This study explored whether statistically significant differences exist between the (1) grammatical structures produced by high, average, and low black, inner-city elementary readers as measured by a language competency task; and (2) whether statistically significant interactions occur between reading achievement levels and the age of the child, the sex of the child, and measures of grammatical structures in a language competency task. Interviews were conducted with 87 black, inner-city children, ages nine through thirteen, in nongraded classrooms. Some of the findings were that (1) the great majority of the subjects' errors corresponded to black dialect grammatical features; (2) the high readers consistently made fewer errors than the average or poor readers; (3) in all groups there were some subjects who did poorly; (4) all measures of the ability to formulate Standard English morphological structures showed significant differences among the three levels of reading achievement; and (5) the ability to produce Standard English grammatical constructions on demand is highly related to reading achievement level and may predict reading achievement. (DI)
During the past decade popular press and professional publications have again and again highlighted the high number of black, inner-city children who fail to learn to read. Survey studies estimate that 60% -- in some situations 80% -- of these children by the time they reach the middle grades score below the expected grade level on standardized reading tests. In response to these reports, many educators, psychologists, sociologists, and linguists have turned their attention to the problem and have attempted to explain why these failures occur.

One theory, prominent in recent years, focuses on the oral language of the child and its relationship to learning to read. The black, inner-city child, according to this theory, encounters a problem in learning to read because a mismatch exists between his oral language patterns and the school language of the textbooks and the teacher. For example, the black, inner-city child says, "He pass him yesterday," or "He tired," or "It don't all be her fault" (Labov, 1969). The textbook using Standard English would read "He passed him yesterday," "He is tired," or "It isn't always her fault." The child's oral language in these examples does not match the written patterns of typical classroom material. Since an initial task in learning to read is the matching of printed symbols to their oral counterparts, and since the black inner-city child's language patterns do not match the phonology, grammar, and the syntax of the printed material, the child's own speech pattern presents an interference, a stumbling block, in learning to read.

Many linguists and educators, assuming that such a language mismatch does
indeed influence learning to read, have proposed various programs to eradicate or alleviate the problems caused by this oral language/ written material mismatch. Some programs are designed to change the child's language patterns before introducing reading instruction. The language interference is theoretically eliminated or at least considerably reduced before the child must match oral and printed symbols.

Other programs, rather than changing the child's language patterns, attempt to eliminate the interference by changing the methods and materials used in reading instruction. In an extreme form such an approach means rewriting the beginning readers in the Nonstandard Negro Dialect (Baratz, 1970). The written material is made to match the child's oral language. Goodman (1969) suggests a more moderate approach of using textbooks written in standard English, but allowing the child to read in his own dialect. The teacher would, therefore, accept "It don't all be her fault" as a correct reading of "It isn't always her fault." Another approach, based on changing methods of teaching reading, emphasizes the use of experience charts. Since the child dictates his own story and the teacher writes exactly what he says, the written story matches the child's oral patterns and he should, therefore, not face a mismatch problem.

Each of these approaches to solving the black, inner-city child's reading problems accepts the validity of the assumption that the oral language patterns of the black, inner-city child do somehow interfere with learning to read. This interference assumption seems extremely logical and has been expounded by Baratz, Goodman, Shuy, Labov, and others prominent in the fields of linguistics and reading. However, the idea has been accepted with little experimental work. Changes have been made with no firm evidence of the existence of interference or the role it may play.

**Purpose of Study**

The objective of this study was to explore the ability of the black, inner-city child to produce on demand selected standard English grammatical features.
Specifically, this study compared the ability of the black, inner-city child who reads well with his counterpart who reads poorly. The good reader, if the language interference theory is valid, should possess a better command of standard English and be better able to produce standard English constructions than the poor reader.

The general research questions explored were:

1. What statistically significant differences exist between the grammatical structures produced by high, average and low black, inner-city elementary readers as measured by a language competency task?

2. What statistically significant interactions occur between reading achievement levels and the age of the child, between reading achievement levels and the sex of the child and measures of grammatical structures in a language competency task?

Review of Literature

In order to investigate the problem, several questions needed to be answered through a search of the existing literature in the fields of linguistics, education, and child development. The first and probably the most significant for this study was "What specific grammatical features of the black dialect are believed to interfere with the learning-to-read process?" The linguists have provided objective data on the phonological and grammatical differences between Standard English and Black English but certainly not all of these differences are of equal importance in the reading process. Labov in his well-known paper "Some Sources of Reading Problems for Negro Speakers of Non-Standard English" lists four features that he considers to be significant factors in reading achievement:

1. The deletion of the possessive marker
   Jane's hat -- Jane hat

2. The loss of the /1/ in contractions of future tense
   He'll go home -- He go home
3. the omission of the copula
   He is ready -- He ready

4. the reduction of /d/ and /t/
   resulting in the loss of the past tense marker
   Jane jumped -- Jane jump

These structures have been well documented in linguistic studies; they are consistent features of the dialect. Although there is no question that the concept of possessive, past tense, etc. are present in Black English (possessive pronouns, their, my are used; irregular forms of verbs are used), whether the markers of the possessive and past tense in written form have any meaning to the child is unclear and is important in studying comprehension skills of the child.

