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AUTHOR   Loflin, Marvin D.; And Others
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                Differences, Research Methodology, *Social Dialects,
                Social Differences, *Sociolinguistics, Syntax,
                Teacher Role

ABSTRACT
                This paper, one of a group prepared by the Classroom
Interaction Project of the University of Missouri's Center of Social
Behavior (see related documents AL 002 750-752), is organized into
two parts. The first section, a presentation of results of research
into the sociolinguistic distribution of syntactic structures in
black and white classrooms, is divided into three categories: those
dealing with grade level differences between (1) black and white
pupils, (2) teachers of black pupils and teachers of white pupils,
and (3) the total sets of teachers and pupils. Findings did not
support the two major hypotheses that (1) white pupils use complex
language more frequently than black pupils, and (2) complexity of
language increases with grade level. It was found rather that black
and white pupils in the sample were in different language development
cycles, in which whites attained maximum use of complex structures
sooner than blacks but where blacks used more complex structures once
their peak of development had been reached. It was also found that
the classroom language of the teacher tended to reflect that of the
pupils. The second section of the paper discusses the implications of
the research for language research as well as for education. (FWB)

IMPLICATIONS OF THE LINGUISTIC DIFFERENCES BETWEEN BLACK-GHETTO AND WHITE-SUBURBAN CLASSROOMS*

by

Marvin D. Loflin
Thomas W. Guyette
Bruce J. Biddle

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This paper is organized into two parts. One section deals with a pre-
sentation of results concerning the sociolinguistic distribution of
syntactic structures in black and white classrooms and the other section
deals with the implications of the research in general. Thus, the first
half extends the discussion of the empirical results reported on in this '
session and the second half attempts to provide a framework for discussing
implications.

Our presentation of findings will be divided into three categories:
(1) those dealing with grade level differences between black and white
pupils; (2) those dealing with grade level differences between teachers
of black pupils and teachers of white pupils; and (3) those dealing with
grade level differences between the total sets of teachers and pupils.

In order to comprehend the results of our comparison of syntactic
structure in black and white classrooms it is necessary to understand
five technical terms: embedding, conjoining, adjoining, simplex sentence and
natural sentence (see handout A). You will note from Table I and Figures I
and II that black first graders use adjoining and conjoining
structures significantly less frequently than white pupils. This finding
corresponds with the observations of a great many researchers and is
mentioned here in passing to provide one indicator of internal validity
for the remaining findings to be reported. In addition, this fact about
the speech of black first graders corroborates a generally held assumption;
the ability of black pupils to manipulate natural language symbols is
significantly below that of white pupils. This generalization would be
expected to hold for our data which were obtained from racially segregated
areas. The white sample was drawn from an upper middle and middle class

school and the black sample from a lower-middle and lower class school.
We are presenting only those results which represent significant depar-
tures from this preconception. Because both groups used all the structures
which were studied it must be remembered that we are reporting on the
relative frequency of occurrence of these syntactic structures.
Finally, we are assuming that different frequency distributions of
language structures reflect important cognitive realities.

Generally, we will assume that greater complexity is to be
expected as the grade level increases. Thus, where this generalization
does not hold the fact will be the object of special mention. In summary,
the two major hypotheses are:

1. White pupils will use complex language more frequently than
   black pupils.

2. As grade level increases the use of complex language will
   become more frequent.

Pupils. I refer you to Table I, Figures I, II, and III. You note
that the facts represented there describe a state of affairs contrary to
those presupposed by both hypotheses. First, black pupils at the eleventh
grade consistently use complex syntactic structures more frequently than
white eleventh grade pupils. Black pupils in the sixth grade use
adjoining structures more frequently and, although the difference is not
significant, first grade blacks use embeddings more often. Second, it
is certainly not the case that the frequency of complex language use
increases with grade level in all instances.

