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AUTHOR Desberg, Peter; And Others
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ABSTRACT

Social dialect is demonstrated as an important factor in the low performance of Black children on language based academic achievement tests. The dialect measure accounted for a substantial percentage of the variance in reading and spelling while the IQ measure and social attitude accounted for a negligible amount of variance in these areas. The subjects were 120 black second, fourth, and sixth grade children (N=40 per grade level) from two elementary schools in California. (RB)

The Relationship Between Non-Standard Dialect and Academic Achievement

Peter Desberg, George Marsh and Diana Wolff
California State College, Dominguez Hills

A number of investigators have speculated on the reasons for the relatively low academic achievement of black children, particularly the high incidence of reading failure (Eisenberg, 1966). The major explanations focus on three different areas: (a) a general cognitive-linguistic deficit produced either genetically (of Jensen, 1969) or environmentally (of Bereiter & Engleman, 1966), (b) general social factors such as negative ethnic or class related attitudes towards school and academic achievement, (Rundquist & Sletto, 1967) and (c) the effects of non-standard dialect (of Laffey & Shuy, 1973; Williams, 1970).

The present study was designed to investigate the relative importance of these three factors on Black children's scholastic achievement in reading, spelling and mathematics.

Method

Subjects: The subjects were 120 Black second, fourth and sixth grade children (N=40 per grade level) from two elementary schools. One of the schools was a racially integrated school in a middle class area of Los Angeles and the other was a practically all Black school in a lower middle class area of Compton, California.

Procedure: Cognitive-linguistic ability was assessed with the Peabody Picture Vocabulary test (PPVT). This test yields IQ equivalents which were used as the predictor variable. The child's attitude towards school was measured by the School Sentiment Index (1970). The children were also asked to have their parents fill out an attitude scale concerning their attitudes towards value of education (of Rundquist & Sletto, 1967). Because of incomplete return forms these data were not included in the formal analysis.

The problem of assessing the social dialect variable was considerably more difficult because of the absence of standardized measures of social dialect. It was not feasible to collect and analyze samples of free speech because of large sample size. The only previous study of the relationships between social dialect and reading achievement

(Baratz, 1970) used a sentence repetition test to grossly catagorize dialect groups. Sentence repetition tests assume that Black English (BE) speaking children will recode a sentence presented in standard English (SE) into their own dialect. This assumption depends on factors such as, the child's interpretation of the instructions (Desberg, Marsh & Stanley, 1976, Pffaf, 1973). In order to assess the degree to which the child's dialect differed from standard English the senior authors in collaboration with a colleague in linguistics devised a continuous measure of dialect radicalism called the social dialect feature inventory (SDFI). A complete description of this test along with validation data against free speech samples in forthcoming (Pfaff, Desberg & Marsh, 1976). However it is appropriate to describe the general procedure. In the context of a non-linguistic task the SDFI elicited a number of features of Black English dialect (see Table 1). The SDFI yielded a continuous score based on use of one or more BE constructions on each item.

Each of these predictor tasks were administered individually to the children by a black examiner. The examiner also asked the children to rank three preferences for classmates. This was used to construct a sociometric measure of peer popularity. The criterion variable was the child's achievement score on the three sub-tests of Wide Range Achievement Test (WRAT) - reading, spelling and arithmetic. The reading subtest of the WRAT is a word recognition test and does not measure reading comprehension of sentences or text.

Results

The major data analysis was a step-wise multiple regression analysis (MRA) using the PPVT, SSI and SDFI as the predictor variables and scores on the three sub-tests of the WRAT as the criterion variable. The results of the MRA are shown in Table 2 for each age-grade level. The numbers indicate the percentage of variance accounted for by each predictor variable with the contribution of the other predictor variables partialled out.

In addition to the MRA the SDFI scores were trichomatized into high, medium and low. The trichomatized scores related significantly to grades in a chi-square for spelling ($X^2=29.32$ $p<.01$) and reading ($X^2=14.$ $p<.01$). The relationship between SDFI scores and arithmetic grades was marginally significant ($X^2=12.32$ $p<.05$).

There was a significant sex difference in SDFI scores ($F=11.65$ $df=1$, $p<.01$) with boys scoring higher in dialect radicalism than girls. The degree of dialect radicalism decreased with age-grade level but this decrease was significant only between second grade and fourth grades. No significant difference was found between the fourth and sixth grades. There were no significant differences between schools in either the predictor or criterion variables. However, the correlation between SDFI and reading and spelling was higher at the all black school than at the integrated school.

The sociometric peer popularity measures did not correlate significantly with either dialect or achievement measure.

Discussion

The present study is the first to unequivocally demonstrate that social dialect is an important factor in low performance of Black children in language based academic achievement tests. The only previous study (Baratz, 1970) failed to control for IQ or attitudes. The dialect measure accounted for a substantial percentage of the variance in reading and spelling while the IQ measure and social attitude generally accounted for a neglible amount of variance in these areas. That linguistic rather than cognitive factors are involved in reading and spelling is also demonstrated by the reversal found with performance on the arithmetic test where the IQ measure accounted for the substantial proportion of the variance and the linguistic measure generally a neglible amount. This confirms a previous finding by Dombrower and Marsh (1971) in which a Piagetian cognitive measure showed a significant relationship with achievement in mathematics but not with reading.

The test used here is a measure of word recognition. Previous work has suggested that phonological interference will have an effect on BE speakers performance on initial decoding stage. This includes auditory discrimination (Melmed, 1970) and auditory sound blending (Desberg, Marsh & Schneider, 1974). However, Baratz (1970) also found a significant effect of dialect on reading comprehension measures indicating possible effects of syntactic factors of BE on understanding of sentences and text. Spelling is an area closely related to the initial decoding stage of reading, and the relationships with dialect measures are higher in several cases than relationships with reading tests. Kligman & Cronnell, 1974) have described a number or possible interfering effects of non-standard dialect on spelling.

The present results are congruent with previous studies showing that dialect radicalism is greater in boys than in girls and that dialect tends to decrease with age and exposure to the school environment (Dillard, 1972).

The reasons for relationships between dialect radicalism and achievement are controversial (of Laffey & Shuy, 1973; Williams, 1970). The remediation strategies based on the putative causes of the relationship are even more hotly debated. In general, they can be divided into the language deficit vs. the language difference viewpoints (of Glucksberg and Danks, 1975, p. 170-173). The remediation strategy favored by the deficit view is to teach the BE speaking child to speak SE, (of Rystrom, 1973; Venezky, 1970). The strategy favored by the difference view is to change the mode of instruction to fit the BE speaking child's dialect either by teacher education (Labov, 1967) or by producing reading materials written in BE (Shuy, 1969, Stewart, 1969).

It is the opinion of the authors that there is at present insufficient evidence to determine the reasons for the relationships between dialect and reading and spelling performance. Until the necessary research has been done remediation programs will have to be based on the intuitions proponents of various viewpoints.

Table 2
Multiple Regression Analysis

WRAT Reading

Grade	2nd	4th	6th
SDFI	.1908	.2214	.4017
PPVT	.1294	.0192	.0732
SSI	.0016	.0966	———

WRAT Spelling

Grade	2nd	4th	6th
SDFI	.2143	.2442	.5758
PPVT	.0618	.0027	.0593
SSI	.0187	.0527	.0104

Arithmetic WRAT

Grade	2nd	4th	6th
SDFI	.0587	.004	.3944
PPVT	.1253	.1795	.1197
SSI	.0057	.1409	.0042

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