003). New Trier alone accounted for 2% (p = 009) and Cathedral alone accounted for 2.9% (p = .002). The lowest group from Cathedral accounted for 5.7% (p = .000). New Trier X Reading accounted for 1.2%, t = -1.99 (p = .048) and Cathedral X Reading, 1.7%, t = - 2.39 (p = .017). New Trier females accounted for 1.5%, t = - 3.12 (p = .012). Lane females accounted for 1.8%, t = -2.54 (p = .012). Cathedral females accounted for .8%, t = 1.71 (p = .088). Cathedral males accounted for 1.2%, t = 1.83 (p = .07). Models with interactions, reading X school X male, were applied. Significance was reached for three interactions; school interacted with reading achievement and males when conformity was the dependent variable in Cathedral; t = -.191 (p = .05), explaining 1.1% of the variance in conformity. New Trier X reading X female explained 1.4%, t = -2.15 (p = .03).

Recognition

Regressing on Recognition, New Trier, Lane and Cathedral accounted for 2.4% (p = .039). New Trier, Lane and Schurz accounted for the same. Entered separately, Cathedral accounted for 2.3% of the variance, (p = .005). Cathedral males accounted for 3.2%, (p = .01). Lane X reading accounted for .8%, t = -1.66 (p = .097). Lane X reading X male accounted for 1.1%, t = -1.95 (p = .05). New Trier X reading X female accounted for 1.2%, t = 2.01 (p = .045).

Independence

Regressing New Trier, Lane and Cathedral on Independence accounted for 3.3% (p = .003); New Trier, Lane and Schurz, the same; New Trier and Cathedral, 3.3% (p = .003); and Lane and Schurz, 3.1% (p = .009) with Lane, t = -2.79 (p = .006) and Schurz, t = -2.14 (p = .033). Lane found significance of .8%, t = -2.54 (p = .012) and Lane males accounted for 2.9%, t = -3.22 (p = .001). Lane and Cathedral males entered together accounted for 4.2% (p = .000), with Lane, t = 3.55 (p = .004) and Cathedral, t = -2.095 (p = .037). Cathedral females accounted for 2.3%, t = 2.87 (p = .004) and New Trier females accounted for 1.8%, t = 2.50 (p = .013).

Benevolence

Regressing on Benevolence, the model using Cathedral males accounted for 3.1% (p = .001), a positive correlation, r = .174, and Cathedral females accounted for 1.3%, t = -2.44 (p = .033), a negative correlation, r = -.115.

Leadership

Regressing on Leadership, Cathedral males accounted for 1.2%, t = -2.07 (p = .039). Lane and Cathedral males entered into the model accounted for 1.6% (p = .06), with Lane, t = -1.21 and not significant and Cathedral, t = -2.25 (p = .025). Entered separately, the tutored group at Cathedral accounted for 6% of the variance in leadership (p = .006) and the tutored group at New Trier accounted for .09% (p = .01)

Self Esteem

Regressing on Self Esteem, the model entering New Trier and Schurz accounted for 1.7%, (p = .05), with New Trier not significant, and Schurz, (p = .014). The model entering New Trier X reading accounted for 1.2%, t = -2.05 (p = .04). Entering tutored group males explained 2.6% of the variance in self esteem (p = .003). Lane males accounted for 4.7%, (p = .005). Cathedral females accounted for 2.2%, t = 2.82 (p = .005) and the model including Cathedral X reading X female accounted for 1.2%, t = 2.06 (p = .04). New Trier X reading X female accounted for 2%, t = -2.68 (p = .008).

Reading

In a backward analysis with reading as the dependent variable and entering all self evaluation variables for New Trier, the saturated model accounted for 26% (p = .015) of the variance in reading, and omitting self esteem, the model resulted in 23% (p = 019). In Cathedral, the full or saturated model accounted for 7.3% (p = .049) and removing self esteem, resulted in 5.5% (p = .10). Self esteem and conformity together accounted for 5.7% (p = .004). In Lane, none of the variables entered separately or together contributed to reading at significant levels.

Analysis of Hypotheses

Hypothesis One

Hypothesis one stated that there would be a significant relationship between self concept and reading achievement in a selected group of secondary school students. In order to test this hypothesis, a Pearson product-moment correlation coefficient was calculated to determine whether a significant statistical relationship existed between the self concept scores, as measured by the SIV and self esteem academic achievement test scales, and reading achievement scores, as measured by ISRT and TAP tests or school records.

Based upon case study findings, as previously described in Chapter 4, New Trier had significant correlations in the total school between reading and support, which were positive, and reading and conformity and reading and self esteem, which were negative.

Lane Technical had no significant correlations in the total school between reading and self evaluation scores.

Cathedral had significant negative correlations in the total school between reading and conformity. Reading and self esteem correlated positively ($p = .099$).

In New Trier, the regular group found reading related significantly and negatively to conformity, and reading and support correlated nonsignificantly and positively at the .065 level, while the tutored group found reading and self esteem significantly and negatively correlated.

In New Trier, males had no significant correlation between reading and any self evaluation score, however, for females there were significant correlations between reading and support, and reading and recognition, both positive. In the regular group, no significant correlations were found for males. Females had a significant positive correlation between reading and recognition, and significant negative correlations between reading and self esteem, reading and conformity and reading and benevolence. No significant correlations were found for males in the tutored group between reading and any of the self evaluation scores. There were only four females in the tutored group, and they were not compared.

In Lane, reading in the regular group was not related significantly to any self evaluation score, although a nonsignificant negative correlation was found between reading and recognition (p = .069). In the honors group no significant relationships were found between reading and any of the self evaluation scores.

In the total male or female sample population at Lane, no significant correlation was found between reading and any self evaluation scores, although males found reading and recognition correlated negatively and nonsignificantly (p = .069).

In the regular group, reading correlated nonsignificantly and negatively with recognition (p = .069). Males in the regular group had a negative nonsignificant correlation between reading and recognition (p = .055). Females had no significant correlations between reading and any of the self evaluation scores. In the honors group, reading and recognition correlated nonsignificantly (p = .108). For males or fe-

males, no significant correlations between reading and any self evaluation scores were found.

For all males in Cathedral, there were no significant correlations between reading and any self evaluation score. In the total female population, reading and benevolence correlated positively and significantly and reading and conformity correlated negatively and significantly. Reading and self esteem were also positively and nonsignificantly correlated (p = .081).

Hypothesis one was confirmed as statistically significant regarding relationships of self concept and cognitive achievement in New Trier and Cathedral High Schools, with no significant correlations found in Lane Technical High School.

Hypothesis Two

Hypothesis two stated that there would be differences between groups on self concept scores. F tests for homogeneity were run and the subsequent application of the t-test was computed, for significance, at the .05 level.

In new Trier, there were no significant differences between groups on self concept, however, significance was approached, with the tutored group higher on conformity (p = .077) than the regular group.

In Lane, no significant differences were found between the regular and honors groups, however, the regular group was slightly higher on recognition (p = .10) than the honors group. There were no significant

differences between groups within schools at New Trier or Lane and Cathedral had no groups, as all students were included in one classroom grouping. Thus, hypothesis two was not confirmed as statistically significant for the groups compared.

Hypothesis Three

Hypothesis three stated that there would be significant differences on self concept scores by gender within schools. F tests for homogeneity were performed, and the subsequent application of the t-test was computed for significance at the .05 level and nonsignificant correlations were examined and reported up to the .10 level of significance.

In New Trier, there were no significant differences between sexes in the total school, although females were higher on independence. There were significant differences between males and females in the regular group, however, with females scoreing higher than males on independence.

In Lane, in the total school, females were significantly higher than males on independence; males were higher on conformity and females were higher on leadership, although not significantly. There were no significant differences between males and females in the regular group, although females were nonsignificantly higher on leadership. In the honors group, between males and females, females were higher on independence and males were higher on benevolence. Males in the honors group were also higher on conformity than females, approaching significance at $p = .053$.

In Cathedral, between males and females, females were higher on independence, self esteem and leadership and males were higher on benevolence.

There were significant gender differences at Lane and Cathedral, but not at New Trier, in the total group. Within the groups at New Trier, however, there were gender differences. Thus, hypothesis three was confirmed as significant.

Hypothesis Four

Hypothesis four stated that there would be significant differences on self concept scores between schools, and by gender and groups between schools. Manovas were performed and application of the Duncan Multiple Range Test examined each self evaluation variable by school variable at the .05 level to determine differences between schools.

New Trier and Lane were significantly higher than Cathedral on support; Cathedral was higher than New Trier and Lane on conformity; Lane was higher than Cathedral on recognition; New Trier and Cathedral were higher than Lane on independence; and there were no significant differences between the schools in the sample on benevolence, leadership and self esteem variables.

While Schurz was included in the sample for the tutored group only, an examination of the self evaluation mean scores found significant differences on support, with New Trier higher than Cathedral and Schurz, and Lane higher than Cathedral and Schurz; on conformity, with Cathedral

higher than New Trier and Lane, and Schurz higher than New Trier; on recognition, with Lane and Schurz higher than Cathedral; on independence, with New Trier higher than Lane and Schurz and Cathedral higher than Lane and Schurz; and on self esteem, with Cathedral higher than Schurz.

Gender

Comparing self evaluation scores by gender between schools there were no significant differences between New Trier males and Lane males. Males in New Trier and Lane were significantly higher on support than males in Cathedral and males in Cathedral were significantly higher on benevolence than males in New Trier.

Lane females were significantly higher on leadership than New Trier females. New Trier and Lane females were significantly higher on support than Cathedral females, and Cathedral females were significantly higher on conformity than New Trier and Lane females. Thus, on comparisons of sexes between schools, there were significant differences between males and between females.

Groups

Tutored Groups

Comparing tutored groups at New Trier and Schurz and low level students at Cathedral, New Trier was significantly higher than Schurz and Cathedral on independence, and Cathedral was significantly higher than Schurz on self esteem.

Males in the low level at Cathedral and the tutored group at Schurz had no significant differences on self evaluation scores. There were no significant differences between males in tutored groups at New Trier and Schurz, however, Cathedral low level males were significantly higher than New Trier tutored males on benevolence.

Regular Groups

Comparing all students above the tutored levels in Cathedral and New Trier and the regular group at Lane, New Trier and Cathedral were significantly higher than Lane on independence; Cathedral was significantly higher than New Trier on conformity; New Trier and Lane were significantly higher than Cathedral on support; and Lane was significantly higher than Cathedral on recognition. New Trier was nonsignificantly higher than Cathedral on recognition, approaching significance at p = .051.

Males at New Trier and Lane were significantly higher than males at Cathedral on recognition and males at Lane were significantly higher than Cathedral males on support. Males in this group in New Trier and Lane found no significant difference, but Lane females were significantly higher than New Trier females on leadership. Females at New Trier were significantly higher than females at Cathedral on support and Cathedral females were significantly higher on conformity than New Trier females. Females at Cathedral were significantly higher than females at Lane on independence and Lane females were nonsignificantly higher than Cathedral females on recognition, t = 1.96 (p = .052).

Comparing all students above tutored levels in New Trier and Cathedral and all of Lane, the same correlations existed as with the regular group at Lane. Male correlations were also the same, with the addition of Cathedral males who were nonsignificantly higher than males at Lane on independence, -1.85 (p = .068). Also, for females in these groups, New Trier and Lane females were significantly higher than Cathedral females on support, and Cathedral females were significantly higher than Lane females on self esteem.

Comparing students in the regular group from Lane, omitting the honors group, and students in the middle group at Cathedral, Lane was significantly higher on support and recognition, and Cathedral was significantly higher on independence.

Comparing males in the regular group at Lane and males in the middle group at Cathedral, Lane males were significantly higher than Cathedral males on support and recognition.

Females in the regular group at Lane and females in the middle group at Cathedral had no significant differences on self evaluation scores.

High Groups

The high level at New Trier, the honors group at Lane and the high level at Cathedral found no significant differences on self evaluation scores between any of the groups on self evaluation scores.

Males in the high level from New Trier and the honors group at Lane were significantly higher than males from the high level at Cathedral on self esteem.

Females in the high levels at New Trier had no significant differences on self evaluation scores from females in the high levels at Cathedral and Lane. Females at Lane were significantly higher than Cathedral females on support, and Cathedral females were nonsignificantly higher than Lane females on self esteem, t = -1.99 (p = .052).

Comparing the regular level at New Trier and the high level at Cathedral, New Trier was significantly higher than Cathedral on support. From these groups, New Trier males were significantly higher than Cathedral males on self esteem and New Trier females were significantly higher than Cathedral females on support.

Comparing students in the regular group at Lane and the high level at Cathedral found Lane was significantly higher than Cathedral on support, and Cathedral was significantly higher than Lane on independence. Lane students were nonsignificantly higher than Cathedral students on recognition, t = 1.94 (p = .056).

Comparing males in these groups, Lane was significantly higher than Cathedral on self esteem. Females at Lane were significantly higher than females at Cathedral on leadership and Cathedral females were significantly higher on independence than Lane females.

Hypothesis four was confirmed as significant, in that there were significant differences between schools in self evaluation scores. Groups between schools, gender between schools, and group by gender between schools were all significantly different.

Summary

This chapter has examined the self evaluation differences between schools, and between groups and gender within and between schools. There were significant differences between correlations of self concept and academic achievement which differed between sexes, groups and schools. The age factor and the grade levels of students were also related to the self concept variables. The extent to which these differences were due to the effects of climate or composition of the schools, and to the SES levels of the schools will be continued further in Chapter 6, which will include a discussion of these findings and their implications.

CONCLUSIONS

Introduction

The purpose of this study was to determine whether a relationship exists between reading and self concept in a selected group of secondary students in the metropolitan Chicago area. One of the major questions addressed concerned the differences in students' values related to high and low reading performance. Other questions involved the effects of school, grouping, and gender on self concept of students.

As discussed in the review of the literature, the relationship between self concept and academic achievement has long been a matter of concern for researchers, educators, parents and students. Reading is basic to student performance in school and is, therefore, one of the main requisites necessary for success in all areas in school.

While many studies have examined academic self concept, or how one views his or her own academic ability, the focus of this study was on general self concept, as it may affect the performance, behavior, attitudes and relationships in all aspects in the life of the student. Studies which have attempted to separate self concept from ability have not been successful and causal connections have not been established.

Correlations have been well documented between self concept and success or failure in the academic arena, and evidence points to the fact

that student failure in basic subjects is directly related to the ways students perceive themselves. Studies of juvenile delinquents have found that nearly 100% were significantly below their age and grade in academic performance.[290] Future plans and aspirations have also been shown to be clearly related to students' self concept and to their academic levels in school. Research studies have verified school effects on students' reading and mathematics achievement[291] as well as the school's influence on students' college aspirations.[292]

The Coleman Report described the relative impact of inputs on achievement and the differences between outcomes in schools. According to the Report, even when inputs to the schools were similar, many students performed at lower achievement levels, leading Coleman and others, who concurred with the Report, to conclude that these variations in output were directly related to the family background of students. Further, family background was felt to have the greatest effect on a student's attitudes, expectations and aspirations for higher education.[293]

Critics of the Report believed that the context of the school a student attends makes a significant difference on his or her attitudes and academic achievement and that teacher qualifications, facilities and resource expenditures are the most important factors affecting student

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[290] E. A. Allen, "Attitudes of Children and Adolescents in School," Educational Research 3 (1960), pp. 65-80.

