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DIRECTIVES USED IN MANAGEMENT AND
INSTRUCTIONAL ACTIVITIES IN THE CLASSROOM

A Thesis

by

LISA HENDRIX PRUITT

Submitted to the Graduate School
Appalachian State University
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and Exceptionalities

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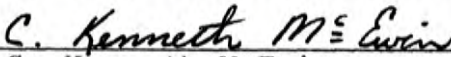
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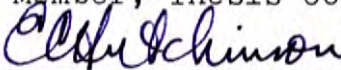
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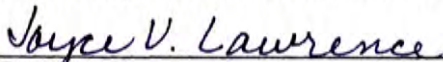
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ABSTRACT

DIRECTIVES USED IN MANAGEMENT AND
INSTRUCTIONAL ACTIVITIES IN THE CLASSROOM

(August 1985)

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The purpose of this study was to compare the types of directives (direct, indirect, and inferred) used by classroom teachers in first-, third-, and fifth-grades during management and instructional activities. Twelve teachers participating as subjects were observed in their classrooms for three 45 minute sessions. Recordings were made during each observation to obtain samples of the teachers' directives. The directives were transcribed and coded as direct, indirect, or inferred, and served in either classroom management or instruction. The frequency of each directive type (direct, indirect, and inferred) and function (management or instruction) was computed for each subject and each grade level. Then, the data were subjected to analyses of variance for repeated

measures to determine significant differences within grade levels. When significant differences were observed, post hoc analyses using the Scheffe test for all comparisons were conducted.

Results indicated the first- and third-grade teachers used a greater number of direct directives, whereas the fifth-grade teachers used a greater number of inferred directives. All teachers used more instructional than management directives. In additional analyses of the management and instructional directive types, the first- and fifth-grade teachers used more inferred directives to manage their students' behavior. First- and third-grade teachers used more direct directives to instruct, while fifth-grade teachers used more inferred directives during instructional activities. There were no significant differences in the uses of direct, indirect, management, direct management, indirect management, inferred management, direct instructional, and indirect instructional directives across grades 1, 3, and 5. Significant differences were found in the use of inferred, instructional, and inferred instructional directives across grade levels. Results could have been skewed due to the third-grade teachers' limited use of directives.

Overall, these results support a developmental progression in the use of directives since first- and third-grade teachers used more direct directives during instructional activities, whereas, the fifth-grade teachers used more inferred directives.

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Chapter 1
INTRODUCTION

Statement of the Problem

Auditory comprehension of language influences reading skills and academic achievement (Burrows & Neyland, 1978). Therefore, the enhancement of auditory comprehension in school-age children is essential. For comprehension of auditory messages to occur, the auditory mechanism must function properly to receive auditory input, then, the input must undergo complex processing at the subcortical and cortical levels. When the auditory input is in the form of oral commands, children not only must receive and process the messages accurately, but also, they must store in memory the sequence of the commands in order to execute appropriate responses. In the school setting, children are required to perform such tasks daily. Teachers may say, for example, turn to page three and circle the tree in the middle of the page. As children execute these academic tasks, they are expected to interpret direct as well as indirect directives (oral commands) used by teachers, aides,

and any other persons in authority. Directives, in this sense, refer to utterances produced by speakers who desire an initiation or cessation of a specific action by listeners.

Directives may be direct (imperative and literally explicit in form, e.g., "Chris, sit down."), indirect (interrogative in form with an embedded imperative, e.g., "Can you tell me that word?"), or inferred (need or desire statements, hints, question directives that omit the desired act or actor from the utterance, e.g., "Eric, you're holding us up.") in form (Garvey, 1977). In the classroom setting, teachers use directives to manage their students' behavior (management directives) and to instruct educational activities (instructional directives).

When children appear to have difficulty processing or comprehending teachers' directives, their difficulty may be due to a mismatch between the teachers' language and their own language. Bellinger (1979), Bohannon and Marquis (1977), and Schneiderman (1983) studied mothers interacting with their children. They found that children exhibited nonverbal cues to confirm comprehension of directives. When directives were not comprehended, the mothers intuitively seemed to change to more direct forms assuming that these forms were

comprehended more easily (Ackerman, 1978; Carrow, 1968; Garvey, 1977; Prinz & Ferrier, 1983; Wood, 1982).