Our explanation for these facts is the following: Black and white
pupils are peaking in their language development at different grade levels,

The structures we have reported on are no longer than a natural sentence whereas the differences which teachers and the majority culture are reacting to are the rules of evidence and coherence for the justification of ideas and socio-cultural beliefs. The symbol domain of discursement presupposes multiple sentence entities which have internal structure and testable meaning relationships. These units will ultimately prove to be of more importance to education than the domain of sentences. Thus, if failure rates among black pupils are higher or it their performance is considered inadequate by some criterion, it is not because of a lack of the conceptual apparatus, that is, the level of sentence propositional symbols structures, but because of a lack of socialization to discursement structure norms.

Teachers. A close look at Table II, Figures IV, V, VI suggests that across grade levels, teachers, in general, use complex language structures with about the same frequencies as their pupils. The major exception is conjoining,where teachers of whites do not conform to the pattern of their students (Compare Figures II and IV). Apparently, most teachers are reflecting the pressures of interaction and conforming their speech to that of their pupils. In other words, the pursuit of language structure objectives is being subverted by the teacher's unconscious need to interact with students. The language structure model of the classroom is pupil-population inspired rather than teacher-population inspired. Teachers talk in the way pupils do; the one exception is among teachers of white students. We are assuming that Table II is reflecting Table I rather than vice versa. Our reasons for accepting this conclusion are the following: (1) The peaking in frequency of use of different sets

of structures for students has implications for language acquisition and
language development among young people being socialized into the culture
which it would not have for teachers. (2) The population of students
in the classroom outnumbers the population of teachers. It is assumed
that verbal interaction norms are set by the norm of behaviors in the larger
population. The pressure upon the teacher to conform is greater than
upon the pupils. Thus, the teacher will reflect the student norms.
(3) If the frequency of occurrence of these language forms is indeed
developmental, then the pupils use the forms they do for reasons over
which they have very little control. Black pupils cannot use adjoinings
as frequently as whites in the first grade because their developmental
burst hasn't yet occurred. Presumably teachers could use more adjoinings.
This could be tested by shifting a teacher into different grade levels.
There are other arguments which suggest the direction of influence is
pupil to teacher rather than the other way round. But these should
suffice to make the claim possible.

If it is true that pupils in the classroom are influencing
teachers to use the syntactic structures they are using, then it could
also be true that teachers are using the same rules of coherence and
evidence that pupils are using. If it is true that developmental pressures
determine the complexity of syntactic structures used, then it may be
that developmental pressures determine the kinds of discursement structures
used. All of these issues remain to be explored in our research.

Pupils and teachers. Table III and Figures VII, VIII and IX
suggest a high degree of overall pattern sameness in the frequency of
occurrence of complex syntactic structures in the classroom. Just as

grade level differences for black and white pupils provide evidence of
social dialect differences according to race it will probably be found
that there are social dialect differences from social situation to social
situation. Thus, we could expect to find these syntactic profiles
differing from those that would emerge from a study of family interaction,
barroom interaction, etc. If there is something to be called the
language of the classroom it should be discoverable in a comparative study
of different social situations of these kinds.

In summary it is possible to state that black and white pupils
are in different language development cycles. These differences in
developmental phases probably stem from subcommunity derived dialects.
In the classroom the language of the teacher appears to reflect the
language of the pupils. We suggest that at the level of sentence structure
both black and white pupils control the same forms. We also suggest
that the differences that make a difference in the classroom are probably
to be found in multi-sentence configurations.

We move now to the second part of this presentation which will
include a discussion of the implications of the research in general and
the implications of the findings as they relate to education.

The implications of this research and these findings can be
classified in at least two categories: general and educational. General
implications bear upon the elucidation of the nature of natural language
symbols.

The objective in studying the verbal messages that are exchanged
in classroom interaction is to investigate the nature of knowing and the

processes leading to it. It is assumed that the ability to manipulate symbols lies at the heart of the process of coming to know. That is, the process of moving from knowing to knowing is to be understood by gaining insight into the nature of symbols and how they are manipulated. It is further assumed that there are three types of symbols: terms, sentences, and discursements. We assume that much of the knowledge that is educationally relevant is ultimately arrived at by the ability to manipulate these three types of symbols. One characteristic of teaching, then, is the manipulating of symbols in such a way as to induce in the learner the process of cognitive transformation from the set of known symbols and the set of actual configuration types to expanded sets. Learning, involving symbols, takes place by integrating the unknown, the to-be-learned, into the known. Thus, it is assumed that coming to know is a process of integrating the unknown into the known by means of symbols and their relationship types.