[291] Brookover, et. al., Schools Can Make a Difference, p. 220.

[292] McDill and Rigsby, Structure and Process in Secondary Schools: The Academic Impact of Educational Climates Coleman, Campbell, et. al., Equality of Educational Opportunity.

[293] Coleman, Campbell, .et. al., Equality of Educational Opportunity Boocock, Sociology of Education: An Introduction, p. 207; Jencks, et. al., "Social Stratification and Higher Education," pp. 227-316.

outcomes.[294] Such findings, in accord with Durkheim's conception of "social facts," theorize that social organizations exert an influence upon the behavior of individuals and shape their behavior in predictable ways.[295] Reflecting the complex functions of society, such as the family, the home and the neighborhood, a school can also be classified as a social system with certain measurable qualities which may potentially and actually make a difference in students' outcomes. That is, values and attitudes are transmitted to students by way of the school's socialization process.[296]

Educational outcomes are not uniform in our schools and variations have been shown to exist largely related to SES and racial factors.[297] Most studies generally agree that the SES of the family and the SES composition of the school are closely related. It is suspected that the student's attitudes and expectations will vary, depending on the school he or she attends, and that grades often serve as proxies of students' competence and self worth. Students in schools which emphasize excellence in academic performance may react differently to their academic scores than students in low performance schools.[298]

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[294] Dyer, "Social Factors and Equal Educational Opportunity," pp. 38-56; Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," pp. 836-845; Herriot, "Some Determinants of Educational Aspirations," pp. 157-177.

[295] Durkheim, The Rules of Sociological Method, p. 123; Blau, "Structural Effects," pp. 178-193.

[296] Durkheim, Education and Society, pp. 97-99.

[297] Orfield, "The Chicago Study"; Conant, Slums and Suburbs, p. 45; Report of the Committee on Secondary School Studies, 1983.

[298] McDill and Rigsby, Structure and Process in Secondary Schools Coleman, The Adolescent Society, p. 84.

To review, this study approached school context from two perspectives: first as the dependent variable, resulting from performance level and self concept of students, and, second, as the independent variable, influencing student achievement and self concept. To determine the possible contextual effects of schools, a selection of schools was made based upon SES level, racial composition, school achievement level and community location.

The sample included two high performance schools, with different SES backgrounds; one, known as New Trier, is a suburban public school composed of nearly 100% Caucasian students, located in a community of primarily middle to upper-middle class families, and, the other, known as Lane, is an urban public school of racially mixed composition, made up of high academic achievement students selected from the larger Chicago area. The third school, known as Cathedral, an urban private Catholic school, was composed equally of Hispanic, Caucasian and black students, from throughout Chicago, and represented a low-middle academic performance school. The fourth school, known as Schurz, is an urban public school, which represented a low academic performance, low-middle SES neighborhood of mixed racial composition, included only the remedial reading group.

The total sample was made up of 360 students: 69 from New Trier, 35 males and 34 females; 204 from Cathedral, 75 males and 129 females; 66 from Lane Tech., 35 males and 31 females; and 21 from Schurz, 19 males and 2 females, for a total of 163 males (45.3%) and 197 females (54.7%).

The units of study included both the classroom groupings, levels and the school. Classroom groupings were treated as intervening variables to examine for interaction effects among the variables.

As described in Chapter 3, scores from two self evaluation questionnaires, The Survey of Interpersonal Values Scale (SIV), which measured area specific self concepts, and a non-standardized self esteem inventory, which measured general self esteem, were correlated with reading scores obtained from standardized reading tests, the Iowa Silent Reading Test at New Trier, Tests of Academic Progress, at Lane and grade point averages at Cathedral.

The self concept measures from the self evaluation questionnaire, as described earlier in the study were:

Support: Being treated with understanding, being treated with kindness and consideration.

Conformity: Doing what is socially correct, doing what is proper, being a conformist.

Recognition: Being looked up to and admired, being considered important, attracting favorable notice, achieving recognition.

Independence: Having the right to do whatever one wants to do, being free to make one's own decisions, being able to do things in one's own way.

Benevolence: Doing things for other people, sharing with others, helping the unfortunate, being generous.

Leadership: Being in charge of other people, having authority over others, being in a position of leadership or power.[299]

The SIV scores represent bipolar dimensions of conformity and independence, benevolence and recognition, and benevolence and leadership.

Conformity and Independence

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[299] Gordon, Survey of Interpersonal Values Manual, p. 1.

Conformity correlated positively with orderliness, goal orientation, endurance, authoritarianism, cautiousness, responsibility, social desirability or being socially approved, religious conservatism, inclusion, docility, dependency, and more bureaucratic propensities and negatively with variety and independence.

Independence correlated positively with variety and autonomy and negatively with orderliness, cooperativeness, overconventionality, sociability, authoritarianism, wanting others to act close and personal, wanting to initiate interactions with others, or wanting to be included by others, bureaucratic propensities, docility and dependency.

Benevolence and Recognition

Benevolence correlated positively with nurturance, friendliness, social desirability and personal relations and negatively with dogmatism, bluntness, aggressiveness, competitiveness, exploitiveness, and skepticism and distrust.

Recognition correlated positively with exhibitionism and negatively with ego strength.

Benevolence and Leadership

Leadership correlated positively with achievement, dominance, control, ego strength, managerial and autocratic behavior, ascendency, vigor, original thinking and Machiavellianism and negatively with bureaucratic propensities, nurturance, docility and dependency.

Support correlated positively with succorance and negatively with ego strength.

Studies incorporating the SIV scale have found the conformity trait to be the variable most related to measures in the cognitive domain when

compared to verbal, mathematics, intelligence and quantitative tests.[30]

High scores in conformity and low scores in independence confirmed students' positive attitudes toward highly structured, traditional school environments.[31] Counselors rated conformity and benevolence as the most highly esteemed qualities in a traditional high school. High school counselors' subjective opinions on student attitudes were also more accurate in identifying those students who scored high on conformity and benevolence and those who scored low on support and independence, based upon personal knowledge of the individual students.[32]

In a study of achievers, of same sex parents, the achievers' parents were found to have significantly lower conformity and higher independence means than parents of non-achievers.[33]

Higher conformity scores also related negatively to indices of academic success, such as grade point averages.[34] Students with superior academic potential scored significantly higher on independence and lower on conformity than those students of broadly normative samples.[35]

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[30] Ibid., p. 10; See Appendix C.

[31] Ibid., p. 24.

[32] E. Kelly, "Cognitive Complexity of Counselors and Assessment of Self-perceived Values of Counselees," Ph.D. dissertation, State University of New York at Albany (1971), in Gordon (1976b), p. 16.

[33] R. Norman, "The Interpersonal Values of Parents of Achieving and Non-achieving Gifted Children," Journal of Social Psychology 64 (1966), pp. 49-57; Gordon, Survey of Interpersonal Values Manual, p. 24.

[34] E. P. Prien and D. E. Botwin, "The Reliability and Correlates of an Achievement Index," Educational and Psychological Measurement 26 (1966), pp. 1047-52; Gordon, Survey of Interpersonal Values Manual, p. 24.

[35] L. Langland, "Gifted Student Program," Unpublished report. University of California Los Angeles Counseling Center, (March, 1961); Gordon, Survey of Interpersonal Values Manual, p. 22.

Students of both sexes in highly selective colleges, such as Harvard, Yale and Reed, had very high independence means and very low conformity means.[36] It was also found that the lower the SES level, the higher the conformity mean in a study of students admitted to University of Illinois. In comparing specially admitted blacks, who did not meet standard admission criteria, with regularly admitted blacks and Caucasian students, the specially admitted blacks had a significantly higher conformity mean score than either of the other two groups.[37]

Medical students who came to UCLA from more highly esteemed colleges tended to score higher on independence and recognition and lower on conformity and benevolence than those from lesser esteemed colleges.[38]

Thus, studies found that high conformity traits were those most often attributed to lower achieving students and lower SES groups, and low conformity and high independence scores were those most often attributed to the gifted and high I.Q. students. Conformity, considered to be one of the most desirable variables by counselors in traditional school settings, was also found to be the choice of students who preferred this type of setting.[39]

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[36] Gordon, Survey of Interpersonal Values Manual, p. 23.

[37] C. Sherman, "Differences in the Personal and Interpersonal Values of Negro and White College Freshmen," Ph. D. dissertation, Northern Illinois University (1969); Gordon, Survey of Interpersonal Values Manual, p. 20.

[38] I. Mensh, "Orientations of Social Values in Medical School Assessment," Social Science and Medicine 3 (1970), pp.339-347; Gordon, Survey of Interpersonal Values Manual, p. 23.

[39] Gordon, Survey of Interpersonal Values Manual, p. 11; See Appendix C.

A high score on self esteem scale would imply high benevolence and conformity valuations and low recognition and support valuations, as found on the SIV scale. The fact that these traits of conformity and benevolence are most desired by teachers in traditional schools would identify the self esteem scale as a "teacher test". Students with high scores on the self esteem scale, correlating highly with conformity and benevolence traits, would be more compliant, obedient and orderly, and be more able to function well with other students in a workable classroom environment. Low scores would correlate with the trait of recognition, related negatively to the self esteem scale, which would identify the student who does not adhere to classroom rules, and who exhibits aggressive behavior, competitiveness and exhibitionism, and the trait of support, which would identify the need to be nurtured.

Teachers, in an effort to provide the optimum learning situation for their students, may prefer the conformity trait over the traits of recognition and independence. This would lead one to question whether the choice of these traits by teachers are those which would be best for the student, leading to greater academic and social growth of students, or whether they are merely pragmatic in that they allow for the best classroom teaching situation. In the name of expediency, teachers with a high student-teacher ratio may prefer this kind of behavior in their students, and the more independent student who demonstrates behavior requiring more individualized attention from the teachers would be discouraged on his or her behavior. Whether our schools reward qualities which are not the most beneficial for the students' optimum learning is not the subject of this paper, but one which would be useful to address in future research.

This study hypothesized that schools affect student outcome and influence students' aspirations and self expectancy. Two questions examined were: (1) Do schools influence student self concept by the students' attendance in the school?, or (2) Does the level of academic achievement affect self concept and do schools have little intervening effect on self concept? This is asking if students in high achievement levels in one school are more like those in high levels of academic achievement in another school than they are like those in low levels of academic achievement in their own school. These questions translate into school contextual, compositional and climate effects upon the students in attendance.

To examine for significant differences, the correlation between reading and self concept scores in each school and self concept mean scores between schools were compared. F ratios computed on these scores were used to confirm or reject the hypotheses. Where significant F tests were found, the t-test was used to determine which specific means differed significantly from each other. The data were tested through computation of Pearson product-moment correlation coefficient for significance at the .05 alpha level, and all correlations up to the .10 level were examined. Multiple regression analyses were run and t-tests examined differences between segments of the population and subpopulation.

Summary of Hypotheses

The first hypothesis, that self concept is related to reading achievement in school, was confirmed as significant. New Trier and Cathedral had significant correlations between reading and self evaluation scores, with no significant correlations found at Lane. The second hypothesis, that self concept is different between reading groups, was not confirmed as significant; self concept mean scores of groups within schools did not differ. The third hypothesis, which stated that gender differences exist in self concept within each school, and within each group in the school was confirmed as significant. Finally, the fourth hypothesis, which stated that there would be significant differences on self concept scores between schools, and by gender and groups between schools, was also confirmed as significant.

The hypotheses, as described in the first chapter and discussed in Chapter 6, Analysis of the Data, will be summarized in the following paragraphs.

Discussion of Hypothesis One

The first hypothesis, that self concept is related to reading, was confirmed as significant. New Trier and Cathedral had significant correlations between reading and self evaluation scores, due to females, with no significant correlations found for males. Lane had no significant correlations between reading and self concept scores.

These findings substantiated the effect of SES on students' self concept. Whereas Lane represented those select students in the top academic levels from many schools throughout the metropolitan area of varying SES backgrounds and neighborhoods, New Trier and Cathedral students represented more homogeneously defined groups. Lane's lack of significant correlations between reading achievement and self concept scores may be due to the heterogeneous SES backgrounds of the the students. This finding would corroborate the EEO Report's conclusions that the effects of school context, composition or climate are not as strongly related to the student's self concept as is the home background and what the student brings with him or her to the school environment.[310] Klausner also found members of the same socioeconomic grouping tend to have a more homogeneous self concept.[311]

Both New Trier and Cathedral were composed of homogeneous groups, New Trier, by the neighborhood in which the school is located, which is economically restrictive, and includes many upper income professional people, and Cathedral, by the religious background of the families and the students' prior education in parochial elementary schools. While Cathedral students' reading scores were skewed toward low scores and New Trier scores were skewed toward high scores, significant negative correlations existed between reading achievement and conformity scores in both schools, indicating that low scoring students valued conformity more than did high scoring students. The fact that, although SES, racial

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[310] Coleman, Campbell, et. al., Equality of Educational Opportunity, pp. 320-322.

[311] Samuel Z. Klausner, "Social Class and Self Concept," Journal of Social Sociology 38 (1953), pp. 201-205.

factors and performance levels in the two schools were different, yet both showed some relationship between reading performance and conformity indicates that reading achievement was more responsible for the conformity score than the context of the school.

At both New Trier and Cathedral, females had more significant correlations between self concept scores and reading achievement than did males. New Trier females had the highest number of significant correlations. Significant positive correlations existed between reading achievement and support and reading achievement and recognition, and significant negative correlations existed between reading achievement and conformity and reading achievement and self esteem.

This would substantiate studies which have found females to be more sensitive to academic achievement and more self critical than males.[312] Cathedral females also had a significant negative correlation between reading achievement and conformity, as well as a positive significant correlation between reading achievement and benevolence. It has been suggested that females tend to place more importance on academic performance while other factors may be more directly related to males' self identity.[313] Wylie's study, relating self concept to the ability to do homework, supported the hypotheses that girls have a more modest self estimate of ability than boys, and that students whose fathers have higher occupational levels are more modest in their self estimate of ability. Also, that blacks demonstrate a more modest self estimate of

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[312] Richman, Clark and Brown, "General and Specific Self Esteem in Late Adolescent Students," p. 560.

[313] Erikson, Identity, p. 279-280.

self concept than whites.[314]

Groups

Bivariate correlations between reading achievement and self concept were examined by groups and levels. The study found no significant correlation between reading achievement and self concept at Lane in the regular or honors groups, nor for females or males in these groups. This finding reflected the total scores at Lane, where no significant differences between self concept and reading scores were found.

