Investigation of the Relationship between Children's Language and Teacher-Pupil Interaction

Jerry James Wellik
St. Cloud State University

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INVESTIGATION OF THE RELATIONSHIP BETWEEN CHILDREN'S LANGUAGE AND TEACHER-PUPIL INTERACTION

by

Jerry James Wellik
B.S., University of Iowa, 1967

A Thesis
Submitted to the Graduate Faculty
of
St. Cloud State College
in Partial Fulfillment of the Requirements for the Degree
Master of Science

St. Cloud, Minnesota
December, 1972
This thesis submitted by Jerry James Wellik in partial fulfillment of the requirements for the Degree of Master of Science at St. Cloud State College is hereby approved by the final evaluation committee.

Floyd W. Ayers
Chairman

Stanley C. Knox

Gordon E. Mortrude

Lowell R. Gillett
Dean, School of Graduate Studies
INVESTIGATION OF THE RELATIONSHIP BETWEEN CHILDREN'S LANGUAGE AND TEACHER-PUPIL INTERACTION

Jerry James Wellik

PROBLEM:

It was the purpose of this study to determine the effect of pupil language as measured by the auditory reception and grammatic closure subtests of the Illinois Test of Psycholinguistic Abilities and indirectly by maternal education level on teacher interaction style in dyadic contacts with children.

PROCEDURE:

Twenty-one children age seven through ten were administered the auditory reception and grammatic closure subtests of the Illinois Test of Psycholinguistic Abilities. Maternal education was ascertained from the children's cumulative records. Teacher-pupil interaction for three hours of class time for each child was recorded according to the Flanders' Interaction Analysis Category System. A second observer trained in interaction analysis provided a reliability measure. When the data were collected an ANOVA was computed between the maternal education level groups and teacher interaction style (Indirect:Direct ratio), and multiple comparisons were computed between language scores and teacher interaction style.

FINDINGS:

The children of the different maternal education groups were treated differently, with low maternal education level children receiving a more direct teaching style. There was no relationship found between direct measures of the children's language and teacher interaction style.

SUMMARY:

The teachers interacted with the students of the different maternal education level groups differently.
However, the findings did not support the hypothesis that student language characteristics elicit different interaction style from teachers.
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Chapter 1

Introduction

One of the problems which exists in our schools is teacher attitudes and approaches in dealing with non-standard English. Failure to teach Standard English would be doing children an injustice, as correct language usage is necessary for entrance and/or adequate adjustment in the mainstream of middle-class society. It is generally accepted by educational theorists that an appropriate means of teaching children who use nonstandard English is to accept different forms of usage of language as dialects, but standard usage should be the language of instruction. Many teachers do not subscribe to the idea that communication should be the first order of business and mode of expression comes afterwards. Children who use nonstandard English are sometimes corrected in a punitive fashion by teachers and thus are made to feel different or inadequate. Children who are thwarted in this manner suffer psychologically as they are brought into conflict with their own cultural heritage.

In recent years, research has examined classroom verbal behavior and several systems for categorizing this behavior have been constructed. Systematic analysis of classroom talk may help to discover causal variables that
explain variations that exist within the chain of classroom events. Primary focus is placed on the teacher because, most educators agree, the teacher has the greatest amount of influence in the classroom. These causal variables might express relationships between the teacher's behavior and the influence this has on the pupil(s) with whom he interacts. Such knowledge should help to explain differences in educational outcomes associated with the process of teaching (Flanders, 1970).

Teachers have traditionally ruled out the use of any language in the classroom that does not conform to that used by most educated middle-class speakers of English. Thus the child who comes to school speaking a dialect or variety of English which the teacher finds undesirable will probably be corrected in a direct manner and therefore will not be given the opportunity to express himself or his ideas. The purpose of this study was to determine if children's language characteristics elicit different interaction patterns from teachers.

Definitions of Terms Used.

**Interaction analysis.** Within this study, the term interaction analysis refers to the category system used to analyze the classroom dialogue taking place between the teacher and his students. The most widely used observational system is the Flanders' ten-category interaction analysis system which is used by recording at least one of ten categories every three seconds (Flanders, 1965).
Indirect teaching behaviors. Teacher verbal behaviors which include accepting children's feelings or ideas, praising and asking questions are indirect teaching behaviors (Flanders, 1970).