Charles Morris and others have propose that symbols can be studied syntactically, semantically, and pragmatically. Syntax involves symbol-symbol relationships; semantics involves symbol-referent relationships; and pragmatics involves symbol-user relationships. Our research looks selectively at different aspects of all these relationships.

The study of groups in natural contexts of interaction where the relationship between characteristics of the participants and their speech are the objects of investigation is a pragmatic study. This research has implications for the study of specific types of interaction situations such as the classroom and for the comparison of symbol-user relationships across types of situations within a language community and across language

SYMBOL RELATIONSHIPS

Syntax	Semantics	Pragmatics
Symbol--Symbol	Symbol--Referent	Symbol--User
word--word	word	word
word--sentence	sentence ——> referent	sentence —— user
word--discursement	discursement	discursement
sentence--sentence		
sentence--discursement		
discursement--discursement		

communities. For example, the findings which indicate that there is a correlation between the frequency of use of certain syntactic structures and race is a relationship of this kind.

Barron's paper where relationships between race and sex of speaker and grammatical case are shown is a further example of the study of symbol-user interrelations.

Although we have not reported on it here we feel that one of the major implications of our research relates to the elucidation of discursement types. It is probably the case that teachers and pupils share essentially the same word and sentence language structures and that differences between the two, if they are presumed to exist, exist at the discursement level.

This is by no means an adequate survey of the general implications of these results and this kind of research. Nevertheless, we hope enough has been stated to suggest that general implications exist.

In addition to the broader implications of this research, there are those which relate more specifically to education. Let me select one example. Assume that a prerequisite to the study of certain subject matter is the control of one or more adjoining structures. Then, obviously, pupil competence in adjoining must precede instruction in the subject matter. Competence in natural language manipulation must precede competence with specific domains of subject matter.

In summary, our research suggests a linguisticization of educational research. Our ability to assess teacher competence and pupil achievement in language instruction and use must come to rely more

heavily on linguistic theory and methodology through which it is possible

to analyze the symbols upon which the pedagogical enterprise is based.

TABLE I

Differences Between the Percentage of Embedding, Conjoining and Adjoining in the Speech of Black and White Students by Grade Level

Black and White Students by Grade Level	Complexity Facets		
	Embedding	Conjoining	Adjoining
First Grade	NS	W > B****	W > B****
Sixth Grade	W > B****	NS	B > W****
Eleventh Grade	B > W****	NS	B > W**

TABLE II

Differences Between the Percentage of Embedding, Conjoining and Adjoining in the Speech of Teachers of Black and White Students by Grade Level

Teachers of Black and White Students by Grade Level	Embedding	Conjoining	Adjoining
First Grade	NS	W > B*	W > B****
Sixth Grade	W > B****	B > W***	B > W***
Eleventh Grade	NS	W > B****	W > B**

TABLE III

Differences Between the Percentage of Embedding, Conjoining and Adjoining in the Speech of Teachers and Pupils by Grade Level