Shuy (1969) lists eight grammatical features which he believes may cause a conflict for the speaker of Black English; three of these features parallel Labov's list:

1. possession
   John house
2. copula
   She a cook
3. past tense marker
   He jump
4. third person singular
   John run
5. plurality
   ten cent
6. negation
   He ain't got no toy.
7. past conditional question
   He asked did I come.
8. negative and "be"
   Every day when I come, he don't be here.

Baratz (1969) in her investigation of sentence repetition ability of Standard English-speaking children and of Black English-speaking children used seven categories in analyzing possible dialect influences on Standard English sentences:

1. possessive marker
2. copula
3. past tense marker
4. third person singular
5. plurality
6. negation
7. conditional question
From these experts' lists of probable linguistic features that interfere, a composite list was formulated for the present study and was used as a guide in the selection of tasks and categories for study in the final analysis of the data. The list included:

1. past tense marker
2. possessive
3. plurality
4. third person singular

Design and Procedures:

The approach used in this study was a one-to-one interview with a standardized format of two tasks.

The subjects were 87 black, inner-city children of a large New York city. The children, ages 9 through 13, were in non-graded classrooms and were for this research classified as good, average or poor readers on the basis of achievement tests administered at the beginning of the school year and of teacher evaluations. The good readers were those who scored at the 75% ile or above on the New York State Reading Test; the poor readers, 25% ile or below; the average readers, between the 40 - 60% ile. These ratings were then evaluated by the teachers and any child about whom there was a question was eliminated from the sample.

The Interview Procedure

After children were selected on the basis of reading achievement, they were interviewed by two black, male college students from the area. Both interviewers received instruction in how to conduct the interview, performed three practice interviews under supervision and were periodically checked throughout the research period to insure consistent and correct procedures. The children were randomly assigned to the interviewers.

The children were individually taken from their classrooms by the interviewer, escorted to the room arranged for the interviews, introduced to the tape recorder, completed the interview tasks, and then escorted back to
their classrooms. The entire procedure took approximately 20 minutes per child; each interview was tape recorded for later analysis. The children enjoyed the interview tasks and often remarked that the time had passed quickly. They were often quite relieved at the beginning of the interview when they found out what was going on; the school nurse was giving shots the same days the interviews were being conducted.

The interview format consisted of two tasks. In the first task of the interview, after the child had been comfortably seated and had become acquainted with the tape recorder, the interviewer presented several photographs of the child's school, classroom, teacher, principal and friends. The subject's task was to tell what was happening in the pictures. The interviewer told each child that he (the interviewer) was new to the school and would like the child to help him learn about the classrooms and students. The task was designed primarily to allow the child to get acquainted with the interviewer and become accustomed to the tape recorder. The photographs were personal, familiar scenes and provided interesting material for discussion. The children knew the pictures had been taken earlier in the month but had not seen them prior to the interview.

The second task was the presentation of an adapted version of Berko's (1958) nonsense word test designed to tap a subject's knowledge of the rules of the formation of the standard English constructions of noun plurals, possessives, past tense -ed and the third person singular. These are the grammatical points at which black dialect and standard English differ significantly and the features selected for investigation in this study.

In this task the interviewer presented 22 pictures of cartoon-type characters and read the captions to the child. The child was asked to supply the missing word. Berko (1958) created this ingenious test to measure a child's understanding and ability to produce morphological structures such
as pluralization of nouns, past tense forms and possessive noun forms. Since the words used in the test are mostly nonsense words, the child must apply his knowledge of the grammatical rule system. Because the grammatical constructions included in this test corresponded to four of the features thought to be significant by the linguists, the test was selected for this research. Previous research has found that by age 3½ children have mastered the plurals and that between 5 to 8 years old they have mastered the other features on this test. The task was scored according to recommendations and findings of Berko (1958). The analysis of variance and Scheffé tests were applied to determine significance levels (Hays, 1963).

Findings of the Study

In scoring the Berko task, two general patterns emerged. First, other than the omission of the -s plural, possessive, and third singular markers and the -ed past tense marker, there were very few other types of errors. In other words, the great majority of the subjects' errors corresponded to black dialect grammatical features. Second, if a subject missed one item on a particular grammatical feature, he usually missed the other items dealing with the same feature. For example, if a subject reported "mot" as the past tense of "mot", he almost invariably gave "bod" as the past tense of "bod."