The regular group at New Trier had a significant positive correlation between reading achievement and support and a significant negative correlation between reading achievement and conformity. Males in this group had no significant correlations, but females had a significant positive correlation between reading achievement and recognition and significant negative correlations between reading achievement and benevolence and reading achievement and conformity. The negative correlation between reading achievement and self esteem affirmed the relationship of the self esteem and the SIV measures, with positive correlation on recognition and negative correlations on benevolence and conformity. The tutored group had a significant negative correlation between reading and self esteem, as did tutored males.

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[314] Ruth Wylie, "Children's Estimates of Their Schoolwork Ability as a Function of Sex, Race and Socioeconomic Levels," Journal of Personality 31 (June, 1963), pp. 203-224.

Of the two levels which comprised the regular group at New Trier, the middle level had no significant correlations between reading achievement and any self evaluation scores, nor did males or females in this level, however, the high level indicated a significant positive correlation between reading achievement and recognition and a significant negative correlation between reading and self esteem. These were due to females' scores and no significance was found for males.

That no significant correlations were found between reading and self concept in the middle level may indicate a heterogeneously defined group, or it may imply that academic achievement did not have an important effect on the self concept of these students. Included in the middle level were students who may be underachievers, as well as students who were performing at their ability level.

These "average" students are often those who are "caught in the cracks" and who are largely ignored. They do not present discipline problems and generally go unnoticed. Often these students are unmotivated, doing only what is required of them. They have been shown to take less advantage of the resources available to them than the high achievers do.[315] These middle level students may have other nonacademic interests, such as jobs, cars, "hanging out with friends" or watching TV, and may be less inclined to be as concerned about grades. Competition in school achievements would be expected to be less keen in this sector of students than in the high achievement level.

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[315] Bidwell and Kasarda, "Conceptualizing and Measuring the Effects of Schools and Schooling," pp. 401-426.

That high reading achievement females had a positive correlation between reading and recognition scores and a negative correlation between reading and self esteem scores at New Trier may demonstrate their need to be admired and to attract favorable notice and recognition. Because high reading achievement males had no significant correlations between reading and any self concept variables, reading achievement was assumed to have less influence on males' self concept.

At Cathedral, where levels were defined by reading grade point averages, no significant correlations were found between reading and self evaluation scores for the low level. For the middle level, a significant positive correlation was found between reading and benevolence, and for the high level, reading and support correlated positively and significantly.

As at New Trier, only the low level males at Cathedral had significant correlations between reading and self evaluation scores, with reading and leadership and reading and independence significantly and negatively correlated. That low achieving males valued leadership and independence more than males who scored higher on reading in this level may imply a defiance of rules and a desire to control or dominate. The leadership trait, as defined by the SIV manual, incorporated defiance of bureaucratic rules and the desire to be in charge. Another study has acknowledged that males may use defensive attitudes as a means of coping with defeat.[316] Females who scored lowest in reading in the low level valued conformity more than females who scored higher on reading in this level. This would also agree with studies which found lowest levels of

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[316] Hauck and Loughead, "Adolescent Self-Monitoring," p. 573.

academic achievers and lowest SES groups to be more affected by the
norms of the group and in more conformity with the rules.[317] Thus, males
and females at Cathedral handled failure differently, males were more
defiant and females were more conforming.

No differences were found between males in the high or the middle
levels, but middle level females had significant positive reading
achievement and benevolence correlations and significant negative read-
ing achievement and recognition correlations, and high level females had
significant positive reading achievement and support correlations. Be-
nevolence and recognition represent two ends of a continuum and the
duplicity of scores in the middle level females would confirm a high be-
nevolence trait, which may be due to the religious indoctrination of
these students. The scores would imply that these average academic per-
formance females may not be as competitive and grades may not be as im-
portant to them as they are to the high level, whereas understanding and
tolerance and relationships with other students may be of more value.
That highest level females valued support agrees with other studies, im-
plying a need in the high achieving females to communicate and to be un-
derstood.[318]

The total study found no significant correlations between reading and
self concept scores for middle and high level males at New Trier, Lane
or Cathedral, and only low level males at New Trier and Cathedral had
any significant correlations. This finding would imply that males have
found other means than academic achievement by which to establish their

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[317] Ibid.

[318] Gordon, Survey of Interpersonal Values Manual, p. 24.

identity and self concepts.

Discussion of Hypothesis Two

The second hypothesis, that self concept of students would differ between reading groups within schools, was not confirmed as significant. No significant differences were found between tutored and regular reading groups at New Trier, nor honors and regular reading groups at Lane.

At Lane, males in the honors group were significantly higher than the regular group males on benevolence, and females in the honors group were significantly higher than the regular group females on independence.

No significant differences were found between males at New Trier in the tutored and regular groups. Although females in the regular group were significantly higher than females in the tutored group on support, with only four females in the tutored group, this was not an important finding.

Students' perceptions of their ability to function successfully in the school system and others' perceptions and evaluations of them have been found to affect student performance and self esteem.[319] The effect of the students' status role within the group made a significant contribution to his or her expection of outcomes, which, although limited, was independent of composition and climate.[320]

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[319] Boocock, <u>Sociology</u> <u>of</u> <u>Education</u>: <u>An</u> <u>Introduction</u>, pp. 224-225.

[320] Brookover, et. al., <u>Schools</u> <u>Can</u> <u>Make</u> <u>a</u> <u>Difference</u>, p. 229.

In this study, segregating by groups did not affect students' self concept. Groups were examined in the two high performance schools.

A study has suggested that it is only if students relate to the level in which they have been placed and if they believe this level to be inferior or superior to others that it will affect their self concept.[321]

A meta-analysis of findings of fifty-two studies in ability grouping in secondary schools, which examined four major areas; student achievement, self concept, attitude toward subject matter and attitude toward schools, showed findings to differ on results of student self concept. The benefits from grouping were small, but significant, on academic examinations and grouping practices did not appear to influence students' attitudes toward themselves or their schools.[322]

Brookover found that instructional units, or tracks, which tended to be associated with student ability, SES, and academic motivation, were better measures of student outcomes than the school the student attended.[323] He also found grouping was less related to school composition than to students' relationships within the groups.[324] The importance of peers in the school has also been found to affect the behavior and achievement of students and their aspirations.[325]

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[321] Boocock, *Sociology of Education: An Introduction*, pp. 224-225.

[322] C. Kulik and J. Kulik, "Effects of Ability Groupings on Secondary School Students: A Meta-Analysis of Evaluation Findings," *American Educational Research Journal* 19:3 (Fall 1982), pp. 415-428.

[323] Brookover, et. al., *Schools Can Make a Difference*, p. 229.

[324] *Ibid.*

[325] Boocock, *Sociology of Education: An Introduction*, p. 207; Campbell and Alexander, "Structural Effects and Interpersonal Relationships," pp. 284-289.

It has been suggested that the classroom, as unit of analysis, has a measurable effect upon the student's achievement and values, and that schools create inequalities by the fragmentation of students into groups,[326] While student grouping did not appear to be related to self concept for the subjects in this sample, and the findings would suggest that grouping was not a significant effect, differences between levels of achievement within schools were substantiated. Thus, the students' achievement level was more important to self concept than the group effect.

Of the two levels at New Trier within the regular group, the middle level and the high level, there were no significant differences on self concept scores, nor did males differ between these two levels. However, females in the high level were significantly higher on conformity than females in the middle level, a finding which confirms the lack of significant correlations between self concept and reading achievement in middle level females.

Between the middle and the low level, the middle level students had significantly higher self esteem scores than the low level, and the low level had slightly higher conformity scores ($p = .076$) and slightly lower benevolence scores ($p = .097$) than the middle level. Males in the middle level had significantly higher scores on self esteem and slightly higher scores on benevolence ($p = .084$) than males in the low level.

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[326] Parsons, "The School Class as a Social System," pp. 297-318; McDill and Rigsby, "Instructional Effects on the Academic Behavior of High School Students," pp. 188-199.

Between the low and the high level, no significant differences were found, but low level students were slightly higher on conformity scores. Males in the high level were slightly higher on self esteem than males in the low level. Females were not compared, with only four females in the low level.

At Cathedral, comparing the low and high reading achievement levels, the low level was significantly higher on conformity and older than the high level, with significantly more males in the low level, and the high level was significantly higher on independence and included more females than males. Males in the high level were significantly higher on self esteem than males in the low level, while males in the low level were significantly higher on conformity and significantly older than males in the high level. Females in the high level were significantly higher on benevolence than females in the low level and females in the low level were significantly older than those in the high level.

The low and the middle levels had no significant difference, however, the middle level students were slightly higher on self esteem ($p = .066$) and leadership ($p = .069$) and were in higher grades, with significantly more females in the middle level than in the low level.

Comparing the high and middle levels at Cathedral, no significant differences were found. The high level was slightly higher on independence ($p = .079$) and the middle level was significantly older and in higher grades than those in the high level. Significantly more females in the high level may have affected this score. Comparing males in these groups, males in the middle level were significantly higher on self esteem than males in the high level, and high level males were sig-

nificantly older than middle level males. Females in the middle level were significantly older and in higher grades than females in the high level, but no significant differences on self evaluations were found between females in the two groups.

This would concur with other studies using the SIV questionnaire, where low achievers were found to have higher conformity scores than high achievers. Independence, more highly valued in the high level than the low level, may have been related to the age and gender factors. There were significantly more females in the high level than males, who were also older than males in this level. Thus, at Cathedral, low and middle levels and middle and high levels were alike on self concept with the only significant difference being between males in the middle level who were higher on self esteem than males in the high level. Significant differences between the high level and the low level were found for both sexes on the conformity and independence values with the high level students scoring lower on conformity and higher on independence than the low level students.

While student grouping did not appear to be related to self concept for the subjects in this sample, significant differences were found between reading achievement levels. It is suggested, therefore, that future studies acknowledge this compounded effect due to group placement based upon academic achievement levels.

Discussion of Hypothesis Three

The third hypothesis, which stated that gender differences on self concept would exist within each school, and within each group in the school, was confirmed as significant. Significant differences were found between sexes across groups at Cathedral and Lane, but not at New Trier. At Lane, females were significantly higher than males on independence. At Cathedral, females were significantly higher than males on independence, self esteem and leadership, and males were significantly higher than females on benevolence.

Differences were found between sexes at New Trier in the regular groups where females were significantly higher than males on independence. They were also older and in higher grade levels than males. No significant differences were found between males and females in the middle and high levels or the low and high levels, although there were significantly more males in the low level and significantly more females in the high level. Males in the middle level were slightly higher on conformity than females, .i.e., $p < .10$. Middle level females may be more concerned about other things than academic studies and, in this sense, would be less conforming to the rules which society and the school have established.

At Lane, no significant difference was found in the regular group between males and females, although females were slightly higher on leadership than males ($p = .059$). In the honors group, males were significantly higher on benevolence and higher on conformity at levels approaching significance ($p = .053$), and females were significantly

higher on independence. Again, this may have been due to the age fac-
tor, with females being older than males.

At Cathedral, in the low level, males were significantly higher on
benevolence than females, and females were significantly higher on lead-
ership and independence than males; in the middle level, males were
slightly higher (p = .068) on benevolence than females; and in the high
level, females were significantly higher on self esteem than males.
Males higher scores on benevolence may have been due to the Catholic
school background training, although it is not known why they should
surpass girls. A further study on these findings would be useful.

Gordon's overall comparisons of gender in the high school sample
found females to be significantly higher on support, conformity, and be-
nevolence and males to be significantly higher on independence and lead-
ership.[327] The current study did not support these findings. However,
the fact that schools in the sample were selective may have been re-
flected in the results. Age, gender and grade level were found to be
strongly related to independence scores. Females who were older and in
higher grades than males were generally higher on independence than
males.

As previously discussed, girls have been shown to mature earlier than
boys, physically, emotionally and intellectually,[328] and have been found

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[327] Ibid.

[328] D. H. Eichorn, "The Berkley Longitudinal Studies, Continuities and
Correlates of Behavior," Canadian Journal of Behavioral Science 5
(1973), pp. 279-320; R. Prawat, H. Jones and J. Hampton, "Longitudinal
Study of Attitude Development in Pre, Early and Later Adolescent Sam-
ples," Journal of Educational Psychology 71:3 (1979), 363-369; A. Ges-
sell and L. Ilg, Youth: The Years From 10 to 16 (New York: Harper and
Row, 1951).

to be generally superior to boys in reading ability and other verbal activities.[329]

The number of boys in remedial reading groups and clinics at the elementary level exceeds girls by a ratio of ten to one according to the National Education Association.[330] The present study concurred with these findings, where females scored higher in reading than males, where significantly more females were in high level reading classes than males and significantly more males were in the remedial reading classes than females in each of the schools examined. Studies also have found that boys tend to perform higher on arithmetic than girls and girls tend to be better in reading and vocabulary than boys.[331]

Males, as less able readers than girls since early elementary grades, may have learned to use nonacademic activities to establish their identity, such as athletic ability and other forms of achievement.[332] Thus, males may be able to disassociate academic scores from their self concept. Berger also felt that females' self concept stems from social certainty, while males rely on other sources for their self concept.[333]

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[329] W. Barbe and W. Grilk, "Correlations Between Reading Factors and I.Q.," School and Society 75 (March 1952), pp. 134-135.

[330] National Education Association, "Ability Grouping," p. 15.

[331] C. Dwyer, "Influence of Children's Sex Role Standards on Reading and Arithmetic Achievement" Journal of Educational Psychology 31 (1975), pp. 674-685.

[332] Coleman, The Adolescent Society, p. 84.

[333] C. R. Berger, "Sex Differences Related to Self Esteem Factor Structure," Journal of Consulting and Clinical Psychology 34:4 (1968), pp. 442-446.

In one study which assessed the effects of gender, race and social class on the self esteem of high school students found females, whites and lower social class adolescents were consistently lower in their self esteem scores than were males, blacks and upper SES teenagers. White females were found to be lower in general self esteem and happiness than all other gender by race subgroups. High SES white students were lower on the happiness and behavior self esteem measures than black students and white middle class students; and black males and white females were less confident in their school ability than were black females and white males.[334]

A study of sex-role stereotypes which examined college women and men found women held negative values of self worth relative to men.[335] Another study found boys tended to act out their aggressions, while girls were more apt to conceal or to internalize them, allowing boys to remove some of the self judgments based upon their accomplishments and achievements, or lack of them in the classroom. That males had little or no relationship between academic scores and self evaluation scores in this study and that females had many significant correlations between reading and self evaluation scores may be due to the fact that females are less external and more achievement motivated than males.[336]

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[334] Richman, Clark and Brown, "General and Specific Self Esteem in Late Adolescent Students," pp. 555-566.

[335] Paul Rosenkrantz, et. al., "Sex-Role Stereotypes and Self Concepts in College Students," Journal of Consulting and Clinical Psychology 32:3 (1968), pp. 298-295.

[336] Erikson, Identity: Youth and Crisis, p. 269.