Direct teaching behaviors. Teacher verbal behaviors which include lecturing, giving directions and criticizing or justifying authority are direct teaching behaviors (Flanders, 1970).
Chapter 2

Review of Literature

Teacher-student interaction is the central element in the classroom. Several factors have been identified as influencing this interaction. This chapter will present a brief background on interaction analysis and discuss some of the specific factors that influence the teacher-student interactions.

Research Related to Interaction Analysis

Recent developments in techniques for classification and analysis of verbal interaction in the classroom have made research on this facet of instruction possible. Of the recently developed systems for analyzing the instructional process, interaction analysis is the one that is currently best known and most widely used. Interaction analysis captures the verbal behavior of teachers and pupils that is directly related to the social-emotional climate of the classroom (Flanders, 1970).

One of the earliest approaches to the analysis of teaching behavior was that devised by H. H. Anderson (1937). He assessed the integrative and dominative behavior of teachers in their contacts with children, and his ideas and basic categories of integration are, in a significant way,
forbears of Flanders' concepts of indirect and direct influence.

Lewin, et al. (1939) conducted an intensive study of the effects of leader behavior on children's groups. This research on group climate was conducted in a context somewhat removed from the formal classroom situation, but the inherent hypotheses are basically the same as those tested by Anderson.

John Withall (1949), a pioneer in the study of classroom climate, measured interaction by means of a category system that classified teacher statements. In many ways the categories used by Withall are similar to those that are embodied by the Flanders system. From his work came support that classroom climate could be assessed and described by means of a category system.

Morris Cogan (1956) analyzed students' perceptions of teachers in order to provide a framework for conceptualizing teacher behavior as inclusive, preclusive, or conjunctive. The results of his work indicate that there is a relationship between the way the teacher is perceived by his students and the amount of self-initiated work that the pupils report doing. Cogan's work, along with that of the previously-mentioned researchers, provided Flanders with a theoretical basis for conceptualizing the relationship between teacher influence and the behavior and attitudes of pupils.

Flanders (1965), with the cooperation and assistance of other researchers, conducted a series of studies and the
results of his research clearly support hypotheses that students of teachers who use a teaching style that is both indirect and flexible have more positive attitudes toward school and their teacher and achieve more than students of teachers who use a more direct style.

Studies conducted at the elementary level support Flanders' hypotheses. A selected number of these studies are reviewed.

Soar (1966) used Flanders' Interaction Analysis Category (FIAC System) in a study of reading comprehension at the elementary level. Indirect teaching produced greater growth in reading comprehension than direct teaching. A follow-up of these children over the summer revealed more growth by the students taught by indirect teachers. Children taught by indirect teaching methods advanced an average of five and one-half months in reading achievement; children who had been in direct teachers' classes advanced three months during the same period.

Nelson (1966) found a positive relationship between indirect teacher influence and pupil achievement on written language tests. Direct influence methodology appeared to inhibit pupils' development of written language skills.

Weber (1967) used the Torrance Creativity Tests to measure creativity levels of children taught by direct and indirect methods. This study was conducted in a unique situation in which children spent the first, second and
third grades with the same teacher. Indirect teaching resulted in higher pupil creativity scores than direct teaching.

Amidon and Giamatteo (1965) used the FIAC System to discern the teaching patterns of teachers judged by their supervisors as superior and average. The superior teachers talked less and provided for more student-initiated questions than did the average teachers. The superior teachers were less dominating in the classroom and used direction giving and criticism less than the average group of teachers.

The purpose of a study conducted by Piele (1969) was to investigate the relationship of teacher open-and-closed-mindedness to classroom verbal behavior. The significant findings of this study were that closed-minded teachers appeared to use a greater variety of verbal behaviors and to monopolize classroom talk more than did open-minded teachers, and that students of open-minded teachers appeared to use more extended responsive talk and to verbally interact with each other more than did students of closed-minded teachers. It was suggested that, because closed-minded teachers are more concerned about classroom control than open-minded teachers they tend to discourage student talk through the use of a wide variety of verbal behavior. It was further suggested that some of the verbal behavior used by closed-minded teachers to control student talk are recorded as indirect influence by the FIAC System.
Schantz (1963) found that a high ability group of fourth graders taught science principles by indirect teaching behaviors gained significantly more over their mean pretest than a similar group taught by direct style.

The studies conducted at the elementary level point overwhelmingly toward the effectiveness of teaching behaviors that are usually classed as democratic. Studies at the secondary level (Filson, 1957; Amidon & Flanders, 1961; LaShier & Westmeyer, 1967; Johns, 1966; Snider, 1966; Furst, 1967; Pankratz, 1967; Campbell, 1971) report findings similar to those of the elementary level.