Table I presents the mean scores of each subgroup. The task was scored as the number of dialect-based responses elicited for each grammatical feature. In general, as the subjects supplied each response, they seemed confident of their answers and seldom changed their initial responses.
Table I. Mean Error Scores on Berko's Nonsense Word Task

<table>
<thead>
<tr>
<th>Grammatical Feature</th>
<th>Reading</th>
<th>Age</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Average</td>
<td>Low</td>
</tr>
<tr>
<td>Noun plural</td>
<td>2.80</td>
<td>3.05</td>
<td>4.90</td>
</tr>
<tr>
<td>Past tense -ed</td>
<td>1.32</td>
<td>2.14</td>
<td>3.17</td>
</tr>
<tr>
<td>Third singular</td>
<td>.72</td>
<td>.86</td>
<td>1.38</td>
</tr>
<tr>
<td>Possessive noun</td>
<td>.76</td>
<td>1.05</td>
<td>2.10</td>
</tr>
<tr>
<td>Total score</td>
<td>5.60</td>
<td>7.09</td>
<td>11.66</td>
</tr>
</tbody>
</table>

The mean scores show that the high readers consistently made fewer errors than the average or poor readers.

An inspection of the individual error scores revealed that in all groups there were some subjects who did poorly. In the low reading group 5 subjects missed 17 or more items out of a possible 22; among the average readers 2 subjects missed more than 17; among the good readers 2 subjects missed more than 17. Likewise, in all groups there were some subjects who missed fewer than 5 items. In the low reading groups there were subjects who missed fewer than 5 items but none who achieved perfect scores. In the average reading group 9 subjects missed fewer than 5 and 2 received perfect scores. In the high reading group 15 subjects missed fewer than 5 and 6 received perfect scores. Other studies using this test report that children who speak standard English typically have mastered these constructions by the age of six or seven.

Table II summarizes the statistical results for the Berko test.
Table II. Summary of the Results of Analysis of Variance:
Berko's Nonsense Words

<table>
<thead>
<tr>
<th>Grammatical Feature</th>
<th>Reading</th>
<th>Age</th>
<th>Sex</th>
<th>RxA</th>
<th>RxS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun plural</td>
<td>6.360**</td>
<td>.014</td>
<td>.190</td>
<td>1.083</td>
<td>1.363</td>
</tr>
<tr>
<td>Past tense -ed</td>
<td>6.221**</td>
<td>.170</td>
<td>.002</td>
<td>2.639</td>
<td>.480</td>
</tr>
<tr>
<td>Third singular</td>
<td>5.902**</td>
<td>.065</td>
<td>.125</td>
<td>2.092</td>
<td>.534</td>
</tr>
<tr>
<td>Possessive noun</td>
<td>6.989**</td>
<td>1.234</td>
<td>1.161</td>
<td>.357</td>
<td>1.007</td>
</tr>
<tr>
<td>Total score</td>
<td>11.036***</td>
<td>.455</td>
<td>.174</td>
<td>1.640</td>
<td>.825</td>
</tr>
</tbody>
</table>

*Significant at the .05 level  
**Significant at the .01 level  
***Significant at the .001 level

All measures of the ability to formulate standard English morphological structures showed significant differences among the three levels of reading achievement. The noun plural marker, the past tense marker, the third person singular marker and the possessive marker were significant at the .01 level; the total score was significant at the .001 level. No significant differences were found between the two age groups or between the sexes. Similarly, no significant interaction effects between age and reading level or between sex and reading level and the Berko measures were found.

In order to determine whether significant differences existed between the high and average groups and between the average and low reading achievement groups, the Scheffé comparison test was performed. The results are presented in Table III.
Table III. Summary of Results of Scheffé Test: Berko's Nonsense Words

<table>
<thead>
<tr>
<th>Grammatical Feature</th>
<th>High/Average Comparison</th>
<th>Low/Average Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun 'plural'</td>
<td>.116</td>
<td>7.341*</td>
</tr>
<tr>
<td>Past tense -ed</td>
<td>5.615*</td>
<td>3.183</td>
</tr>
<tr>
<td>Third singular</td>
<td>.031</td>
<td>6.457*</td>
</tr>
<tr>
<td>Possessive noun</td>
<td>.446</td>
<td>7.267*</td>
</tr>
<tr>
<td>Total score</td>
<td>.837</td>
<td>10.700**</td>
</tr>
</tbody>
</table>

*Significant at the .10 level
**Significant at the .05 level

The difference between the total scores of the average and the low reading achievement groups reached significance at the .05 level. The difference between the total scores of the high and average reading groups was far from the required level necessary for significance. At the .10 level of significance, the level recommended by Ferguson (1966), the measures of the noun plural, the third person singular and the possessive noun between the average and low reading groups reached statistical significance; the difference between the high and average groups on the past tense -ed was significant at the .01 level. The comparisons between the high and average reading achievement levels were again far from the required level needed for significance.

The results of the Berko nonsense word test suggest that the ability to produce standard English grammatical constructions on demand is highly related to reading achievement level. Further, the consistent differences between the average and low reading groups as demonstrated by the Scheffé test indicate that in this sample, ability to produce these constructions may predict reading achievement.
REFERENCES


