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ABSTRACT

This study investigated differences in achievement among 487 inner-city, black fourth graders taught by 28 black, white, male, and female teachers. Data were obtained from these teachers during 1968-69 and again in 1969-70. Achievement data consisted of third- and fourth-grade scores from the Iowa Test of Basic Skills and third-grade vocabulary scores. Demographic information from district administrative records and teacher information from district personnel records were also made available. Statistical analysis revealed a) puril achievement differences from year to year even in similar sex and ability groups; b) nonsignificant gains in reading and significant vains in arithmetic for both years; c) no significant differences in pupil sex or ability (girls of high ability outperformed boys of high ability while the reverse was true for pupils of low ability; d) achievement gain in arithmetic for pupils taught by the opposite sex; e) higher gains for pupils taught by the opposite sex when teacher race was significantly related to arithmetic achievement; and f) no relationship between arithmetic or reading gains and teacher age. (Recommendations for further research are made; three pages of references are included.) (BRB)



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Achievement of LSE Black Children with Teachers of Different
Sex and Fthnic Identity

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The last decade witnessed a growing national concern for the lack of school achievement of inner city children and a significant investment in the preparation of teachers, some of whom will become the mentors of the next generation of inner city children. Several studies, notably the massive Coleman (1966) study, have pointed to the generally poor showing of black purils taught by black teachers, who themselves are frequently products of segregated schools staffed by black teachers. The clear implication is that a self-perpetuating system is operating. Conflicting evidence and opinion may be found also for the view that black teachers are necessary as role models for black pupils. One view sees provision of male black teachers in particular as an educational imperative; the opposite camp sees black teachers who reject the LSE black youngster because he cannot or does not exhibit behavior consonant with middle class standards. Aside from this academic controversy, school districts frequently assign teachers, both black and white, to schools for the purpose of effecting token integration. The issue remains: little or no empirical evidence exists to provide a basis for such decisions.

The purpose of this exploratory study was to investigate differences in achievement of inner city fourth grade classes taught by male and

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female teachers of the Negro and Caucasian races. Specifically, the study was designed to examine achievement gains of LSE black children of both sexes at two ability levels, taught by black male, black female, white male, and white female teachers. To avoid judgment on the basis of the outcome of a single year, data were obtained for pupils of 28 teachers during 1968-69 and for pupils taught by those same teachers during 1969-70. Records of 487 pupils from a total of 23 schools were utilized.

Achievement of black pupils below national norms is well-established. The black female pupil, as with other ethnic groups, generally outperforms the black male pupil. As indicated earlier, there is conflicting evidence as to the effects of black versus Caucasian adults on the performance of LSE children although there is general agreement that the LSE child is more sensitive to ethnic noncongruency than is the child of higher socioeconomic status. He has been found to perform more successfully in cognitive areas when the experimenter is of the same race as his own.

The theoretical basis for the study was Schutz! (1960) theory which proposed that when two people are brought together and are incompatible that at least a portion of their energies is expended in seeking ways to better the relationship, thus reducing the energy available for the learning task. From this, Thelen's (1961) theory of the teacher-pupil match was a logical extension. It was hypothesized that for this LSE black population, achievement gains would be greater under conditions of congruent teacher sex and race.



The design of the study involved selection of a metropolitan school system and schools serving predominantly black pupils from low-income families; selection of the lowest possible elementary grade to permit useof test scores from both current and previous years (here, grade four), and selection of teachers of the four sex and race categories meeting the following criteria--bachelor's degree, permananent certification, and two consecutive years' teaching experience in the present school. The initial plan was to include all fourth grade classes whose teachers met the established criteria. When only seven male black teachers were found, however, it was decided to use that group as a basis for matching by age. This procedure resulted in four groups of seven teachers, ranging in age from 25 to 46.