Filson (1957) found that seventh grade students displayed significantly more independent behavior when assigned ambiguous tasks with indirect teachers than students under the supervision of direct teachers.

Amidon and Flanders (1961) found that dependent prone children learned significantly more geometry in an indirect influence treatment than in a direct influence treatment. They suggested that this finding challenges the myth that dependent children feel more secure when told what to do.

Eighth grade biology students achieved higher and had more positive attitudes toward the teacher and school work when taught by student teachers who used indirect influence than direct influence (LaShier & Westmeyer, 1967).

Johns (1966) reported that pupils in indirect English classes asked significantly more thought-provoking
questions than pupils in classes of direct teacher influence.

From the above studies it appears as if interaction analysis holds promise for improving teaching by transmitting the knowledge gained to teachers and future teachers.

A study by Amidon (1966) exemplifies an early attempt to use interaction analysis in a teacher training program. He compared student teachers trained in interaction analysis and student teachers trained in learning theory principles on a number of teacher behaviors. The interaction analysis trained group used more indirect influence and elicited more student-initiated ideas. He concluded that interaction analysis appears to increase individuality in teaching behavior.

Moskowitz (1967) found that cooperating teachers trained in interaction analysis became more indirect than a group of cooperating teachers who did not receive this training. Student teachers used teaching patterns similar to those of their cooperating teachers, unless the teachers were trained in interaction analysis and the cooperating teachers were not, in which case the student teachers were more indirect than their cooperating teachers.

Moskowitz (1966) reported in another study that the attitudes of student teachers were significantly more positive toward cooperating teachers who were trained in interaction analysis, whether or not the student teachers received this training themselves.
Ochs (1972), in a study of secondary school biology teachers enrolled in an inservice program, found that increased amounts of praise given by the teacher encouraged students to participate more freely in discussions and stimulated student-initiated talk.

It appears as if interaction analysis can improve teaching by providing feedback to the teacher to modify his style. There is a large body of literature that is supportive of interaction analysis as a tool for assessing the teacher's influence in the classroom. The above references were presented to justify the use of the FIAC System as a tool for measuring one of the variables (teacher influence) of this study.

Demographic and Language Characteristics of Children

The other variable that is central to this study is the child's use of language. The following literature is presented in support of selecting maternal education as an indirect measure of a child's use of language.

Brooks (1937) summed up the effect of environment on language by stating:

The child's environment has an important effect on his language development. The socioeconomic status of the family is closely related to his linguistic ability. Children who come from homes of more comfort and refinement and whose parents are better educated, have larger vocabularies and better language habits than children of the poorer and less educated groups. Apparently, those differences are found even when the two groups of children have the same intelligence. This is not surprising, since language habits are learned, and better homes provide better examples and more stimulating situations [p. 204].
Based on the Hollingshead-Redlich (1968) index of social position, maternal education was selected as an indirect measure of the language community to which the child has been exposed. Direct measures of each child's language style were desired, and in lieu of doing a dialect analysis of each child, two subtests of the Illinois Test of Psycholinguistic Abilities by S. A. Kirk, et al. (1968) were administered.

The two subtests used were the auditory reception and grammatic closure. The auditory reception subtest measures functions at the representational level. According to Kirk, et al. (1968):

This is a test to assess the ability of a child to derive meaning from verbally presented material. Since the receptive rather than the expressive process is being sampled, the response throughout is kept at the simple level of a "yes" or "no" or even a nod or shake of the head. The vocabulary becomes more and more difficult while the response remains at a two-year level. Similarly, the automatic function of determining meaning from syntax has been minimized by retaining only one sentence form. The test contains fifty short, direct questions printed in the Manual. Typical items are: "Do dogs eat?" "Do dials yawn?" "Do carpenters kneel?" "Do wingless birds soar?" [pp. 9-10].

The grammatic closure subtest measures functions at the automatic level. Again, according to Kirk, et al. (1968):

This test assessed the child's ability to make use of the redundancies of oral language in acquiring automatic habits of handling syntax and grammatic inflections. In this test the conceptual difficulty is low, but the task elicits the child's ability to respond automatically to often repeated verbal expressions of standard American speech. The child comes to expect or predict the grammatic form so that when part of an expression is presented he closes the gap by supplying the missing part. The test measures the form rather than the content of the missing word, since the content is presented by the
examiner. There are 33 orally presented items accompanied by pictures which portray the content of the verbal expressions. The pictures are included to avoid contaminating the test with difficulty in the receptive process. Each verbal item consists of a complete statement to be finished by the child. The examiner points to the appropriate picture as he reads the given statements, for example: "Here is a dog; here are two \[\ldots\]." "This dog likes to bark; here he is \[\ldots\]." [pp. 11-12].