Erikson has further suggested that some females, as they reach adolescence, may be apt to depart from their feminine roles and take on the roles of their male counterparts, and may revolt and become more rebellious in their effort to find their identity.[337]

In the current study, while race was not examined, females in New Trier, who were white, upper SES subjects, and females in Cathedral, who were from lower SES backgrounds and represented a mixed racial population, had significant reading achievement and self concept correlations, while males had little or none, and none were found for males at Lane. This would seem to infer that females, whether of white or mixed racial groups, were more sensitive to reading scores than were males and that racial variables were not as important as gender in the present sample.

This finding agrees with another study which found boys were higher on dominance scores and girls were higher on love scores, whether black or white, however, black males had much higher dominance scores than white males.[338] Still another study found more differences in self concept between black and white males than between black and white females.[339]

That social class and education influence sex-role stereotypes was verified in a study by Rabban, with more differentiation found between working class children than middle class children.[340] The current study

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[337] Ibid.

[338] Robert McDonald and Malcolm Gynther, "Relationship of Self and Ideal Self Descriptions with Sex, Race and Class in Southern Adolescents," Journal of Personality and Social Psychology 1:1 (1965), p. 86.

[339] E. E. Harris, "Family and Student Identities: An Exploratory Study in Self and We-Group Attitudes," Journal of Negro Education 34 (1965), pp. 17-22.

also found fewest differences on self concept scores between sexes in New Trier and most differences in Cathedral. These findings would indicate that sex variables must be included in analyses of self concept, as well as differences between races in males and females.

Discussion of Hypothesis Four

The fourth hypothesis, which stated that there would be significant differences on self concept scores between schools was confirmed as significant by school, and by group, gender, and group by gender interactions between schools.

Schools

In a comparison of schools in the sample, Cathedral was higher than New Trier and Lane on conformity, while Lane and New Trier were higher than Cathedral on support, and New Trier and Cathedral were higher than Lane on independence. Lane was higher than Cathedral on recognition, and New Trier was slightly higher than Cathedral on recognition.

Cathedral, highest on conformity and lowest on support, represented the lowest academic and probably the lowest income level of the three schools. Findings in the current study would agree with studies related to SIV scores, where conformity scores were found to be highest in low SES and low income levels and among low academic achievers. Support, in

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[340] M. Rabban, "Sex Role Identification in Young Children in Two Diverse Groups," Psychology Monographs 42 (1960), pp. 81-158.

opposition, attributed to high achievers, was higher at New Trier and Lane than at Cathedral. While students at New Trier and Cathedral were higher on independence than Lane, they were also significantly older, and this was found to be a main factor related to the independence variable.

Bieri and Lobeck's study of adolescents found significantly higher dominance scores, of assertiveness and aggressiveness, in the upper class subjects and lower dominance in the lower class subjects.[341]

Differences between self concept of students by SES have been verified in a number of studies. A study of gifted students found SES correlated with self concept.[342] Georgeoff found white children of lower SES had lower self concept than white children of higher SES.[343] Another study, comparing two schools of high and low SES levels, did not find any influence from SES background on students' self perceptions, nor did students from lower SES communities demonstrate more negative attitudes towards themselves.[344] Using different measures, a study found no effects from social class, but did find that race and sex influenced emo-

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[341] J. Bieri and R. Lobeck, "Self Concept Differences in Relation to Identification, Religion and Social Class," Journal of Abnormal and Social Psychology 62 (1963), pp. 112-116.

[342] Dean K. McIntosh, "Correlates of Self Concept in Gifted Students," Unpublished Doctoral Dissertation, University of California, Los Angeles, 27 (1966).

[343] P. J. Georgeoff, "The Effect of the Curriculum upon the Self Concept of Children in Racially Integrated Fourth Grade Classes," Paper at the American Educational Research Association Annual Meeting, Chicago, (February, 1968).

[344] Donald Godbold, "A Comparison of Attitudes Towards School, Self Perception and Achievement of Eighth Grade Pupils Attending Junior High Schools in Communities of Different Levels of Economic Affluence," Unpublished Doctoral Dissertation, University of Michigan, Ann Arbor, 28 (1967).

tional states, physical well being and interests.[345]

While Cathedral and Lane were both representative of lower SES and mixed racial schools, Lane students were significantly higher on recognition than Cathedral, which may reflect the religious background of Cathedral students, since benevolence and recognition represent bipolar traits on a continuum. No differences were noted between New Trier and the other schools in the study.

SES and performance levels, as well as urban and suburban locations, private (Catholic) versus public schools and racial compositions between schools were compared and students were found to have different self concept scores depending upon the school which they attended. Differences in self concept may become more pronounced in secondary schools than in elementary schools. Elementary schools have been found to be more alike, whereas in secondary schools, school effects become more noticable.[346]

Gender Between Schools

Comparing self evaluation scores by gender between schools revealed no significant differences between New Trier males and Lane males. New Trier and Lane males were higher than males at Cathedral on support and males at Cathedral were higher than males at New Trier on benevolence. The higher support score may be attributed to higher achievers at New

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[345] Robert McDonald and Malcolm Gynther, "MMPI Differences Associated with Sex, Race and Social Class in Two Adolescent Samples," Journal of Consulting Psychology 27 (1963), pp. 112-116.

[346] Andrew Greeley and Peter Rossi, The Education of Catholic Americans (Chicago: Aldine, 1966).

Trier and Lane than Cathedral. The religious training at Cathedral may be responsible for the higher scores on benevolence for those male students compared to The religious training at Cathedral may be responsible for the higher scores on benevolence for those male students compared to males at New Trier. While not significantly different from Lane, New Trier males were also lower on benevolence than Lane males, which may be attributable to the high SES, white students New Trier, which differed from the other two schools in the sample. New Trier and Lane males were similar in negative binary variable correlations between reading and self esteem.

Females at Lane and New Trier were also higher than females at Cathedral on support. Cathedral females were higher on conformity than New Trier or Lane, and Lane females were higher than New Trier females on leadership. Both males and females at Lane and New Trier were higher on support than those at Cathedral, a trait attributed to higher achieving students.

Gender differences were found to exist between schools in the samples examined, as were correlations between reading and self evaluation scores of males and females.

Groups Between Schools

Tutored Groups

In the tutored groups at New Trier and Schurz, and the low level at Cathedral, New Trier students were significantly higher than Schurz and Cathedral on independence, and Cathedral students were significantly higher than Schurz on self esteem.

Because of the low numbers of females in the low academic achievement levels, males in these groups were compared. No significant differences on self evaluation scores were found, except that Cathedral low level males were significantly higher than New Trier tutored males on benevolence, as was the total sample of males in Cathedral.

Regular Groups

Comparing all students above the tutored levels at Cathedral and New Trier, and all students at Lane, New Trier and Cathedral were significantly higher than Lane on independence. Cathedral was significantly higher than New Trier on conformity. Lane was significantly higher than Cathedral on recognition, while New Trier was higher than Cathedral on recognition, at a level approaching significance , t = 1.97 (p = .051). New Trier and Lane were significantly higher than Cathedral on support.

Differences between males in these groups found Lane higher than Cathedral on support, and New Trier and Lane males higher on recognition than Cathedral males. No significant differences on self concept scores were found between New Trier and Lane males. Females at New Trier and Lane were higher than Cathedral females on support and Cathedral females were higher than Lane on self esteem. Cathedral females were higher on conformity than New Trier females and Lane females were nonsignificantly higher than Cathedral females on recognition, t = 1.96 (p = .052).

Comparing students in the regular group from Lane and students in the middle group at Cathedral, Lane was significantly higher on support and recognition, and Cathedral was significantly higher on independence. Of males in these groups, Lane males were significantly higher than Cathedral males on support and recognition, while females in these groups had no significant difference on self evaluation scores.

High Groups

Between the high level at New Trier, the honors group at Lane and the high level at Cathedral, no significant differences on self evaluation scores were found. Males in the high level at New Trier and the honors group at Lane were significantly higher than males in the high level at Cathedral on self esteem. Females in the high level at New Trier had no significant differences on self evaluation scores from females in the high levels at Cathedral and Lane. Lane females were significantly higher than Cathedral females on support, and Cathedral females were slightly higher than Lane females on self esteem, -1.99 (p = .052).

That no significant differences were found between high levels of achievers in each of the schools would substantiate the hypothesis that students formed their self concept on the success of their academic achievement level related to their own school. The self concepts may have been formed prior to entry into secondary school, where students had experienced academic success compared to the other students in their respective elementary schools. While causal claims cannot be made related to self concept and academic achievement, the relationship has been shown to exist. In this sense, these students were more like students in similar academic achievement levels at other schools than they were like students of different academic achievement levels in their own schools.

These findings concur with Coopersmith, who accounted for the small differences between self concept of children from varying SES levels, that "individuals gauge their individual worth by their achievement and treatment in their own interpersonal environments rather than by the

more general and abstract norms of success ... in direct terms of their day-to-day relationships."[347]

High level males at both New Trier and Lane were higher than high level males at Cathedral on self esteem. The traits measured on the self esteem scale reflects high conformity and benevolence traits and low recognition and support scores. Because these are combined traits, it can only be surmised that they are measuring these variables combined, and not the strength of the individual variables.

New Trier and Cathedral females shared the same self concept values, and no significant differences were found between New Trier and Lane, however, Lane females showed a higher value of support than Cathedral, which is a variable attributed to higher achievement levels.[348]

The regular level at New Trier was significantly higher than the high level at Cathedral on support. In these groups, New Trier males were significantly higher than Cathedral males on self esteem and females at New Trier females were significantly higher than Cathedral females on support.

Students in the regular group at Lane and the high level at Cathedral found Lane students were significantly higher than Cathedral on support, and Cathedral students were significantly higher than Lane on independence. Lane students were nonsignificantly higher than Cathedral students on recognition, t = 1.94 (p = .056). Males in these groups at Lane were significantly higher than Cathedral on self esteem and females at Lane were significantly higher than Cathedral on leadership and Ca-

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[347] S. Coopersmith, "Studies in Self Esteem," Scientific American, 218:2 (February, 1968), pp. 96-106.

[348] Gordon, Survey of Interpersonal Values Manual, pp. 20-22.

thedral significantly higher on independence.

Comparing only the highest level of Cathedral with the regular group at New Trier, and omiting the honors group and comparing only the regular students at Lane with the highest performers at Cathedral to more closely correlate student scores, male students were the same as on comparisons of the highest levels in each school, however, females in Lane were no longer significantly higher on support scores, although they were significantly higher for New Trier females, than Cathedral females. As discussed earlier, both New Trier and Lane females were found to be higher than Cathedral females on support, and this would be indicative of their higher academic levels over Cathedral students. While at Lane, it was due to females in the high levels, at New Trier it was due to females in the middle and high levels combined, and comparing only highest levels in each school did not find any difference. This would be another reason for examining each level within each group in future studies.

Discussion of School Context

In lecturing to hundreds of schools in the midwest, over the past ten years, the researcher observed differences in school climates within the schools, which seemed to vary greatly. The aspects of the school community, race, ethnic background, level of SES and income and academic level of the school may have caused students within the school to view themselves in certain ways. Further, this may explain the values which

students placed on learning and their attitudes toward school. Because it was suspected that school context, composition and climate may have affected student's attitudes and behavior, the question arose, "Would students in high performance schools value academic scores more than those students in low performance schools and, further, would they react differently to low academic scores than would students in low academic performance schools?", and "How would this relate to the students' self concepts?"

Brookover examined these questions and found that students in majority black schools were not as affected by low scores as were students in majority white schools, and that academic performance mattered more to the students in high SES schools than to students in low SES schools, whether white or black majority.[349]

Coleman also found that student self concept was based upon the student's ability to perform in those areas of activities which the school deemed important, and this varied by schools, depending on whether schools valued academic performance or athletic activities more.[350]

Two factors which might not be considered relevant in inner city schools, but which are important in an affluent suburb, are the high degree of competition and the pressure on the student to be accepted at the more prestigious universities and colleges. One study found more than three times as many gifted children in schools in an affluent community as in an average small town or city school.[351] In another study,

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[349] Brookover, et. al., Schools Make a Difference, pp. 96-97.

[350] Coleman, The Adolescent Society, p. 84.

[351] Thomas and Crescimbeni, Guiding the Gifted Child, p. 10.

it was found that students in higher SES groups were more self critical when they did not perform at top levels most of the time.[352]

In this study, both New Trier and Lane represented high performance schools while Cathedral represented the more academically able students from parochial schools in the area. Scores in reading and mathematics were higher at New Trier and Lane and number of students in college preparation classes exceeded that of other public schools in the Chicago area.[353] While exact numbers of Cathedral students who planned to attend college were not obtained, those students who were the highest achievers would be those expected to go on to college. For this reason, a comparison of these students in the high levels in each of the three schools was made. No significant differences on self concept were found. While academic scores in New Trier and Lane would have been higher than Cathedral, this study measured the relative level of reading achievement within each school with self esteem scores.

Those who were highest achievers found a measure of success related to the other students within their own school. Whether self concept is shaped by the school or by the relationship of the student to his or her peers, it is suggested, based upon the findings in this study, that the relative status of the student's level of achievement within the school was influential in forming self concepts.

Although mean scores on self concept differed between schools, no significant differences were found between the students in the higher levels within each of these three schools, nor tutored groups at New

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[352] Coles, "The Children of Affluence," pp. 53-64.

[353] Orfield, "The Chicago Study."

Trier and Schurz, which were the only two groups examined. Differences were greater within schools between high and low levels than they were between schools in the same levels of achievement. This would indicate that the level of achievement of students within their own schools had more effect on their self concept than did context of the school. The self concept of students in these levels were alike, no matter which school they attended. Thus, future studies should look at the equivalent levels of students when comparing between schools for more accurate conclusions.

In Chapter 1, demographic comparisons were made between schools. Schurz was included in the study to examine tutored groups of students in reading at a low performance, low SES urban school with those at a high performance, high SES suburban school. The low level reading students at Cathedral were also used in this comparison. Schurz contained 28.5% of low income students, New Trier, .9%, and Cathedral, although no data on this point was available, would be expected to fall in a lower income bracket, as well, based upon data from Coleman's comparisons of public, private and Catholic schools.[354] These differences in income and SES would also be expected to reflect differences in values related to students' attitudes toward education and college aspirations.

A comparison of the schools in The Illinois Report Card[355] showed the amount of resources for instruction of students, teacher's and administrator's salaries was higher for New Trier than for Lane and Schurz. The teacher student/ratio was also lower at New Trier than either Lane

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[354] Coleman, Hoffer, and Kilgore, High School Achievement: Public, Catholic and Private Schools Compared, p. 123.

[355] See Appendix A, Tables 45-47.

or Schurz, and, again, based upon Coleman data, would be expected to be higher at Cathedral.