It seems reasonable to assume, then, that teachers might also adjust directives to meet the needs of their students, and that a first-grade teacher's presentation of directives would differ from that of an eighth-grade teacher's. Although teachers have not been instructed specifically to alter their use of directives according to the age or comprehension level of the students they instruct, this alteration must take place for comprehension to occur (Ackerman, 1978; Prinz & Ferrier, 1983).

Ackerman (1978) found that third-grade students comprehended indirect utterances better than first-grade students suggesting developmental changes in comprehension of directive types across grade levels. The purpose of this study was to compare types of directives (direct, indirect, and inferred) used by classroom teachers in first, third, and fifth grades during management and instructional activities.

Statement of the Hypotheses

For the purposes of this study, the following hypotheses were developed in the null form and tested at the .05 level of significance.

Major Null Hypothesis

There are no significant differences in the types of directives used in the classroom for first-, third-, and fifth-grade teachers during instruction and management.

Null subhypothesis 1. There is no significant difference in the use of directive types (direct, indirect, and inferred) for first-grade teachers.

Null subhypothesis 2. There is no significant difference between the use of management and instructional directives for first-grade teachers.

Null subhypothesis 3. There is no significant difference in the use of management directive types (direct, indirect, and inferred) for first-grade teachers.

Null subhypothesis 4. There is no significant difference in the use of instructional directive types (direct, indirect, and inferred) for first-grade teachers.

Null subhypothesis 5. There is no significant difference in the use of directive types (direct, indirect, and inferred) for third-grade teachers.

Null subhypothesis 6. There is no significant difference between the use of management and instructional directives for third-grade teachers.

Null subhypothesis 7. There is no significant difference in the use of management directive types (direct, indirect, and inferred) for third-grade teachers.

Null subhypothesis 8. There is no significant difference in the use of instructional directive types (direct, indirect, and inferred) for third-grade teachers.

Null subhypothesis 9. There is no significant difference in the use of directive types (direct, indirect, and inferred) for fifth-grade teachers.

Null subhypothesis 10. There is no significant difference between the use of management and instructional directives for fifth-grade teachers.

Null subhypothesis 11. There is no significant difference in the use of management directive types (direct, indirect, and inferred) for fifth-grade teachers.

Null subhypothesis 12. There is no significant difference in the use of instructional directive types (direct, indirect, and inferred) for fifth-grade teachers.

Null subhypothesis 13. There is no significant difference in the use of direct directives across grades 1, 3, and 5.

Null subhypothesis 14. There is no significant difference in the use of indirect directives across grades 1, 3, and 5.

Null subhypothesis 15. There is no significant difference in the use of inferred directives across grades 1, 3, and 5.

Null subhypothesis 16. There is no significant difference in the use of management directives across grades 1, 3, and 5.

Null subhypothesis 17. There is no significant difference in the use of instructional directives across grades 1, 3, and 5.

Null subhypothesis 18. There is no significant difference in the use of direct management directives across grades 1, 3, and 5.

Null subhypothesis 19. There is no significant difference in the use of indirect management directives across grades 1, 3, and 5.

Null subhypothesis 20. There is no significant difference in the use of inferred management directives across grades 1, 3, and 5.

Null subhypothesis 21. There is no significant difference in the use of direct instructional directives across grades 1, 3, and 5.

Null subhypothesis 22. There is no significant difference in the use of indirect instructional directives across grades 1, 3, and 5.

Null subhypothesis 23. There is no significant difference in the use of inferred instructional directives across grades 1, 3, and 5.

Assumptions and Limitations

In this study, there were two assumptions and one limitation.

Assumptions

The following assumptions were made in this study:

1. That the researcher, a practicing speech-language clinician, was qualified to categorize and interpret the directive types.

2. That the directives included for analysis were a representative sample of the types of directives used by the teachers.

Limitation

The following limitation was noted in this study:

Since the subject sample may not have been representative of the population at large, it will not be possible to generalize the results beyond the sample investigated or a like study.

Chapter 2

REVIEW OF LITERATURE

Children's comprehension of auditory messages has long been studied yet remains a subject in question. The following review of related literature examines previous studies in the area of children's language comprehension.