Student Variables Which Influence Teacher Behavior

The child who is perceived as disadvantaged by his teacher is stigmatized and is not expected to do as well in school as his more fortunate peers. This phenomenon has been the focus of numerous studies.

Davis and Dollard (1940) analyzed the operation of social-class standards in the classroom and concluded that the lower-class child is punished for what he is; they found that he is stigmatized by teachers and their favored students on the grounds of the ignorance of his parents, the dialect which he speaks, the appearance of his clothes, and often-times the color of his skin.

In the famous Oak School Experiment of Rosenthal and Jacobson (1968), false information to the effect that certain students could be expected to "bloom academically" was given to teachers. The study included children in grades one through six, and the expectancy advantage was greatest for children in the second grade. The advantage of having been expected to bloom was evident for these children in total IQ, verbal IQ and reasoning IQ.
M. B. Smith (1965) found significant correlations between positive and encouraging teacher statements and the high-status occupations that the teacher anticipated the students would attain and between negative statements and the low-status occupations that students would presumably end up in. This disquieting conclusion involved seven white female teachers over age 25 with middle-class backgrounds interacting with 40 white boys in the sixth grade. The study sheds some light on the teachers' differential treatment of pupils.

The question of which variables are active in establishing a teacher's expectations for a pupil was the focal point of a study conducted by Sanders and Goodwin (1969). The data indicated that teachers perceive IQ, course grades, standardized test performance and socio-economic background as being related to the behavior which they should expect from students. Of these four factors, socio-economic background most influenced the teacher's expectation for a pupil.

Good (1969) hypothesized that teacher's expected different performance levels, and based upon this expectancy extend different types and frequencies of response opportunities and provide differential feedback to students as a function of achievement level. Subjects were chosen from four first-grade classrooms in two predominantly white, working-class neighborhoods. It was found that teachers consistently and significantly afford high achievers more response opportunity and positive feedback information than
low achievers and that low achievers receive significantly more negative feedback than high achievers. The data amply demonstrate that low achievers, psychologically, live in a different room than do high achievers. It was suggested that such a response deprivation separates progress. Thus teacher behavior may be a major factor contributing to the phenomenon of cumulative deficit wherein students of low achievement progressively decline relative to their classmates.

Dalton (1969) noted that the teacher interacted more directly with pupils rated low than those rated high on a continuum from a typical "worst" to "best" student.

The research points out that indirect teacher behaviors are correlated with higher achievement and better attitudes of pupils and direct teacher behaviors are correlated with lower achievement and poor attitudes of pupils.

Socio-economic background was a major variable in influencing teacher expectations and teaching style. Nothing was found in the literature concerning the influence of student language characteristics on teacher behavior.

However, language style is a behavioral correlate of socio-economic background and as such may serve as a stimulus that affects student-teacher interaction.
Chapter 3
Design and Method

This study was designed to study the effect of children's language characteristics on teacher interaction style. A child's language is something which the teacher can respond to immediately.

Sample

The sample consisted of 21 children, age 7 to 10, who were enrolled at Timbertop Camp during the summer of 1972. Admission to Timbertop requires a statement from the school that the child has a learning disability. Fourteen of the students were boys and seven were girls. Seven had a maternal educational level of college graduate, nine of the mothers completed high school and five mothers did not complete high school. Most of the tuition was paid by the children's parents; however, scholarships were available and did pay tuition for some of the children.

Instructional Program

A portion of the camping experience at Timbertop consisted of academic tutoring in language, reading, or mathematics, depending upon what the child's teachers and parents felt he could benefit from most. Classes ranged in size from two to seven pupils.
A total of ten teachers were involved in this study. They included four undergraduate college students, three graduate college students and three elementary school teachers.