The effect of resources and the teacher salaries, $40,000 in New Trier and $31,000 in the Lane and Schurz district, would imply that New Trier could choose more experienced and better qualified teachers. Per capita student tuition at New Trier was $5,500 as compared to $3,300 in the Lane and Schurz district, and probably lower at Cathedral, based upon the information from the Catholic diocese.[356]

New Trier and Lane were similar on performance levels, i.e., scores on the ACT, the SAT and math and reading, although they differed on SES factors, location and income levels, as reported on the Illinois Report Card Data. Income levels varied from .9% low income in New Trier to 19.% low income in Lane.[357]

In the total school sample, Cathedral was lower on support and higher on conformity than New Trier and Lane, and Lane was higher on recognition than Cathedral. As discussed earlier, this would agree with findings in studies using SIV scales which have suggested that low SES and low academic performance have higher conformity values, while support was valued more by those with higher SES and academic ability.[358] Cathedral, which was higher than New Trier and Lane on conformity values and lower on support than either school, was also the the lowest in academic scores and in SES background. New Trier and Lane, as high performance schools, had no significant difference between students on self evalua-

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[356] Cathedral case study, Chapter 4.

[357] See Appendix A, Table 45.

[358] Gordon, _Survey of Interpersonal Values Manual_, pp. 20-24.

tion scores. These findings imply that SES was not as important a determinant of self concept as was the performance level of students. Because the three schools in this sample were selective schools, in one or another sense, it is expected that parental involvement would be high and that concern for the students' education would be of value to these parents. The findings may be reflecting this fact, although it has not been directly assessed.

While Gordon's studies showed that gifted males and females, high achievers, and high SES students had higher scores on independence than their counterparts,[359] the present study found the variable of independence to be most highly related to age and gender.

Discussion of Age

The adolescent is in a fluctuating stage of formation of self concepts and age must be considered as a major factor in the self evaluation which a student makes. This is a time of searching for identity and may be as changeable a period as any time in the individual's development, which brings a word of caution, in labeling a child or making solid decisions on a student's self concept, which may change during adolescence.

Puberty is a time of physical change, emotional turbulence, pressures by peer groups, fear of not measuring up to expectations by teachers and parents and concern for personal appearance, and general social behav-

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[359] Ibid., pp. 20-24.

ior.[360] A positive self esteem is necessary during this transitional
period, where students have stress due to conflicts regarding indepen-
dence, sexuality, morality and vocational choice or career aspira-
tion.[361]

Adolescents' attitudes toward self and toward achievement, in a group
of pre, early and later adolescents, found the amount of attitudinal
change at each age level varied with the kind of attitude being as-
sessed.[362] Early adolescence was found to be a time of major quantita-
tive and qualitative change in important attitudes and perceptions, and
the greatest amount of change occuring in attitudes toward achievement
was found in the older adolescent group. Preadolescence was found to be
the period where the most marked change in locus of control attitudes
took place.

SIV studies have indicated that age was a strong correlate of inde-
pendence and conformity traits. In medical students between the first
and second year, and nurses in their first year and senior years, sig-
nificant increases were found on independence and significant drops were
found on conformity.[363] Male college students' scores, upon entrance and

[360] Jerome Kagan, "The Conception of Early Adolescence," Journal of the
American Academy of Arts and Sciences (1971), pp. 190-196.

[361] W. W. Purkey and J. M. Novak, Inviting School Success (Wadsworth
Publishing, Belmont, Ca. 1984).

[362] Prawat, Jones and Hampton, "Longitudinal Study of Attitude Develop-
ment in Pre, Early and Later Adolescent Samples," p. 365.

[363] Gordon and I. Mensh, "Values of Medical School Students at Different
Levels of Training," Journal of Educational Psychology 53 (1962), pp.
48-51; B. Woodward, "An Investigation of Some Interpersonal Values of
Freshman and Senior Nursing Students at the Texas Womens' University,"
Master's Thesis, Texas Womens' University, (August 1962); Gordon, Survey
of Interpersonal Values Manual, pp. 17-19.

graduation two years later from a community college, found increases on independence and decreases on conformity scores.[364]

Even though the population of this sample involved high school students, the current findings would agree with those of college age students. The present study found independence especially related to age in many segments of the population being examined, although conformity was not as strongly related.

Students at New Trier and Cathedral were significantly older and significantly higher on independence than Lane. Cathedral students were also in higher grade levels than Lane. There were more females at Cathedral than at Lane and they also were in higher grade levels than females at Lane.

Correlations between independence and age were found in the New Trier sample, and females who were older scored higher on independence than males. Age and benevolence correlated negatively for the regular group. The total sample of males at New Trier had no significant correlations between self concept and age but, for females, age and support were negatively correlated. Age and leadership were positively correlated and age and benevolence were negatively correlated for males in the regular group, but for females in the regular group, age was not significantly correlated with any self evaluation scores.

In the middle level, age was not significantly correlated with self concept, although females were in higher grade levels and were older (p = .052) than males. In the high level, age correlated positively

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[364] E. Rozecki, "The Effect of Short Term Counseling of Heroin Addicts under Office versus Living Quarters Setting," Ph.D. dissertation, State University of New York at Albany, (1969), in Gordon (1976b), p. 18.

with recognition and independence and negatively with benevolence and self esteem. There were also more females than males in this level.

At Lane, where females were in higher grade levels (p = .098) and males were older (p = .087) than females, at nonsignificant levels, females were significantly higher than males on independence.

At Cathedral, age and self esteem were positively correlated and age and recognition negatively correlated. For the low group of males, age and leadership correlated negatively, for the middle group of males, age and recognition correlated negatively and age and conformity correlated positively. In high level males there was no significant correlation with age, but females had significant negative correlations between age and support and age and recognition.

The low level was older than the high level and higher on conformity while the high level was higher on independence and had more females than the low level. Females in the low level were lower on benevolence and older than the high level females.

Low and middle students were not significantly different on age. Middle level students were older and in higher grade levels than high level students, with more females in the high level.

The older males in Cathedral were the lower achieving males and were also higher on conformity than the high achieving males. Middle and high level males were higher on self esteem than the low level, and the middle level was higher than the high level. This reflects the combined positive traits of benevolence and conformity and the negative traits of recognition and support which the self esteem scale measures.[365]

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[365] As defined in Chapter 3 of this study.

Independence was more related to age than any other variable, where older students were higher on independence. Although conformity and benevolence also showed some relationships to age, these were not consistent, and other intervening variables were suspected as having an effect. Females in the low and middle level were older than those in the high reading level. That no other significant differences between females, either in the low and middle levels or the high and middle levels were found would indicate that females in Cathedral share many of the same values. As stated earlier, these students are a homogeneous group, and may reflect the Catholic school training as well as the home background values. Age would have been expected to show different self concept scores, however, the fact that it did not would indicate that similarity in students' background was more important to self concept than was their age. It is also to be recalled that students' self concepts change·with age and, therefore, allowances should be made to accommodate for these changes.

Discussion of Race

In the present study, while race, per se, was not examined, the schools and different racial proportions. The high performance, high SES suburban school was also nearly 100% white, while the urban schools represented mixed racial populations.

Studies have indicated that race, related to achievement, affects students differently. Mean scores of self concept in black schools were

significantly higher than those in white schools, a finding which Brook-
over suggested may have been due to a different set of evaluations of
ability used by majority black schools and middle class white
schools.[366] The black students evaluations, based on different standards
than those set up by middle class whites, may be made by family members,
fellow students and others in the school and the neighborhood, who are
predominantly black.[367]

A study of junior college students found no significant difference
between black and white students, when controlling for SES. However,
significant differences existed between SES levels within the black
groups, the lower the level, the higher the conformity score, indicating
a need to control SES in research concerned with racial comparisons.[368]
Brookover found SES was related to each of the black and the white
school samples. Higher SES schools had slightly higher mean school self
concept scores than lower SES schools. Schools with majority black stu-
dents had higher self concepts than high SES white schools, however,
white students in low SES schools had lower self concepts.[369]

The racial variables were more highly related to climate variables
than the SES of the student body. High SES white schools had lower
feelings of futility, indicating they could master the school social
system, but that they evaluated their own ability lower than students in

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[366] Brookover, et. al., Schools Make a Difference, pp. 96-97.

[367] Ibid.

[368] C. Sherman, "An Investigation of the Interpersonal Values of Negro
and White Junior College Students," Journal of Negro Education 40
(1971), pp. 356-360; Gordon, Survey of Interpersonal Values Manual, p.
20.

[369] Brookover, et. al., Schools Can Make a Difference, p. 98-103.

black schools.[370] A high sense of futility has been verified in majority minority black and Hispanic schools. These students, therefore, did not feel that their lack of achievement was due to their own efforts, and did not lower their self concept of their abilities. Reversed from the black schools, students in low SES white schools reflected a relationship in which high mean self concept was associated with a high sense of futility.[371]

The current study, related to these findings, would suggest that, although there were no significant differences in mean self concept scores between high level students in each of the sample schools, and the mean self concept scores may be similar, that the reasons leading to the self concept scores may vary greatly. Black students, as discussed above, may overrate their self concepts and white high SES students may be far more critical of their self concept as related to academic ability. A further look at this aspect would be in order.

Discussion of Motivation

To the degree which a student believes his or her own efforts are responsible for the academic outcomes, the more he or she forms a self concept related to success or failure. The motivational aspect of reading has been found to be an important factor where expectancy effects

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[370] Ibid.

[371] B. R. Hare, "Racial and Socioeconomic Variations in Preadolescent Area-specific and General Self Esteem," International Journal of Intercultural Relations 1:3 (1977), pp. 31-51.

are related to self concept.

In perceiving causality, the main issue is whether to attribute an event to internal states or to external forces. External attributions would accredit causality to something external, as the environment, another person, role constraints or luck, while internal attributions would involve personality traits, motives, emotions, attitudes, effort, abilities and mood.[372] Those students who have control over their own behavior and who perceive an outcome of their behavior to be a consequence of their own action will perform tasks better than individuals who perceive behavioral outcomes as a result of luck, fate, or "powerful others".[373]

The adolescent who places blame on society for his or her failure often alleviates his or her own sense of duty and responsibility. The student who accepts his or her own efforts and ability for his or her success or failure is more able to build a positive self esteem than the student who places the blame on external causes. It may be easier for the minority low income student to accept this lower status as the reason for failure and to blame society, than for the person who has had socioeconomic advantages and fails because of his or her ability.[374]

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[372] B. Weiner, "A Theory of Motivation for Some Classroom Experiences," Journal of Educational Psychology 71 (1979), pp. 3-25.

[373] Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," p. 609.

[374] Miles Hewstone and Serge Moscovici, "Social Representations and Social Explanations: From the 'Naive' to the 'Amateur' Scientist," Attribution Theory, ed. Hewstone (Oxford, England, Basil Blackwell Publishers, 1983), p. 75.

One study found that the adolescent with higher levels of self esteem was sensitive to social relationships and less fearful of engaging in self revelation. Adolescents who were adept at self monitoring had mastered the social competencies known as poise, ascendance, self assurance, and interpersonal adequacy, while low self monitoring youth had not. Low self esteem adolescents could, in some cases, mask their negative self findings through self monitoring and, thus, present a more socially desirable front to others. Females with lower self esteem displayed greater ability in social pretense than males.[375]

These attitudes may be reflected in the present study, where female students in the high SES white school where females had many more correlations between self concept scores and reading achievement levels than did females in racially mixed schools.

In an examination of the low level in Cathedral, the males in the lowest segment of this level valued leadership and independence, while females who were the lowest readers in this group valued conformity more. Thus, this may be an example of females internalizing their feelings while males externalized theirs. Males with low self esteem and high self monitoring could be engaging in defensive postures to protect a perceived negative self while females with lower self esteem could be displaying a greater social presence than males.[376]

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[375] Ibid., p. 569.

[376] Hauck and Loughead, "Adolescent Self-Monitoring," pp. 567-574.

Conclusions

The design of this study allowed for specific dimensions of the subjects' self concept to be examined, as well as global self concept. Thus, where some studies have failed to find significant differences between groups and subgroups, the variables under study were more sensitive to comparison. Using academic level of achievement as unit of study, rather than using the entire school or groups within schools, more specific information was disclosed.

SES was defined by the location of the schools, as well as from the data provided by the Illinois Report Cards which indicated the percentage of low income families represented in each school.

Aggregate measures were used to indicate SES, for the context and composition of the school, rather than individual scores. Social class variables were thus defined by the school, and schools reflected the SES background and cultural values in a total composite. Ethnic and racial compositions were combined within the context, with no specific distinctions made between the variables. It is suggested that future studies separate these variables so that each may be more closely examined, especially the ethnic factors.

Differences between schools were found to exist, as students within the schools perceived themselves differently on the specific dimensions of the self concept.

Based upon the findings of this study, greater expenditures of money would not necessarily improve students' self concept. Raising the level of learning to the highest level would, of course, benefit all students.

Although students who performed at the highest levels of achievement in each of the sample schools had no significant differences on self concepts, whether from high or low expenditure schools, students in the middle and low levels may be improved to more closely equate with the high levels in each school. The fact that the correlation between students' reading achievement and self concept was found to be significant indicates that academic achievement and self concept were related, even though causal ties could not be established. The scores were directly related to the academic level in the school, rather than to the norms or averages of all schools. Gender differences were found to exist within schools, especially in the lower SES school, with regard to self concept.

Implications for School Personnel

The achievement of a favorable attitude toward oneself has been regarded as important by personality social psychologists. While the reasons one feels good about oneself may vary, the need to be accepted, approved and respected is universal. As discussed throughout this study, achievement, to some degree, is dependent on how children view themselves and their ability.

The relationship between self concept and academic achievement has been shown to exist. It would, therefore, indicate that improvement in either area would benefit the student in the other. Teachers and counselors should be made aware of the findings of research and this current study to be able to recognize and meet students' needs.

More attention needs to be given to the "average" students, who often may be underachievers. Programs designed to to improve self concept of underachievers in the classroom have had positive results and students improved in math and reading as they progressed in viewing themselves more positively.[377]

Because the variables of self concept and academic achievement are interwoven, teachers need to be alert to signals which would identify behavior or academic performance to target problem areas of students. Teachers should also be aware of motivational principles, in maintaining and enhancing student self-esteem and catering to individual differences.

Methods may be applied to educational situations with regard to promoting success in the learning process of students, building self-esteem, dealing with students who often disregard effort as the cause of success or failure, in working with those who ascribe success to external causes and failure to lack of ability, and changing student's causal perceptions.

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[377] J. Van Boven, "Improving Self-Concept: A Possible Aid to Increased Achievement and More Desirable Behavior," Unpublished doctoral dissertation, Nova University, Ft. Lauderdale, Fla., (April, 1973); Fresh State Minischool, Patricia Harrison, Director. Division for Grants Administration, ESEA Title IV -C Program, 1980-81.