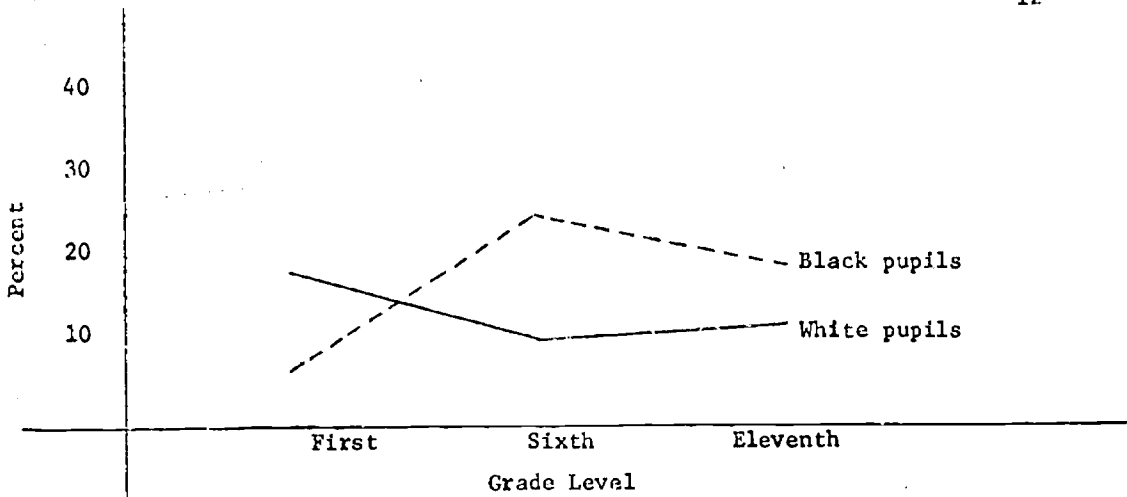| Teacher and Students by Grade Level	Embedding	Conjoining	Adjoining
First Grade	NS	T > S**	NS
Sixth Grade	NS	NS	NS
Eleventh Grade	NS	NS	NS

*=p < .10
**=p < .05
***=p < .02
****=p < .01

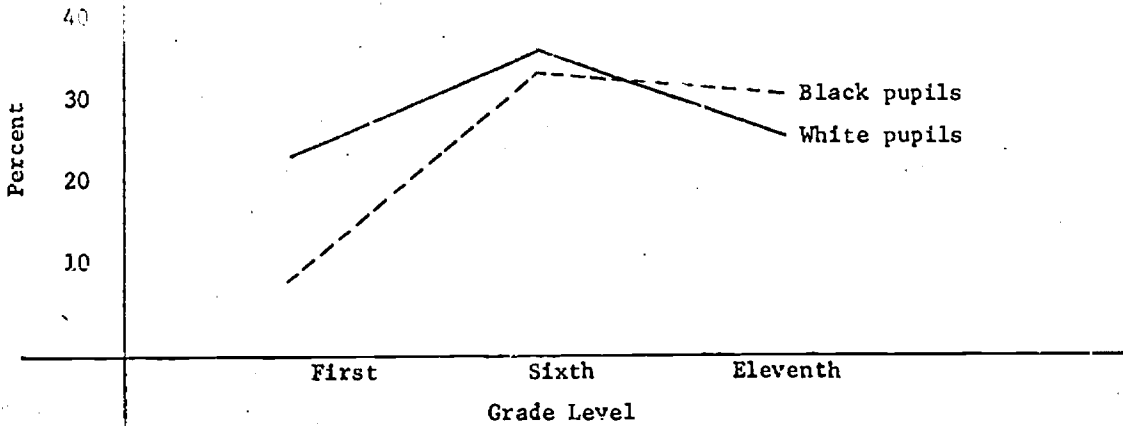Figure I. Percent of adjoining in the speech of black and white pupils by grade level.

Figure II. Percent of conjoining in the speech of black and white pupils by grade level.
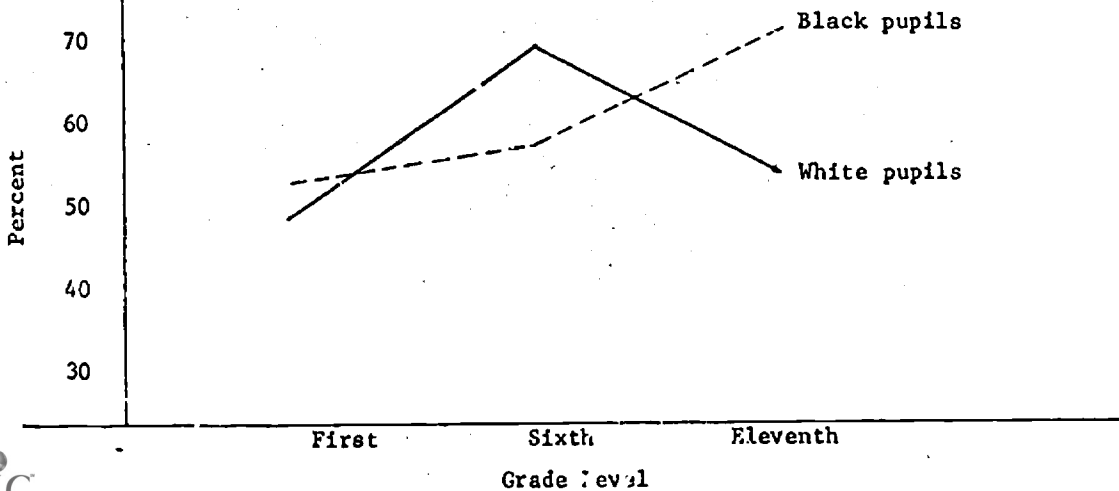