Comprehension Skills

In order for students to survive in the classroom setting, they must have the ability to comprehend and follow directives. Rampp (1976) emphasized the importance of following directions:

Throughout the child's educational career, he is expected to follow directions. Not being set to listen, poor auditory memory, confusion about what is expected, lack of understanding of specific words used, and not understanding the words that express relationships between things or propositions can contribute to problems in following instructions. (p. 37)

Rampp suggested that factors contributing to ease of comprehension are command length, word complexity, and sentence structure. Others also have developed theories concerning comprehension (Gordon & Lakoff, 1971 as cited in Clark & Lucy, 1975; Rees & Shulman, 1978; Shatz, 1978b).

Shatz (1978b) argued that "understanding involves the listeners' representing the messages sent to them in just the way that senders intended them to be represented" (p. 272). Gordon and Lakoff (1971) as cited in Clark and Lucy (1975) suggested that "the interpretation of conveyed requests arises from a recipe requiring three ingredients: (a) the literal meaning of the sentence, (b) the perceived context, and (c) a so-called conversational postulate" (p. 57). In short, the recipe suggests that a child first examines the appropriateness of the literal meaning of an utterance. If the literal interpretation seems inappropriate, the context is examined. If the context provides no additional information concerning the intended meaning, the child considers the literal meaning in conjunction with a conversational postulate (Clark & Lucy, 1975).

Rees and Shulman (1978) also suggested three considerations when evaluating comprehension: (a) literal meaning, (b) presupposition and inference (relationships between sentences in conversation), and (c) illocutionary acts (how the speaker intends the sentence). These considerations also imply the existence of an examining process prior to comprehension. Thus, a child's ability to comprehend auditory messages, oral directives in particular,

may be affected by the presentation of the directive and the child's developmental age.

Comprehension of Directives by the
Preschool Child

A few studies of directive comprehension have focused on preschool children's comprehension of their mothers' directives. Shatz (1978a) studied three young children, ages 2, 2;3, and 2;4, during natural play sessions in their homes. Results of the study indicated that the mothers used nonverbal cues such as pointing to signal the meaning of their directives. When this study was replicated using two younger subjects, 1;7 and 1;8 years old, Shatz found that once again, mothers of even younger children used nonverbal cues to signal meaning. All of the children responded appropriately to their mothers' requests regardless of the type of directive used. Results also revealed that mothers of younger children used more nonverbal cues than mothers of older children.

Bellinger (1979) observed 40 mother-child pairs during play activities in a laboratory playroom, with children ranging in age from 1 to 5 years. Results revealed that mothers of younger children were more direct in their presentation of directives. "As children get older, mothers' directives resemble

conventional imperatives less and less in terms of certain properties of surface structure" (p. 453). When indirect forms were used, the mothers were consistent in using certain forms so that the children were accustomed to responding to invariable indirect forms (e.g., "Can you get your toys?", "Can you get your coat?", "Can you sit down?").

Other studies have also focused on preschool children's abilities to comprehend accurately direct and indirect directives. These studies, however, were conducted in more structured situations. Prinz and Ferrier (1983) examined comprehension skills of 30 language-impaired children, ages 3;6 to 9, during role-playing situations with puppets. The experimenters used the puppets to present six pairs of requests to the children who were then required to determine "Who asked nicest?" and "What did he say that was nicer?". Analysis of the requests indicated that the more polite forms were more indirect. The younger children, 3;6 to 5;6, were unable to identify correctly the indirect requests as more polite forms. Following the testing, the children were asked to assist in tidying the room through a series of requests for assistance including question, imperative, tag question, conditional, and declaring appropriateness. "All of the children, with the exception of one

5-year old performed appropriately" (p. 49) on this compliance task. The child who failed to comply did so only on requests that were more indirect. This failure lends support to the theory that indirect forms were and are more difficult for children to comprehend.

Results of a study conducted by Leonard, Wilcox, Fulmer, and Davis (1978) provide additional support for such a theory. Subjects for this study included 7 adults and 60 children ranging in age from 4 to 6. All subjects observed videotaped interactions involving two adults in everyday-type situations. The subjects were required to judge the listener's responses to 20 negatively structured indirect requests (e.g., "Can't you move the ashtray?") and 20 affirmative indirect requests (e.g., "Can you open the door?"). The 6-year-old group performed significantly better than the 5-year-old group. Likewise, the 5-year-old group performed significantly better than the 4-year-old group. Although not equal to their peers, the 4-year-old groups' performance exceeded the level of chance. These results indicated a developmental progression in children's comprehension of request directives.

Leonard et al. (1978) conducted a second experiment using only affirmative indirect requests.