Achievement data consisted of both third and fourth grade scores from the Iowa Test of Basic Skills for pupils of classes for each of the two years. The third grade vocabulary score was used as the measure of ability since group intelligence testing is no longer used by that particular school system. Groups of both sexes were divided at the sample median vocabulary score of 3.0 to form four pupil groups. Gains from third to fourth grade were calculated for each group for reading and arithmetic total tests of the Iowa battery. The Iowa tests are administered each May by the classroom teacher in all schools of the system, a procedure which was assessed as a strength for the present study since familiarity with the examiner was thus assured and any racial experimenter effects would be randomly distributed.



Data from three sources were then available: demographic information from district administrative records; teacher information from district personnel records, and test score information for each pupil from both third and fourth grade tests. These data were submitted to statistical analysis to permit testing of the following hypotheses:

- there will be no significant differences within groups of pupils of comparable sex and ability levels assigned to the four teacher groups
- 2. there will be no significant difference attributable to year
- 3. there will be no significant difference attributable to pupil ability
- 4. there will be no significant difference attributable to pupil sex
- 5. there will be no significant difference attributable to teacher sex
- 6. there will be no significant difference attributable to teacher race
- 7. there will be no significant difference attributable to teacher age

Conclusions

The conclusions which may be drawn from the data are:

- 1. achievement of pupils taught by a given teacher differ markedly from year to year even when comparisons are made for like sex and ability groups
- 2. nonsignificant gains in reading and significant gains in arithmetic generally held for both years
- 3. there were no significant differences attributable to



pupil sex or pupil ability; athough girls of high ability outperformed boys of high ability, the reverse was true for pupils of low ability

- 4. achievement gain in arithmetic was found more frequently for pupils taught by the sex opposite to their own
- 5. achievement gain in arithmetic was found to be related somewhat less consistently to teacher race than to teacher sex, but when teacher race was significantly related, higher gains were generally found for pupils taught by teachers of the opposite race
- 6. neither arithmetic nor reading gains were found to be related to teacher age

Initial restraint in interpretation is indicated in view of the nature of the data. Other limitations of the study include the use of eligibility for Title I, ESEA, aid as the criterion of socioeconomic status, restriction of the population to one identified as LSE and black as the only controls for the family background variable, and both of these factors as partial controls for peer influence. It was not possible to control for teacher origin, job satisfaction, or morale factors. Use of achievement gain scores as the criterion of teacher effectiveness also has inherent limitations and requires caution in interpretation.

Generalizations cannot be made to populations different from that employed in the study, nor from groups to individuals.

Recommendations

The inconsistent results from year to year point to the need for studies of a longitudinal nature. They lend further support to



earlier studies which caution against the use of data from a single subject area or a single school year for the measurement of achievement.

The effects of various political action groups on the self-concept and achievement of the ISE black child are as yet unknown. Of perhaps equal relevance for the imer city child is the issue of gang membership. These areas need much exploration and would be desirable adjuncts to studies of achievement.

Although the null hypotheses formulated for this study were refuted in only approximately half the instances and findings of differences were generally in directions opposite to those hypothesized, the latter is seen as an indication that the effects of teacher sex and teacher race for the LSE black child are of sufficient importance to warrant further study.

The consistent findings that arithmetic is a subject more sensitive to teacher influence than reading should motivate school administrators and teachers alike to search for ways to capitalize on this association. The discouraging aspect of the study comes with the realization that the pupils involved, despite relatively spectacular gains in arithmetic, did not make gains sufficient to place them at grade level. The mean gain of 3.6 in reading and 5.9 in arithmetic fall short of the minimum eight months' gain which can be expected for a test given in early May. The child thus begins another school year in September below grade level and the gap widens with each successive September.

To provide evidence to substantially support or refute the theory of the teacher-pupil match by sex and race, additional research with stringent controls is needed. The findings of this study point to the possible efficacy of a match but to a match of opposites rather than



of likes. If future studies verify the improved results of ISE black children with teachers of opposite sex and race, then such a match should become one of the primary considerations in teacher assignment and class scheduling. Pernaps, as other researchers have suggested, the teacher is not the most effective role model for children of this ethnic group, and that instead of trying to be all things to all people, the teacher should get on with his siphers. At any rate, the subject bears further looking into.



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