Figure III. Percent of embedding in the speech of black and white pupils by grade level.
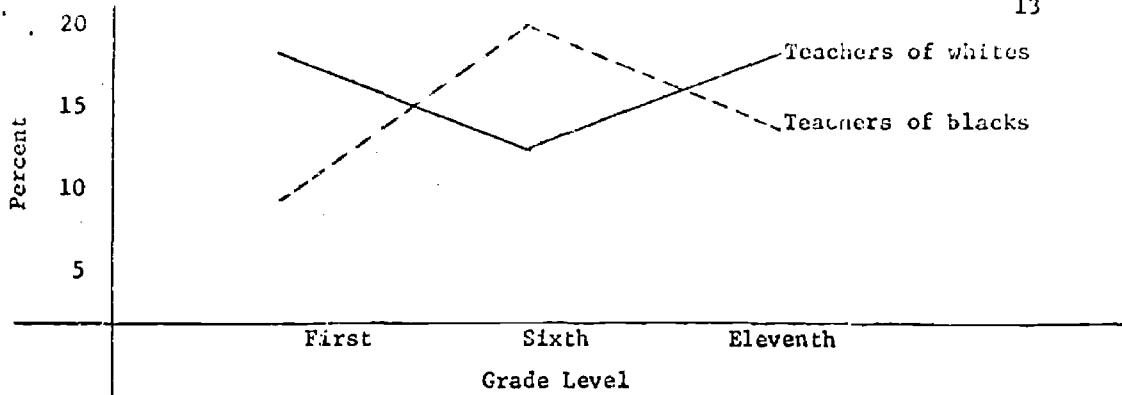
Figure IV. Percent of adjoining in the speech of teachers of black and white students by grade level.
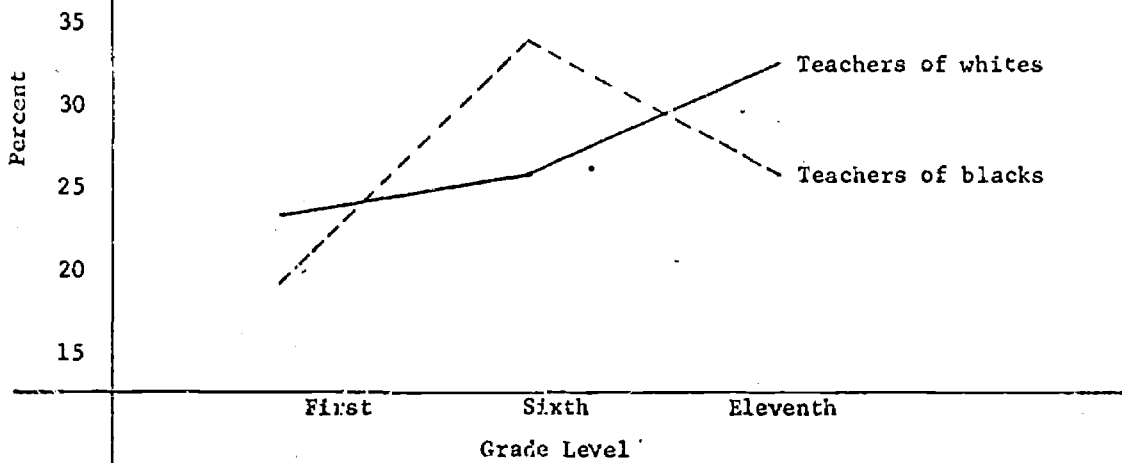