Suggestions for Future Studies

The population of this study included students from three selective secondary schools. An examination of disadvantaged students in schools with high dropout rates and low academic achievement rates would be useful to compare with those in the present study. As well as an inner city low SES, low performance school, studies incorporating a segregated black school, segregated and desegregated inner city schools, separated by tracks, to examine for group effects, and a high SES, segregated black public school located in a neighborhood of upwardly mobile, high income, professional families (such as Chatham High School in Chicago), would also be worthy of further examination. A comparison of rural schools with urban and suburban schools would also be useful to determine differences in the way students view themselves.

In the present study, students' I.Q. was not examined and overachievers and underachievers, therefore, were not identified. A future study incorporating these data would also be useful.

An important finding in this study was the age factor. Further studies incorporating different age levels would be of benefit, and separating adolescents from adults is especially important, due to the subculture which they inhabit. Norms and values of the adolescent are unlike those of the adults' world and the childs' world.

While the bilingual factor was not discussed in this study, differences related to this variable were found throughout the sectors as being related to student's self concept and reading achievement. It is suggested that the importance of bilingual variables be defined for Hispanic, Asian and other groups.

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APPENDIX A

School Data

	New Trier	Lane	Schurz	Cathedral
TABLE 45				
School Variables Examined				
Sample Population	64	66	17	201
Race	white	mixed	mixed	mixed
SES	high	middle	low	low-middle
Academic Performance	high	high	low	low-middle
Bilingual Data	no	yes	no	yes
Academic Scores	reading vocab power	reading math	none	reading math
SIV scale	yes	yes	yes	yes
Self Esteem Scale	yes	yes	yes	yes
Groups	regular, tutored	honors, regular	tutored	regular
Levels	high, middle, low			high, middle, low

TABLE 46

Student Data

	New Trier	Lane	Schurz	State
Student Population	3,829	4,665	3,459	1,800,584
Low income (%)	.9	19.	28.5	23.7
Student Mobility	4.6	6.2	34.5	55.9
Not promoted	.4	3.5	34.2	
Graduation Rate (1982-1986)	98.5	89.	53.5	76.3
Attendance rate	94.4	91.2	80.	93.6
College prep.	95.	100.		55.9
ACT Test Scores	22.8	20.	12.2	19.1
Test takers	83.7	83.5	29.1	54.4
English scores	21.9	19.5	13.	19.1
Math Scores	23.8	19.5	9.9	18.9
Composite Scores	23.1	20.2	12.8	19.9
SAT Test Test takers	93.5	18.		NA
Verbal scores (Range from 200 to 800)	482	481		466
Math Scores	539	535		519
Math & Verbal	1,021	1,016		985

(Perfect score, 1,600; National mean, 906)

(From Illinois Report Card Data, 1985-1986)

TABLE 47

Resources

	New Trier	Lane	Schurz	State
Instructional Resources	22.1	26.	25.2	20.3
(Administration, teacher/student ratio)	15.9 to 1	(dist. 19.8 to 1)		18.3 to 1
Average Teacher's salary	39,931	(dist. 31,050)		27,014
Average Administrator's Salary	65,750	(dist. 42,757)		41,284
Per pupil Expenditure	5,758	(dist. 4,182)		3.526
Per capita tuition	5,542	(dist. 3,318)		3,071
(In dollars)				
% of expenditures for operating Expenses	80.6%	(dist. 88.2%)		77.%

(From Illinois Report Card Data, 1985-1986)

TABLE 48

School Mean Scores

	Means	Standard Deviations

Support

New Trier	59.52	25.54
Lane Tech	60.38	27.04
Cathedral	45.70	27.05
Schurz	45.28	27.04

Conformity

New Trier	31.28	26.66
Lane Tech	33.06	25.22
Cathedral	42.87	25.82
Schurz	44.52	28.23

Recognition

New Trier	48.55	30.32
Lane Tech	50.11	29.69
Cathedral	41.27	27.35
Schurz	53.95	30.55

Independence

New Trier	58.66	25.85
Lane Tech	46.20	26.53
Cathedral	55.56	25.61
Schurz	43.62	30.51

Benevolence

New Trier	48.58	27.59
Lane Tech	47.29	25.51
Cathedral	45.26	26.96
Schurz	45.14	28.42

Leadership

New Trier	48.30	26.74
Lane Tech	52.12	31.24
Cathedral	49.14	25.55
Schurz	54.33	22.90

Self Esteem

New Trier	18.19	14.35
Lane	18.36	16.38
Cathedral	19.68	13.01
Schurz	10.83	11.36

TABLE 49

Males

	Means	Standard Deviations
Support		
New Trier	60.81	26.60
Lane Tech	62.80	28.88
Cathedral	46.58	28.48
Schurz	47.11	23.71
Conformity		
New Trier	33.71	25.57
Lane Tech	37.89	27.11
Cathedral	44.01	24.93
Schurz	44.89	26.58
Recognition		
New Trier	51.00	34.12
Lane Tech	50.06	30.90
Cathedral	39.22	24.91
Schurz	56.47	30.13
Independence		
New Trier	52.42	27.75
Lane Tech	40.17	26.82
Cathedral	49.54	26.01
Schurz	40.32	30.19
Benevolence		
New Trier	44.87	31.47
Lane Tech	50.89	27.77
Cathedral	57.61	25.01
Schurz	44.32	29.77
Leadership		
New Trier	53.10	27.53
Lane Tech	46.31	30.05
Cathedral	44.08	25.69
Schurz	52.47	23.33
Self Esteem		
New Trier	18.24	14.24
Lane	20.94	14.69
Cathedral	16.63	13.94
Schurz	12.19	10.19

TABLE 50

Females

	Means	Standard Deviations

Support

New Trier	58.30	24.86
Lane Tech	57.57	24.92
Cathedral	45.19	26.29
Schurz	28.00	38.18

Conformity

New Trier	29.00	25.92
Lane Tech	27.43	21.94
Cathedral	42.21	26.40
Schurz	41.00	56.57

Recognition

New Trier	46.24	26.60
Lane Tech	50.17	28.72
Cathedral	42.46	28.70
Schurz	30.00	32.53

Independence

New Trier	64.51	22.82
Lane Tech	53.23	24.81
Cathedral	59.06	24.81
Schurz	75.00	5.66

Benevolence

New Trier	52.06	23.32
Lane Tech	43.10	22.33
Cathedral	44.40	26.96
Schurz	53.00	8.49

Leadership

New Trier	43.79	25.57
Lane Tech	58.90	31.73
Cathedral	52.07	25.11
Schurz	72.00	.0

Self Esteem

New Trier	18.14	14.65
Lane	15.45	17.90
Cathedral	21.49	12.13
Schurz	11.00	.0

TABLE 51

Tutored Groups

	Means	Standard Deviations
Support		
New Trier	49.50	27.13
Cathedral	46.38	28.20
Schurz	45.29	27.74
Conformity		
New Trier	43.08	22.61
Cathedral	47.32	23.97
Schurz	44.52	28.23
Recognition		
New Trier	47.67	33.45
Cathedral	44.04	26.04
Schurz	53.95	30.55
Independence		
New Trier	64.25	22.17
Cathedral	52.73	27.35
Schurz	43.62	30.51
Benevolence		
New Trier	38.42	24.99
Cathedral	46.76	28.14
Schurz	45.14	28.42
Leadership		
New Trier	54.17	20.65
Cathedral	46.20	26.74
Schurz	54.33	20.90
Self Esteem		
New Trier	18.19	14.35
Cathedral	17.58	13.08
Schurz	10.83	11.36

TABLE 52

All Groups Above Tutored Level

	Means	Standard Deviations
Support		
New Trier	61.83	24.86
Lane Tech	60.38	27.04
Cathedral	45.89	26.31
Conformity		
New Trier	28.56	25.74
Lane Tech	33.06	25.22
Cathedral	39.57	26.98
Recognition		
New Trier	48.75	29.90
Lane Tech	50.11	29.69
Cathedral	39.21	28.34
Independence		
New Trier	57.37	26.54
Lane Tech	46.20	26.53
Cathedral	57.52	24.34
Benevolence		
New Trier	50.92	27.85
Lane Tech	47.29	25.51
Cathedral	50.96	26.37
Leadership		
New Trier	46.97	27.92
Lane Tech	52.12	31.24
Cathedral	50.93	24.79
Self Esteem		
New Trier	19.51	13.81
Lane	18.36	16.38
Cathedral	18.68	13.01

TABLE 53

Tutored Groups - Males

	Means	Standard Deviations
Support		
New Trier	58.25	21.68
Cathedral	47.90	28.17
Schurz	47.11	23.71
Conformity		
New Trier	40.50	16.70
Cathedral	49.08	24.06
Schurz	44.89	26.58
Recognition		
New Trier	48.25	38.88
Cathedral	42.48	24.10
Schurz	56.47	30.13
Independence		
New Trier	64.00	24.26
Cathedral	46.58	26.30
Schurz	40.32	30.19
Benevolence		
New Trier	31.25	24.13
Cathedral	57.45	26.70
Schurz	44.32	29.77
Leadership		
New Trier	57.63	22.41
Cathedral	39.20	25.65
Schurz	52.47	23.33
Self Esteem		
New Trier	11.92	15.81
Cathedral	15.79	14.75
Schurz	12.19	10.19

TABLE 54

Support

	Means	Standard Deviations
Lane Honors	60.38	26.91
Lane Regular	60.38	27.42
New Trier Regular	61.82	24.86
New Trier Tutored	49.50	27.13
Cathedral Regular	45.89	26.31
Cathedral Low	46.38	28.20
Schurz Tutored	45.29	24.74

TABLE 55

Conformity

	Means	Standard Deviations
Lane Honors	33.29	27.43
Lane Regular	32.95	24.43
New Trier Regular	28.56	25.74
New Trier Tutored	43.08	22.61
Cathedral Regular	39.57	26.98
Cathedral Low	47.32	23.97
Schurz Tutored	44.52	28.23

TABLE 56

Recognition

	Means	Standard Deviations
Lane Honors	41.33	25.19
Lane Regular	54.30	31.01
New Trier Regular	48.75	29.90
New Trier Tutored	47.67	33.45
Cathedral Regular	39.22	28.34
Cathedral Low	44.04	26.04
Schurz Tutored	53.95	30.55

TABLE 57

Independence

	Means	Standard Deviations
Lane Honors	51.86	25.24
Lane Regular	43.50	26.99
New Trier Regular	57.37	26.54
New Trier Tutored	64.25	22.77
Cathedral Regular	57.52	24.34
Cathedral Low	52.73	27.35
Schurz Tutored	43.62	30.51

TABLE 58

Benevolence

	Means	Standard Deviations
Lane Honors	52.57	23.88
Lane Regular	44.77	26.14
New Trier Regular	50.92	27.85
New Trier Tutored	38.42	24.99
Cathedral Regular	50.96	26.37
Cathedral Low	46.76	28.14
Schurz Tutored	45.14	28.42

TABLE 59

Leadership

	Means	Standard Deviations
Lane Honors	51.61	28.91
Lane Regular	51.10	36.39
New Trier Regular	46.94	27.95
New Trier Tutored	54.17	20.65
Cathedral Regular	50.93	24.79
Cathedral Low	46.26	26.40
Schurz Tutored	54.33	22.90

TABLE 60

Self Esteem

	Means	Standard Deviations
Lane Honors	18.52	11.42
Lane Regular	18.30	18.37
New Trier Regular	19.51	13.81
New Trier Tutored	11.92	15.81
Cathedral Regular	21.35	12.72
Cathedral Low	17.58	13.08
Schurz Tutored	10.83	11.36

Self Evaluation Correlations

TABLE 61

Correlations by School

	New Trier	Lane	Cathedral	Schurz
	r	r	r	r
Support	.148	.165	-.221	.053
Conformity	-.063	-.014	.098	.054
Recognition	.058	.085	-.150	.079
Independence	.090	.136	.083	.096
Benevolence	.001	-.022	.023	.032
Leadership	-.028	-.041	-.031	.034
Self Esteem	-.019	-.012	.080	-.127

TABLE 62

Correlations by School by Gender

School X Male

	New Trier	Lane	Cathedral
	r	r	r
Support	.112	.145	-.082
Conformity	-.063	-.014	.098
Recognition	.065	.058	-.104
Independence	-.015	-.171	-.080
Benevolence	-.043	.030	.174
Leadership	.038	-.111	-.045
Self Esteem	-.011	.053	-.078

School X Female

	New Trier	Lane	Cathedral
Support	.087	.118	-.201
Conformity	-.124	-.102	.116
Recognition	.014	.063	-.051
Independence	.133	-.025	.140
Benevolence	.043	-.045	-.130
Leadership	-.074	.056	.088
Self Esteem	-.014	-.084	-.134

TABLE 63

Support

	r
New Trier	.148
Lane	.165
Cathedral	-.221
Schurz	.053

	School X Male
New Trier	.112
Lane	.145
Cathedral	-.082

	School X Female
New Trier	.087
Lane	.074
Cathedral	-.158

	School X Reading
New Trier	.108
Lane	-.022
Cathedral	.054

	School X Reading X Male
New Trier	.035
Lane	-.029
Cathedral	.043

	School X Reading X Female
New Trier	.117
Lane	.005
Cathedral	.033

TABLE 64

Conformity

r

New Trier	-.140
Lane	-.109
Cathedral	.169
Schurz	.054

School X Male

New Trier	-.063
Lane	-.014
Cathedral	.098

School X Female

New Trier	-.124
Lane	-.136
Cathedral	.092

School X Reading

New Trier	-.109
Lane	.010
Cathedral	-.130

School X Reading X Male

New Trier	-.037
Lane	.024
Cathedral	-.105

School X Reading X Female

New Trier	-.116
Lane	-.019
Cathedral	-.082

TABLE 65

Recognition

	r
New Trier	.058
Lane	.085
Cathedral	-.150
Schurz	.079

	School X Male
New Trier	.065
Lane	.058
Cathedral	-.104

	School X Female
New Trier	.014
Lane	.055
Cathedral	-.067

	School X Reading
New Trier	.052
Lane	-.091
Cathedral	-.009

	School X Reading X Male
New Trier	-.035
Lane	.024
Cathedral	.029

	School X Reading X Female
New Trier	.109
Lane	-.003
Cathedral	-.050

TABLE 66

Independence

r

	r
New Trier	.090
Lane	.136
Cathedral	.083
Schurz	.096

School X Male

New Trier	-.015
Lane	-.171
Cathedral	-.080

School X Female

New Trier	.133
Lane	-.005
Cathedral	.153

School X Reading

New Trier	.068
Lane	.059
Cathedral	.034

School X Reading X Male

New Trier	.051
Lane	.068
Cathedral	-.027

School X Reading X Female

New Trier	.045
Lane	.002
Cathedral	.089

TABLE 67

Benevolence

	r
New Trier	.001
Lane	-.022
Cathedral	.023
Schurz	.032

	School X Male
New Trier	-.043
Lane	.030
Cathedral	.174

	School X Female
New Trier	.043
Lane	-.062
Cathedral	-.115

	School X Reading
New Trier	-.030
Lane	.076
Cathedral	.036

	School X Reading X Male
New Trier	.037
Lane	.078
Cathedral	-.025

	School X Reading X Female
New Trier	-.080
Lane	.019
Cathedral	.087

TABLE 68

Leadership

r

	r
New Trier	-.028
Lane	-.041
Cathedral	-.031
Schurz	.043

School X Male

	School X Male
New Trier	.038
Lane	-.111
Cathedral	-.045

School X Female

	School X Female
New Trier	-.074
Lane	.104
Cathedral	.062

School X Reading

	School X Reading
New Trier	.012
Lane	-.045
Cathedral	-.055

School X Reading X Male

	School X Reading X Male
New Trier	.009
Lane	-.048
Cathedral	-.029

School X Reading X Female

	School X Reading X Female
New Trier	.008
Lane	-.008
Cathedral	-.049

TABLE 69

Self Esteem

r

New Trier	-.019
Lane	-.012
Cathedral	.080
Schurz	-.127

School X Male

New Trier	-.011
Lane	.053
Cathedral	-.078

School X Female

New Trier	-.014
Lane	-.073
Cathedral	.148

School X Reading

New Trier	-.111
Lane	-.047
Cathedral	.083

School X Reading X Male

New Trier	-.017
Lane	-.041
Cathedral	.015

School X Reading X Female

New Trier	-.143
Lane	-.023
Cathedral	.110

APPENDIX B

Letter for Permission to Examine Students

Dr. Roderick Bickert, Superintendent
New Trier High School
385 Winnetka Avenue
Winnetka, Illinois 60093

Dear Dr. Bickert:

   Mrs. Doris Gross, a doctoral student in educational research,
would like to have your permission to gather some data for a re-
search project that she has been involved in the past year.