**Description of Instrument**

The FIAC System was used to collect data in this study. Classification of the verbal behavior of teachers and pupils during instruction was conducted by the author. Instruction was tape-recorded to provide for more thorough analysis of the verbal interaction. Since the groups were small, the author focused on dyadic interactions between the teacher and individual pupils. Thus it was possible to analyze the classroom behavior of individual pupils and their interactions with the teacher. A recording was made every three seconds, or every time there was a change in verbal behavior from one category to another. The categories of the FIAC System (Flanders, 1970) are as follows:

<table>
<thead>
<tr>
<th>Teacher Talk</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accepts feeling. Accepts and clarifies an attitude or the feeling tone of a pupil in a nonthreatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included.</td>
<td></td>
</tr>
<tr>
<td>2. Praises or encourages. Praises or encourages pupil action or behavior. Jokes that release tension, but not at the expense of another individual; nodding head, or saying &quot;Um hm?&quot; or &quot;go on&quot; are included.</td>
<td></td>
</tr>
<tr>
<td>3. Accepts or uses ideas of pupils. Clarifying, building, or developing ideas suggested by a pupil. Teacher extensions of pupil ideas are included but as the teacher brings more of his own ideas into play, shift to category five.</td>
<td></td>
</tr>
<tr>
<td>Teacher Talk</td>
<td>Initiation</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>4. <strong>Asks questions.</strong> Asking a question about content or procedure, based on teacher ideas, with the intent that a pupil will answer.</td>
<td></td>
</tr>
<tr>
<td>5. <strong>Lecturing.</strong> Giving facts or opinions about content or procedures; expressing his own ideas, giving his own explanation, or citing an authority other than a pupil.</td>
<td></td>
</tr>
<tr>
<td>6. <strong>Giving directions.</strong> Directions, commands, or orders to which a pupil is expected to comply.</td>
<td></td>
</tr>
<tr>
<td>7. <strong>Criticizing or justifying authority.</strong> Statements intended to change pupil behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pupil Talk</th>
<th>Initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. <strong>Pupil-talk-response.</strong> Talk by pupils in response to teacher. Teacher initiates the contact or solicits pupil statement or structures the situation. Freedom to express own ideas is limited.</td>
<td></td>
</tr>
<tr>
<td>9. <strong>Pupil-talk-initiation.</strong> Talk by pupils which they initiate. Expressing own ideas; initiating a new topic; freedom to develop opinions and a line of thought, like asking thoughtful questions; going beyond the existing structure.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silence</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. <strong>Silence or confusion.</strong> Pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.</td>
</tr>
</tbody>
</table>

Categories 1-4 are considered indirect teaching behaviors; categories 5-7 represent direct teaching behaviors. The I:D ratio was obtained by dividing the total number of times categories 1, 2, 3, and 4 were used by teachers in dyadic interactions with each child by the total number of times categories 5, 6, and 7 were used ($\frac{1-4}{5-7}$).
The extent to which observers using the FIAC System agreed was reflected in a reliability as determined by a coefficient of correlation. In the present study, this was determined by having a second trained observer listen to and record the verbal interaction on a sampling of ten hours of taped instruction. For the two observers in this study, the coefficient of correlation was .93. Other important data for the present study were ratios of indirect to direct behavior (I:D), i.e., a comparison of the percentage of indirect teacher behavior, in interactions with individual students, to the percentage of direct behavior.

Procedure

The teachers were not informed of the nature of the study until after all of the data were gathered. They were merely told that the investigator was studying pupils' classroom behavior.

During the second and third weeks of the four-week instructional period, the author observed and tape-recorded a minimum of three hours of instructional time for each student. The dyadic teacher-pupil verbal interactions were analyzed more thoroughly afterwards from the tapes.

Each student was individually administered the auditory reception and grammatic closure subtests of the ITPA to ascertain direct measures of language performance. Maternal educational levels were obtained from the children's cumulative records.
Hypotheses

The experimental hypotheses were designed to find (1) the correlation between socio-economic background (maternal education index) and teacher interaction style and (2) the correlation between performance on language tests and teacher interaction style. Since teachers would probably act critically in reaction to children's language, the teachers would probably interact in a more direct fashion with the children of the lowest socio-economic background and those with less refined language.

Analysis of Data

An analysis of variance was computed between the socio-economic groups and teacher-pupil interaction ratios. A multiple correlation was computed between the auditory reception and grammatic closure subtest scores of the ITPA and teacher-pupil I:D (Indirect:Direct) interaction ratios.
Chapter 4

Results

The first null hypothesis of the present study was: There was no significant difference in teacher interaction style between different socio-economic groups. A significant difference was found between teacher treatment of students in the different socio-economic groups. According to the results in Table 1, the null hypothesis was rejected.