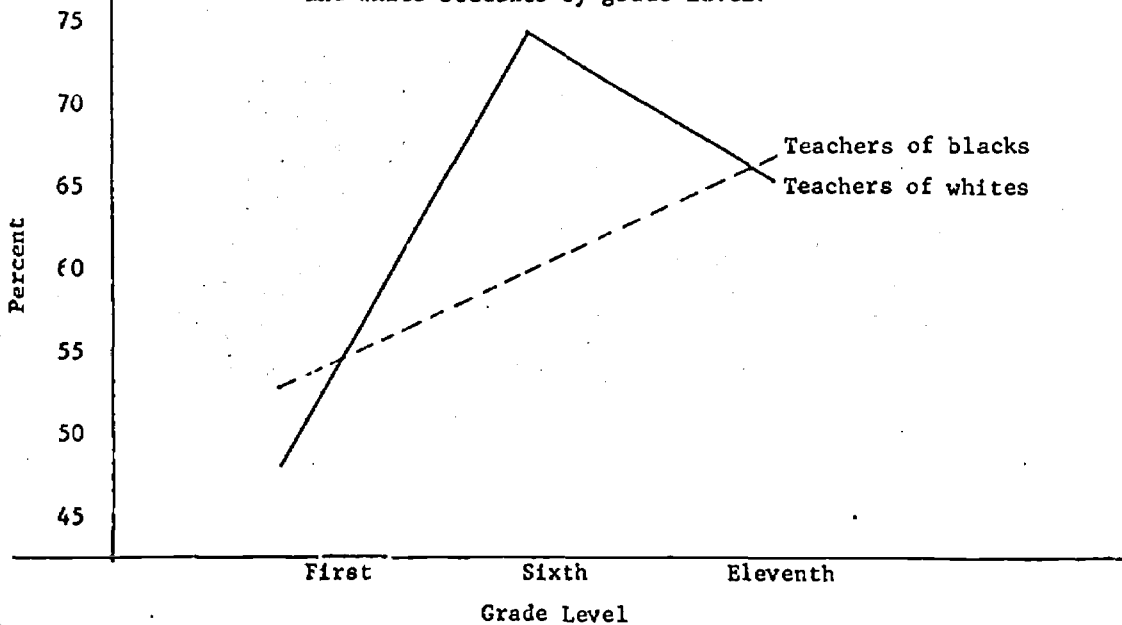Figure V. Percent of conjoining in the speech of teachers of black and white students by grade level.

Figure VI. Percent of embedding in the speech of teachers of black and white students by grade level.

All Students
All Teachers

First   Sixth   Eleventh
Grade Level
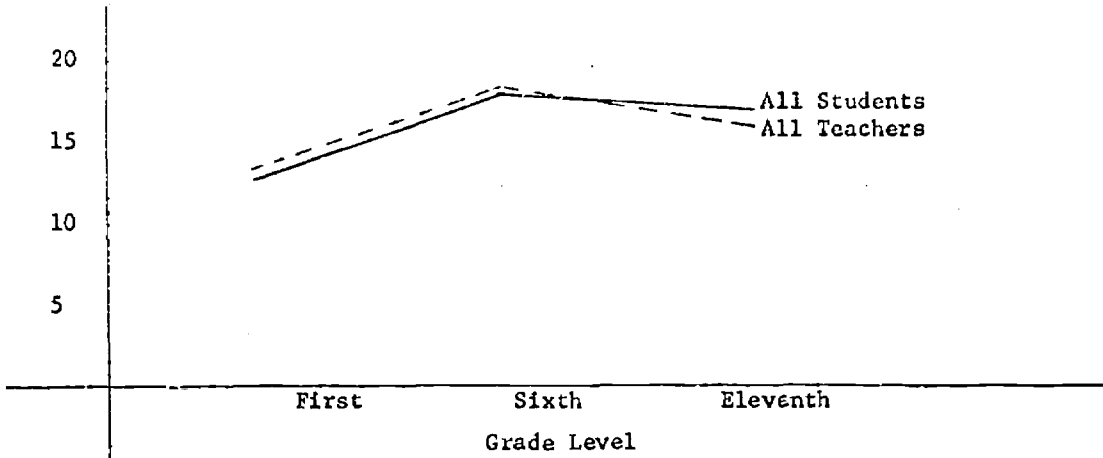
Figure VII.   Percent of adjoining in the speech of teachers and
pupils by grade level.