   Mrs. Gross is exploring the possible relationships between self
esteem and reading levels. This is an important area of research
that also has many practical applications. Mrs. Gross is attempt-
ing to broaden the scope of her research to include several
schools, both urban and suburban. She has identified your school
as one that would be very helpful in gathering additional data.

   Mrs. Gross is well qualified to carry out this type of research.
She is cooperative and pleasant to work with. If you will permit
her to gather this information, she would, of course, first clear
all procedures with you, as well as assuring complete anonymity for
all participants.

   I hope you would seriously consider her request. Please feel
free to call me if you require any additional information. Thank
you for your time and consideration.

Sincerely,
Steven I. Miller
Department of Foundations
School of Education
Loyola University

SIV Questionnaire

	M	L
To be free to do as I choose		
To have others agree with me		
To make friends with the unfortunate		
To be in a position of not having to follow orders		
To follow rules and regulations closely		
To have people notice what I do		
To hold an important job or office		
To treat everyone with extreme kindness		
To do what is accepted and proper		
To have people think of me as being important		
To have complete personal freedom		
To know that people are on my side		
To follow social standards of conduct		
To have people interested in my well being		
To take the lead in making group decisions		
To be able to do pretty much as I please		
To be in charge of some important project		
To work for the good of other people		
To associate with people who are well known		
To attend strictly to the business at hand		
To have a great deal of influence		
To be known by name to a great many people		
To do things for other people		
To work on my own without direction		
To follow a strict code of conduct		
To be in a position of authority		
To have people around who will encourage me		
To be friends with the friendless		
To have people do good turns for me		
To be known by people who are important		
To be the one who is in charge		
To conform strictly to the rules		
To have others show me that they like me		
To be able to live my life exactly as I wish		
To do my duty		
To have others treat me with understanding		
To be the leader of the group I'm in		
To have people admire what I do		
To be independent in my work		
To have people act considerately toward me		
To have other people work under my direction		
To spend my time doing things for others		
To be able to lead my own life		
To contribute a great deal to charity		
To have people make favorable remarks about me		

	M	L
To be a person of influence		
To be treated with kindness		
To always maintain the highest moral standards		
To be praised by other people		
To be relatively unbound by social conventions		
To work for the good of society		
To have the affection of other people		
To do things in the approved manner		
To go around doing favors for other people		
To be allowed to do whatever I want to do		
To be regarded as the leader		
To do what is socially correct		
To have others approve of what I do		
To make decisions for the group		
To share my belongings with other people		
To be free to come and go as I want to		
To help the poor and needy		
To show respect to my superiors		
To be given compliments by other people		
To be in a very responsible position		
To do what is considered conventional		
To be in charge of a group of people		
To make all of my own decisions		
To receive encouragement from others		
To be looked up to by other people		
To be quick in accepting others as friends		
To direct others in their work		
To be generous toward other people		
To be my own boss		
To have understanding friends		
To be selected for a leadership position		
To be treated as a person of some importance		
To have things pretty much my own way		
To have other people interested in me		
To have proper and correct social manners		
To be sympathetic with those who are in trouble		
To be very popular with other people		
To be free from having to obey rules		
To be in a position to tell others what to do		
To always do what is morally right		
To go out of my way to help others		
To have people willing to offer me a helping hand		
To have people admire me		
To always do the approved thing		
To be able to leave things lying around if I wish		

Self Esteem Questionnaire

"0" If not true

"1" If somewhat true

"2" If largely true

"3" If true

TEST FOR SELF-ESTEEM

Score	Statement of Action or Condition
_____ 1.	I feel inferior to others.
_____ 2.	I feel warm and happy toward myself.
_____ 3.	I feel inadequate to handle new situations.
_____ 4.	I feel warm and friendly toward all I contact.
_____ 5.	I usually condemn myself for my mistakes and shortcomings.
_____ 6.	I am free of any shame, blame, guilt or remorse.
_____ 7.	I have a driving need to prove my worth and excellence.
_____ 8.	I have great enjoyment and zest for living.
_____ 9.	I am concerned about what others think and say of me.
_____ 10.	I can let others be "wrong" without attempting to correct them.
_____ 11.	I hunger for recognition and approval.
_____ 12.	I am free of emotional turmoil, conflict and frustration.
_____ 13.	Losing usually causes me to feel resentful and "less than."
_____ 14.	I anticipate new endeavors with quiet confidence.
_____ 15.	I am prone to condemn and wish to punish others.
_____ 16.	I do my own thinking and make my own decisions.
_____ 17.	I often defer to others on account of their wealth or prestige.
_____ 18.	I willingly take responsibility for the consequences of my actions.
_____ 19.	I am inclined to exaggerate and lie to maintain an image.
_____ 20.	I am free to give precedence to my own needs and desires.
_____ 21.	I tend to belittle my talents, possessions and achievements.

Score	Statements
_____ 22.	I am free to speak up for my own opinions and convictions.
_____ 23.	I deny, alibi, justify or rationalize my mistakes and defeats.
_____ 24.	I am poised and comfortable among strangers.
_____ 25.	I am critical and belittling of others.
_____ 26.	I am free to express love, anger, hostility, resentment, joy, etc.
_____ 27.	I am vulnerable to others' opinions, comments and attitudes.
_____ 28.	I rarely experience jealousy, envy or suspicion.
_____ 29.	I am a "professional people pleaser."
_____ 30.	I am unprejudiced toward racial, ethnic and religious groups.
_____ 31.	I am fearful of exposing my "real self."
_____ 32.	I am considerate, sincere and generous with others.
_____ 33.	I often blame others for my handicaps, problems and mistakes.
_____ 34.	I rarely feel uncomfortable, lonely and isolated when alone.
_____ 35.	I am a compulsive "perfectionist."
_____ 36.	I accept compliments and gifts without embarrassment or obligation.
_____ 37.	I am often compulsive about eating, smoking, talking or drinking.
_____ 38.	I am appreciative of others' achievements and ideas.
_____ 39.	I shun new endeavors because of fear of mistakes or failure.
_____ 40.	I make and keep friends without effort.
_____ 41.	I am often embarrassed by the actions of my family or friends.
_____ 42.	I readily admit my mistakes, shortcomings and defeats.
_____ 43.	I experience a strong need to defend my acts, opinions and beliefs.
_____ 44.	I take disagreement without feeling "put down", or rejected.
_____ 45.	I have a strong need for confirmation and agreement.
_____ 46.	I am eagerly open to new ideas and proposals.
_____ 47.	I judge my self-worth by comparison with others.
_____ 48.	I am free to think any thoughts that come into my mind.
_____ 49.	I frequently boast about myself, my possessions and achievements.
_____ 50.	I accept my own authority and move on my own initiative.
_____	NET SCORE OF SELF-ESTEEM INDEX.

APPENDIX C

CORRELATIONS BETWEEN SIV SCALES AND COGNITIVE MEASURES

Sample	N	Measure	S	C	R	I	B	L
College students	111	CQT—Verbal	.17	-.20*	-.03	.05	.04	.03
		Quantitative	.03	-.05	.12	-.10	.02	.02
College students	95	OSPE	-.02	-.27**	-.01	.04	-.13	.11
Air Force Academy	582	CEEB—Verbal	.01	-.16**	.07	.16**	-.09*	.11*
first-year		Mathematical	.07	-.06	.01	.07	-.03	-.07
students		Watson-Glaser Critical						
		Thinking	.08	-.15**	.05	.11	-.08*	.00
Junior high school	104	Junior S.A.T.—Verbal	.09	-.30**	-.01	.18	-.05	.12
students		Mathematical	.09	-.27**	.04	.03	-.15	.13
Practical nurse	264	GATB—Intelligence	.08	-.04	.03	-.01	-.06	.03
trainees		Verbal Aptitude	.12	-.11	.01	.14*	-.13	.06
		Motor Coordination	.00	.00	.03	-.05	-.02	.07
		Clerical Perception	.06	.04	.09	-.09	-.03	-.03

CORRELATIONS BETWEEN THE SIV AND STUDY OF VALUES
(N = 89)

Scale	S	C	R	I	B	L
Theoretical	-.19	-.36**	.08	.36**	-.48**	.42**
Economic	.10	.04	.29**	-.18	-.33**	.16
Social	.16	.26*	-.08	-.31**	.59**	-.44**
Aesthetic	-.04	-.23*	-.11	.46**	-.09	-.07
Political	-.06	-.14	.17	-.01	-.31**	.30**
Religious	-.01	.37**	-.27**	-.32**	.52**	-.24*

SIV Typological Profiles

TABLE 84. FOUR TYPOLOGICAL VECTORS AND TYPOLOGICAL PROFILES,
SALIENT VALUES AND ILLUSTRATIVE GROUPS ASSOCIATED
WITH EACH POLE

POSITIVE POLE

Vector	I Control Of Others	II Self-Determination	III Institutional Restraint	IV Service to Others
Typological profiles[a]	BM, II	IA	BS	WO
High means	Leadership	Independence Leadership	Conformity	Benevolence
Low means	Support Benevolence	Conformity Recognition	Independence	Recognition
Specimen groups	executives managers supervisors project directors sales representatives (wholesale) military officers	college faculty scientists engineers psychiatrists media coordinators college students	salesclerks enlisted men information clerks rental agents hospital service personnel assembly-line workers	physicians PHS Peace Corps volunteers YMCA directors guidance counselors psychiatric aides priests

NEGATIVE POLE

Vector	Reciprocal Support	Institutional Service	Self- Expression	Economic Influential
Typological profiles[a]	RS	IS	(SE)[b]	(EI)[b]
High means	Support Benevolence Independence	Conformity Benevolence	Recognition Support	Leadership Recognition
Low means	Leadership	Recognition Independence Leadership	Conformity Benevolence	Benevolence
Specimen groups	teachers (F)[c] social workers (F) clinical psychol- ogists college students (F) graduate education students (F) gifted high school students (F)	practical nurses (F) teachers' aides (F) salesclerks (F) clerical workers (F) hospital service personnel (F)	(groups in the arts and the enter- tainment fields)	(retail sales- people and bank managers)

a. See Table 83.
b. Tentative profiles, not routinely employed in typological analysis.
c. "F" designates female samples; all others are male.

SIV Percentile Norms for Male High School Students

TABLE 90. PERCENTILE NORMS FOR
MALE HIGH SCHOOL
STUDENTS
(N = 2026)

Score	Percentiles						Score
	S	C	R	I	B	L	
32				99			32
31				98			31
30				97		99	30
29		99		96	99	98	29
28		98		94	98	97	28
27	99	97		91	97	96	27
26	98	95		87	96	95	26
25	96	93		83	94	93	25
24	93	90	99	79	92	91	24
23	90	87	98	75	89	89	23
22	86	83	97	71	86	86	22
21	81	79	95	66	82	83	21
20	76	75	92	61	78	80	20
19	71	70	88	56	74	76	19
18	66	65	83	51	69	72	18
17	61	60	77	45	63	67	17
16	55	55	71	40	57	62	16
15	48	50	65	35	51	56	15
14	41	44	58	30	44	50	14
13	34	38	51	25	38	44	13
12	27	32	44	21	33	38	12
11	21	27	37	17	28	32	11
10	16	22	30	14	23	26	10
9	12	17	23	11	18	21	9
8	9	13	17	8	14	17	8
7	7	10	12	6	10	13	7
6	5	7	8	4	8	9	6
5	3	5	5	3	5	6	5
4	2	3	3	2	3	4	4
3	1	2	2	1	2	3	3
2		1	1		1	2	2
1						1	1
0							0
Mean	15.3	14.7	12.4	18.0	15.1	14.5	Mean
S.D.	5.6	6.3	5.1	7.0	6.2	6.5	S.D.

SIV Percentile Norms for Female High School Students

TABLE 91. PERCENTILE NORMS FOR
FEMALE HIGH SCHOOL
STUDENTS
(N = 1629)

Score	S	C	R	I	B	L	Score
32				99			32
31				98	99		31
30		99		97	98		30
29		98		96	97		29
28	99	97		95	95		28
27	98	96		94	92		27
26	96	95		93	88		26
25	93	93	99	91	83	99	25
24	89	90	98	89	77	98	24
23	84	86	97	87	71	97	23
22	79	81	95	85	65	96	22
21	73	76	92	82	59	95	21
20	67	71	89	79	53	94	20
19	61	66	86	75	47	92	19
18	55	61	83	71	40	90	18
17	48	55	79	66	34	87	17
16	40	48	74	61	28	83	16
15	33	42	68	56	23	78	15
14	26	36	61	50	19	72	14
13	20	30	53	44	15	66	13
12	15	25	45	38	12	59	12
11	11	21	37	31	10	52	11
10	8	17	29	25	8	45	10
9	6	14	22	19	6	39	9
8	4	11	16	14	4	33	8
7	3	8	11	10	3	27	7
6	2	6	7	7	2	21	6
5	1	4	4	5	1	15	5
4		3	2	3		10	4
3		2	1	2		6	3
2		1		1		3	2
1						1	1
0							0
Mean	17.3	16.0	12.4	14.7	19.0	10.6	Mean
S.D.	5.0	6.4	4.9	6.6	6.0	5.7	S.D.