TABLE 1

Analysis of Variance on Teacher Treatment of Children of Different Socio-economic Groups

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356565</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>67476</td>
<td>2</td>
<td>33738</td>
<td>21.007</td>
<td>&gt; .01</td>
</tr>
<tr>
<td>Within</td>
<td>289089</td>
<td>18</td>
<td>16060</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second hypothesis of this study, stated in the null form, was: There was no significant correlation between performance on the auditory reception and grammatic closure subtests of the ITPA and teacher interaction style.

The intercorrelations between teacher interaction (Indirect:Direct ratio), the grammatic closure and auditory reception scores are presented in Table 2. The only significant correlation was between the grammatic closure and
auditory reception subtests of the ITPA. The null hypothesis concerning teacher-pupil interaction and the language measures failed to be rejected as no significant relationship between them was found in this study.

Further testing of this hypothesis was carried out by calculating a multiple correlation between teacher-pupil interaction and the combined variables of grammatic closure and auditory reception scores. The multiple correlation coefficient was computed by means of the Doolittle Method (McNemar, 1962, p. 180). The multiple correlation of .304 was not significant and therefore the hypothesis of no relationship was accepted.

TABLE 2

Intercorrelations between Teacher Interaction Style (I:D), Grammatic Closure and Auditory Reception Scores

<table>
<thead>
<tr>
<th></th>
<th>Indirect:Direct</th>
<th>Grammatic Closure</th>
<th>Auditory Reception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect:Direct</td>
<td></td>
<td>.113</td>
<td>.269</td>
</tr>
<tr>
<td>Grammatic Closure</td>
<td></td>
<td></td>
<td>.447*</td>
</tr>
<tr>
<td>Auditory Reception</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level (McNemar, 1962, p. 274).
Chapter 5

Summary

This study investigated the effect of pupil language characteristics on teacher interaction style in dyadic contacts with children. Two direct measures of language, auditory reception and grammatic closure subtests of the ITPA, and one indirect measure of language, maternal education level, were obtained for 21 children. Teacher-pupil interaction was recorded for three hours of class time. The findings of the present study reveal that the children of the different maternal education groups were treated differently, with low maternal education level children receiving a more direct teaching style. There was no relationship found between direct measures of the children's language and teacher interaction style.

Discussion and Implications

This study investigated the hypotheses of children's language style eliciting different interaction styles from the teacher. The results show that teachers interact differently with children of the different socio-economic groups. Maternal education is a major factor in the Hollingshead-Redlich index of socio-economic status. Maternal education may also be viewed as an indicator of the language community in which a child acquires his vocabulary, syntax and dialect.
Therefore maternal education was selected as an indirect measure of the child's language. Since only maternal education showed any differences, the teacher interaction style may be attributable to bias from sources other than the child's language characteristics. These might be cumulative records, gossip, dress, cleanliness, etc. The present study did not examine these factors; perhaps future research could concentrate on them.

The author speculates that teachers make an implicit value judgment about children of low socio-economic background which elicits a more direct interaction style. The review of research pointed out that nondirective teaching behaviors seem to establish learning conditions which enable the student to operate effectively at a level consistent with his cognitive and emotional characteristics. Students taught in a more direct fashion are not allowed to make such an adjustment, and therefore cannot operate as effectively.

If the results of this portion of the study can be generalized, they will have important implications for educational practices. In addition to presenting a new focus for classroom research, knowledge about student influence on teacher behavior may necessitate modification in teacher education curricula. The inclusion of this information in teacher education courses may be important to make teachers cognizant of the stigma which is oftentimes placed on the lower class child and to encourage a more indirect teacher interaction style.
The language tests (auditory reception and grammatic closure subtests of the ITPA) used to get a direct measure of language may not have been accurate in this study due to earlier interventions to remediate learning disabilities. All of the children enrolled in this camp had learning problems and many were enrolled in earlier special education programs which may have invalidated the scores on the auditory reception and grammatic closure subtests.

A measure of untutored language would be necessary if the hypothesis concerning language eliciting different teacher interaction styles is to be truly tested. Any replication or further studies of this nature should analyze any language tutoring that may have occurred outside of the home. A major limitation of this study was that all of the students were identified as having learning problems.

Further studies should be conducted in mainstream classrooms to see if teachers interact differently in response to children's language characteristics.
References

Amidon, E. J. Using interaction analysis at Temple University. Paper read at the Conference on the Implications of Recent Research on Teaching sponsored by the National Association for Student Teaching and the University of Rochester, Rochester, New York, January, 1966.


Flanders, N. A. Analyzing teaching behavior. Reading, Massachusetts: Addison-Wesley, 1970.