All Teachers
All Students

First   Sixth   Eleventh
Grade Level
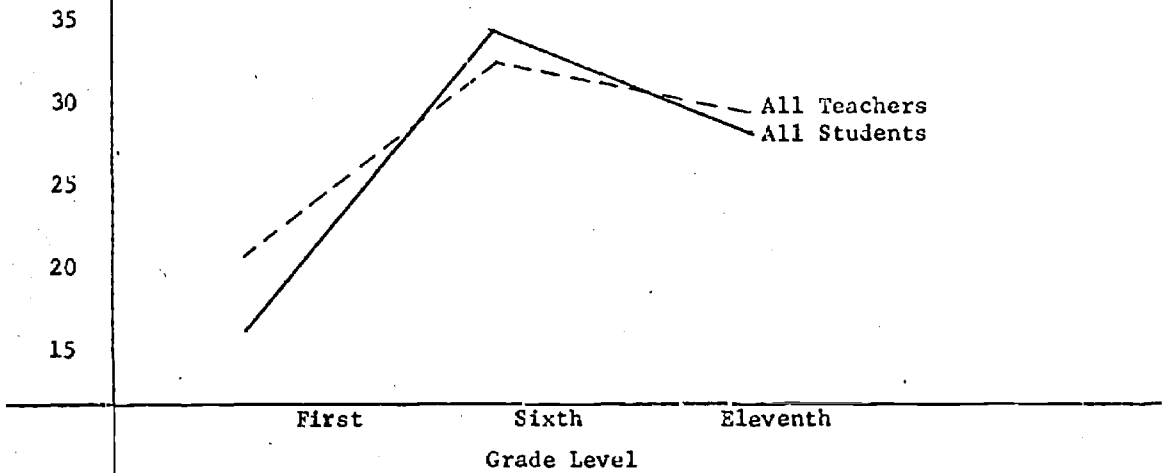
Figure VIII.   Percent of conjoining in the speech of teachers and
pupils by grade level.

All Teachers
All Students

First   Sixth   Eleventh
Grade Level
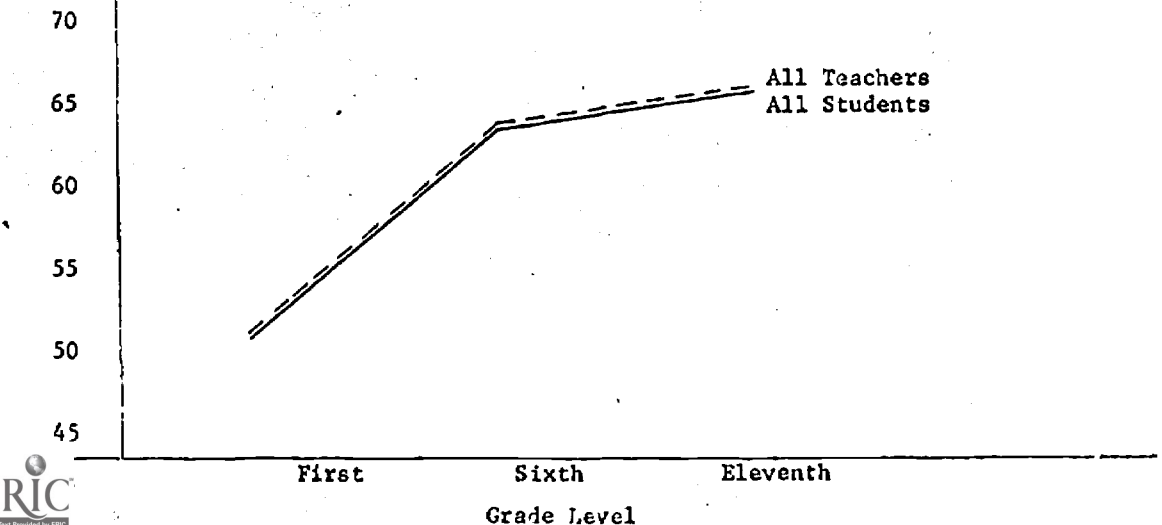
Figure IX.   Percent of embedding in the speech of teachers and
pupils by grade level.