TABLE 7.   MEANS, STANDARD DEVIATIONS, AND MEAN
DIFFERENCES FOR MALE AND FEMALE NORMATIVE SAMPLES

Sample	N	Mean						Standard Deviation					
		S	C	R	I	B	L	S	C	R	I	B	L
Ninth grade—Male	1096	14.3	15.0	12.5	16.7	14.6	14.4	4.3	4.7	4.2	5.8	5.4	5.4
Female	1571	17.2	15.6	12.8	14.2	18.0	10.8	4.4	4.8	4.7	6.2	5.6	4.3
X̄ Difference		-2.9**	-0.6**	-0.3	2.5**	-3.4**	3.6**						
High school—Male	2026	15.3	14.7	12.4	18.0	15.1	14.5	5.6	6.3	5.1	7.0	6.2	6.5
Female	1629	17.3	16.0	12.4	14.7	19.0	10.6	5.0	6.4	4.9	6.6	6.0	5.7
X̄ Difference		-2.0**	-1.3**	0.0	3.3**	-3.9**	3.9**						
Junior college—Male	2311	15.2	14.9	12.2	17.6	14.9	14.8	5.0	6.1	4.6	6.9	5.8	6.4
Female	587	16.9	17.2	11.5	15.1	19.8	9.4	5.1	5.5	4.0	6.2	5.7	5.2
X̄ Difference		-1.7**	-2.3**	0.7**	2.5**	-4.9**	5.4**						
College—Male	2412	15.1	12.2	12.2	19.5	14.3	16.7	5.6	6.4	5.1	7.1	6.5	6.9
Female	1529	18.1	14.2	11.8	16.3	18.1	11.5	4.9	6.1	5.0	6.4	5.8	6.4
X̄ Difference		-3.0**	-2.0**	0.4*	3.2**	-3.8**	5.2**						
General adult—Male	213	15.0	14.8	11.2	16.9	15.8	16.1	5.7	6.5	5.2	7.4	5.8	7.7
Female	212	18.2	18.0	9.9	15.7	20.4	7.9	4.9	5.8	4.2	5.9	4.8	5.2
X̄ Difference		-3.2**	-3.2**	1.3**	1.2	-4.6**	8.2**						

Throughout this manual, *designates the .05 level of significance
and **designates the .01 level of significance.

SIV Comparisons of Gifted and Regular High School Students

Table 28. Means and Standard Deviations for Gifted Freshmen and High School and College Comparison Groups

	MALE Gifted (N = 51) Mean	S.D.	High School (N = 782) Mean	S.D.	College (N = 1075) Mean	S. D.		FEMALE Gifted (N = 50) Mean	S.D.	High School (N = 666) Mean	S.D.	College (N - 746) Mean	S. D.
S	15.6	5.1	15.4	5.5	14.9	5.5		18.0	4.5	17.5	4.8	17.8	4.9
C.	7.5	4.5	14.8	6.4	12.3	6.6		10.7	5.8	16.0	6.1	14.2	6.2
R	13.6	5.7	12.6	4.9	12.4	5.0		12.6	4.9	12.7	4.8	12.1	4.9
I	21.9	6.1	18.3	7.3	19.3	7.2		19.5	6.3	14.3	6.6	16.2	6.6
B	13.8	7.0	14.7	6.3	13.6	6.5		17.5	6.1	18.9	5.9	18.4	5.7
L	17.7	6.2	14.2	6.6	17.3	7.2		11.7	6.8	10.3	6.0	11.4	6.5

Differences and Significance of Differences

	MALE Gifted and High School Diff.	Sig.	Gifted and College Diff.	Sig.		FEMALE Gifted and High School Diff.	Sig.	Gifted and College Diff.	Sig.
S	-.2	ns	.7	ns	S	.5	ns	.2	ns
C	-7.3	.01	-4.8	.01	C	-5.3	.01	-3.5	.01
R	1.0	ns	1.2	ns	R	-.1	ns	.5	ns
I	3.6	.01	2.6	.01	I	5.2	.01	3.3	.01
B	-.9	ns	.2	ns	B	-1.4	ns	-.9	ns
L	3.5	.01	.4	ns	L	1.4	ns	.3	ns

Chicago High School Reading Test Scores

RANKING OF THE SCHOOLS BY READING SCORES

School	Reading Score 1982	Reading Score 1983	School	Reading Score 1982	Reading Score 1983
Cregier Voc	10	16	Westinghouse	27	33
Crane	12	18	Schurz	27	31
Harper	12	19	Simeon	27	35
King	12	21	Kelvyn	27	23
Marshall	12	19	Julian	27	35
Orr	12	14	Lincoln Park	30	49
Calumet	13	18	Corliss	30	25
Phillips	14	18	Roosevelt	30	33
Flower	14	19	Sullivan	30	27
DuSable	14	16	Hyde Park	30	40
Clemente	16	23	Kelly	30	25
Collins	16	18	Amundsen	30	33
Englewood	16	19	Chicago Metro	32	45
Farragut	16	18	Morgan Park	33	46
Fenger	16	23	Dunbar Voc	33	37
Gage Park	16	23	Chgo Voc	33	35
Harrison	16	N/A	Von Steuben	35	61
Hirsch	16	27	Prosser	37	46
Manley	16	19	Curie	37	45
Near North	16	25	Steinmetz	37	40
Richards	16	23	Mather	48	49
South Shore	16	23	Taft	48	46
Austin	16	16	Washington	48	42
Bowen	16	19	Young	48	76
Tilden	19	16	Kennedy	48	33
Wells	19	21	Kenwood	48	64
Harlan	19	27	Hubbard	48	33
Juarez	21	33	Bogan	48	42
Lake View	21	35	Lindblom	52	64
Jones	24	N/A	Lane Tech	74	76
Foreman	24	33			
Robeson	24	23			
Senn	24	31			
Carver	24	19			

Note: We selected the TAP Spring 1982 and 1983 median
reading scores since these were the most recent and probably
the most indicative of the present state of the schools.
These are ranked from lowest to highest, according to the 1982
scores.

Source: Chicago Board of Education.
*Test Scores and Selected School Characteristics
High Schools 1981-82 and 1982-83.*

From "The Chicago Study" by Gary Orfield, Ph.D, Reprinted by permission
of the publisher.

Chicago Reading Test Scores by Income and Minority

HIGHEST AND LOWEST READING TEST SCORES BY MINORITY AND LOW-INCOME

School	Percentile	% Minority	% Low-Income
Schools Far Below the National Average			
Cregier Voc	10	84.8	98.0
Crane	12	100.0	100.0
Harper	12	100.0	90.4
King	12	100.0	100.0
Marshall	12	100.0	83.3
Orr	12	99.2	80.5
Calumet	13	100.0	79.6
Phillips	14	100.0	99.5
Flower	14	100.0	97.9
DuSable	14	100.0	100.0
Average	12.5	98.4	92.9
Schools Near or Above the National Average			
Matther	48	20.4	4.8
Taft	48	23.0	20.8
Washington	48	35.7	18.3
Young	48	77.2	39.3
Kennedy	48	37.8	43.1
Kenwood	48	76.1	29.3
Hubbard	48	36.0	23.8
Bogan	48	34.2	22.7
Lindblom	52	98.7	52.2
Lane Tech	74	27.3	19.8
Average		46.6	27.4

Source: Chicago Board of Education:
Test Scores and Selected School Characteristics
High Schools 1981-1982.
    Illinois Board of Education:
1982-1983 Public School Fall Enrollment and Housing Report.

From "The Chicago Study" by Gary Orfield, Ph.D, Reprinted by permission of. the publisher.

High School Beyond - Self Evaluation Attitude Scale

58. How do you feel about each of the following statements? (MARK ONE OVAL FOR EACH LINE)

	Agree strongly	Agree	Disagree	Disagree strongly	No opinion
a. I take a positive attitude toward myself	O	O	O	O	O
b. Good luck is more important than hard work for success	O	O	O	O	O
c. I feel I am a person of worth, on an equal plane with others	O	O	O	O	O
d. I am able to do things as well as most other people	O	O	O	O	O
e. Every time I try to get ahead, something or somebody stops me	O	O	O	O	O
f. Planning only makes a person unhappy, since plans hardly ever work out anyway	O	O	O	O	O
g. People who accept their condition in life are happier than those who try to change things	O	O	O	O	O
h. On the whole, I am satisfied with myself	O	O	O	O	O
i. What happens to me is my own doing	O	O	O	O	O
j. At times I think I am no good at all	O	O	O	O	O
k. When I make plans, I am almost certain I can make them work	O	O	O	O	O
l. I feel I do not have much to be proud of	O	O	O	O	O

High School Beyond - Self Esteem Responses

Percentage of Sophomores and Seniors in Public and Private Schools Giving High
Self-Esteem Responses[a]: Spring 1980

Self-Esteem Item	U.S. Total		Major Sectors						High-Performance Schools			
			Public		Catholic		Other Private		Public		Private	
	Grade		Grade		Grade		Grade		Grade		Grade	
	10	12	10	12	10	12	10	12	10	12	10	12
Take positive attitude toward myself (agree strongly)	26.9	32.7	26.9	32.7	26.4	30.9	26.7	33.5	24.8	35.2	35.4	46.0
I'm a person of worth (agree strongly)	26.9	33.5	26.6	33.1	29.5	36.1	29.7	38.6	35.4	36.8	41.1	55.0
Able to do things as well as others (agree strongly)	26.7	33.6	26.5	33.5	28.3	33.3	31.2	37.4	29.0	35.2	41.0	52.4
On the whole, satisfied with myself (agree strongly)	18.9	22.6	18.9	22.4	19.2	22.8	20.0	25.8	21.2	24.7	25.6	32.7
I'm not good at all (disagree strongly)	11.0	14.4	11.0	14.3	10.4	14.0	10.0	15.2	7.9	13.1	13.6	20.7
Not much to be proud of (disagree strongly)	32.6	39.9	32.3	39.4	35.5	43.9	35.0	43.9	37.8	43.6	43.9	58.7
Average	23.8	29.5	23.7	29.2	24.9	30.2	25.4	32.4	26.0	31.4	33.4	44.3

[a] Responses taken from BB058 in student questionnaire.

High School Beyond - Reading Scores

*Means and Standard Deviations for Sophomore Test Scores
in Public and Private Schools: Spring 1980*

Test	U.S. Total	Major Sectors			High-Performance Schools	
		Public	Catholic	Other Private	Public	Private
Means						
Reading (19)[a]	9.1	8.9	10.5	10.5	11.7	14.5
Vocabulary (21)	10.9	10.7	12.9	13.1	14.1	17.6
Mathematics (38)	18.6	18.3	21.5	22.3	24.9	30.2
Science (20)	10.9	10.8	11.9	12.4	13.2	15.1
Civics (10)	5.8	5.8	6.5	6.4	7.1	7.8
Writing (17)	10.3	10.1	11.9	11.5	12.8	14.7
Standard Deviations[b]						
Reading	3.9	3.8	3.6	3.9	4.1	2.8
Vocabulary	4.4	4.3	3.9	4.5	4.2	2.6
Mathematics	7.4	7.4	6.6	7.8	7.5	4.8
Science	3.8	3.8	3.3	3.5	3.5	2.4
Civics	2.0	2.0	1.9	1.9	1.9	1.4
Writing	4.0	4.0	3.5	3.8	3.4	2.0

[a] Numbers in parentheses refer to total number of test items.

[b] Standard deviations shown are standard deviations of individual test scores. Standard errors for sector mean achievement may be found by multiplying the standard deviations shown by the following numbers:

	U.S. Total	Public	Catholic	Other Private	High-Performance Public	High-Performance Private
Sophomores	.006	.006	.019	.044	.054	.055
Seniors	.006	.007	.020	.048	.062	.058

*Means and Standard Deviations for Senior Test Scores
in Public and Private Schools: Spring 1980*

Test	U.S. Total	Major Sectors			High-Performance Schools	
		Public	Catholic	Other Private	Public	Private
Means						
Reading (20)[a]	10.9	10.8	11.9	13.0	13.5	16.0
Vocabulary (27)	13.1	12.9	15.1	15.9	18.0	21.6
Mathematics (32)	19.1	18.9	21.1	22.4	23.9	28.1
Picture Number (15)	11.3	11.3	12.1	11.9	11.6	13.0
Mosaic (89)	45.3	45.2	47.3	51.0	54.2	55.3
Visual (16)	7.7	7.7	7.5	8.6	8.8	9.8
Standard Deviations[b]						
Reading	4.2	4.2	3.8	4.2	4.0	2.6
Vocabulary	5.4	5.3	5.1	6.0	5.7	3.7
Mathematics	6.3	6.3	5.6	6.1	5.7	2.7
Picture number	3.7	3.7	3.3	3.5	3.5	2.8
Mosaic	14.6	14.6	12.6	14.7	16.0	14.5

From <u>High School Achievement: Public, Catholic, and Private Schools</u> Compared, by James S. Coleman, Thomas Hoffer and Sally Kilgore. Copyright c 1982 by Basic Books, Inc. Reprinted by permission of the publisher.

High School Beyond - Social and Economic Inequality Responses

Percentage Distribution by Grade and School Type of the Perceived Importance Among Non-Hispanic -White Students of Working to Correct Social and Economic Inequalities[a]: Spring 1980·

| | | | | | | | | | High-Performance Sector | | | |
| Perceived Importance | U.S. Total | | Public | | Catholic | | Other Private | | Public | | Private | |
	10	12	10	12	10	12	10	12	10	12	10	12
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Very important	12.0	11.1	12.1	11.1	11.5	9.8	11.1	13.2	15.0	12.6	13.6	15.0
Somewhat important	49.6	46.5	49.6	46.8	49.3	46.0	52.1	40.5	47.3	44.9	46.0	38.2
Not important	38.4	42.4	38.4	42.1	39.2	44.2	36.8	46.3	37.7	42.5	40.4	46.8

NOTE: Details may not add to totals because of rounding.
[a] Responses taken from BB057 in student questionnaire.

Student Interest in School

Percentage Distributions in Public and Private Schools of Students Interested
in School and of Students Liking to Work Hard in School: Spring 1980

Item[a]	U.S. Total		Major Sectors						High-Performance Schools			
			Public		Catholic		Other Private		Public		Private	
	Grade		Grade		Grade		Grade		Grade		Grade	
	10	12	10	12	10	12	10	12	10	12	10	12
Interested in School?												
Yes	76.4	73.7	76.2	73.2	78.7	76.3	78.1	82.1	80.9	76.1	88.4	88.7
No	23.6	26.3	23.8	26.8	21.3	23.7	21.9	12.9	19.1	23.9	12.6	11.3
Like Working Hard in School?												
Yes	54.0	52.3	54.0	52.2	52.8	52.3	56.4	54.2	53.8	57.8	63.6	56.7
No	46.0	47.7	46.0	47.8	47.2	47.7	43.6	45.8	46.2	42.2	36.4	43.3

[a] Responses taken from items BB059C and BB061E in student questionnaire.

APPROVAL SHEET

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content and form.

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