Handout A

GLOSSARY OF TERMS

for

VERBAL INTERACTION IN THE CLASSROOM

Biddle
Hays
Guyette
Marlin
Barron
Keyes
Loflin

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GLOSSARY

Embedding: The combination of at least two simplex sentences so that one simplex (the constituent or embedded sentence) serves a syntactic function (i.e., nominal, modifier, etc.) within the other simplex (the matrix sentence).

Types of embedding

1. for-to complement

   It's all right <u>for</u> Harry <u>to</u> be late.

2. -ing complement

   Nancy enjoys <u>swimming</u>.

3. Possessive -ing complement

   <u>John's riding</u> is terrible.

4. to complement

   Annie started <u>to move</u>.

5. whether, if complement

   Harry asked <u>whether</u> Tom had gone.

   Harry asked <u>if</u> Sue wanted turkey.

6. Wh- complement

   John knew <u>what</u> Helen wanted.

7. That complement

   Mary said <u>that</u> Jim would be late.

8. The fact that complement.

   <u>The fact that</u> I am a woman is irrelevant.

9. Possessive

   <u>Jim's</u> house is on the corner.

10. Relative

    The girl <u>who</u> left was Pat.

11. Appositive

   The word _seizing_ has many meanings.

12. Comparative

   Tom is friendlier _than Bob._

13. Verbal noun

   The struggle for civil rights continues.

Conjoining: Two source sentences are joined together by the conjoining
   links _and, but, or,_ or _and/or_ or their meaning equivalents.
   Conjoining may occur with or without deletion. In all the
   examples below the words in parentheses have been deleted
   from the spoken sentence.

   1. _And_ (Additive)

      Tom left _and_ Mary stayed. (without deletion)

      Tom (left) _and_ Mary left.   (with deletion)

   2. _But_ (Adversative)

      Jim danced, _however_ Sue just sat. (without deletion)

      Jim danced _but_ Sue didn't (dance). (with deletion)

   3. _Or_ (Disjunctive)

      Mark must go _or_ I'll stay home. (without deletion)

      Surely Mark (will go) _or_ Pete will go.   (with deletion)

   4. _And/or_ (additive disjunctive)

      I want to go swimming _and/or_ (Iwant to go)to the movies.
          (with deletion)
      Linda can wear a dress _and/or_ she can wear slacks.

      (without deletion)

Adjoining: Two source sentences are joined together by a function word
   or link which exhibits the logical relationship of adjoining
   links (see below). Adjoining may occur with or without deletion.

1. Temporal

   I'll go <u>when</u> you go. (without deletion)

   I'll go <u>whenever</u> you want to (go). (with deletion)

2. Causal

   <u>Because</u> you cried, I cried. (without deletion)

   I laughed <u>because</u> you did (cry). (with deletion)

3. Concessional

   <u>Although</u> today is Saturday, I'm going to school.
   (without deletion)

   Even though you won't (sing), I will (sing). (with deletion)

4. Conditional

   <u>If</u> you leave I'll cry. (without deletion)

   If you leave, I will (leave). (with deletion)

5. Purposive

   Study hall is provided <u>for</u> pupils to study in.
   (without deletion)

   A hammer is <u>for</u> (someone)pounding. (with deletion)

6. Inferential

   If it snows <u>then</u> we'll have to stay home.
   (without deletion)

   We'll come <u>if</u> we can (come). (with deletion)

Natural sentence: An utterance which contains one or more simplex
sentences and is the unit in the fine post-edited text which
begins with a capital letter and ends with a period.

Simplex sentence: A primitive sentential form irreducible into
additional sentences.

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