Although another 60 children participated in this experiment, the same 7 adults participated in both studies. Again, the subjects observed 40 videotaped interactions and were required to judge the appropriateness of the listener's responses. Results, in general, revealed that the negatively structured indirect requests were no more difficult to comprehend than the affirmative. Although the 4- and 5-year-old children were capable of accurately judging some requests, the requests including must and should posed great difficulty. Their performance on must and should requests did not exceed the level of chance. Thus, it was observed that the younger children were not as proficient at judging appropriateness of responses to indirect requests, particularly those involving must and should.

Carrow (1968) evaluated comprehension skills of 159 children, ages 2;10 to 7;9, using a picture pointing task on a series of black and white line drawings. Results of the study revealed that "mean language comprehension scores increased with age" (p. 109). The children seemed to comprehend earlier the words or word categories that were more specifically direct in meaning, such as nouns. Frequency of occurrence also seemed to be an influencing factor in the children's comprehension

of words. The words used more frequently were comprehended more easily.

In view of the findings by Bellinger (1979), Carrow (1968), Leonard et al. (1978), Prinz and Ferrier (1983), and Shatz (1978a), it seems that preschool children are not capable of performing well on tasks requiring comprehension of unspecified, indirect, linguistic forms. As the children age, comprehension skills seem to sharpen, suggesting that comprehension skills of school-age children should be superior to those of their younger counterparts.

Comprehension of Directives by the School-age Child

Carrow (1968) investigated language comprehension skills of preschool and school-age children. Her study included 159 children, ages 2;10 to 7;9. Results of this study indicated that language comprehension scores increased with age. Thus, the older school-age children demonstrated greater comprehension of the test items than did the preschool children.

Ackerman (1978) also studied school-age children's comprehension skills. The first of his two experiments employed 12 first-grade students, 12 third-grade students, and 12 college students as subjects. Subjects were required to listen to readings of

paragraphs containing two variations in meaning, literal and extraliteral. Following the readings, subjects answered yes-no questions about what they thought would happen next. The subjects' responses indicated how well they comprehended implied meanings. Responses were analyzed and Ackerman found that third-grade students, much like adults, were beginning to use context clues to determine meaning. Although the first-grade students did not show evidence of interpreting all of the indirect utterances accurately, they were beginning to use context clues to interpret inferred meaning.

A second experiment conducted by Ackerman (1978) examined children's memory for implied meaning using 16 first-grade, 16 third-grade, and 16 college students as subjects. None of these individuals had participated in the previous study. Subjects listened to readings of 16 short paragraphs, participated in a distraction task, and listened to another 32 sentences. Subjects were asked to determine if the second readings were identical to the first. Results revealed that third-grade students responded much like adults, but first-grade students' performance was much poorer than that of the older subjects'. Ackerman concluded that "The memory of the first-grade children was poorer than the other two groups" (p. 315). It is possible

that the younger children were neither able to comprehend the implied meanings of the utterances nor to recall the utterances. Hence, comprehension or noncomprehension of the implied meanings could have influenced the children's memory skills.

Leonard et al. (1970) studied the comprehension of indirect requests with negative syntactic structures and affirmative syntactic structures by 7 adults and 20 four-, 20 five-, and 20 six-year old children. The subjects were required to make judgments concerning appropriateness of listener's responses to indirect requests. The results indicated that the judgments of 6-year-old children were much like those of adults'. Both the 6-year-old children and the adults performed significantly better than the younger children. From the results of this study and others, it appears that there is indeed a developmental progression in children's comprehension of indirect directives.

Finally, Prinz and Ferrier (1983) studied language comprehension skills of language impaired children. They found that language impaired preschool children were not capable of accurately judging indirect forms as being more polite; however, older school-age children also had difficulty in making accurate judgments. When a chi square statistic was applied,

the developmental increase was significant at the .05 level. Although the children's comprehension skills were two years delayed, there was a developmental progression in language impaired children's abilities to comprehend indirect directives. The language impaired children performed much like younger normal children exhibiting development in comprehension skills with increasing age.

Production of Directives by the
Preschool Child

James and Seebach (1982) investigated the pragmatic function of children's questions used as directives. The subjects for their study were 24 children, nine 2-year-old children, five 3-year-old children, five 4-year-old children, and five 5-year-old children. All subjects were observed during natural communication in the day care center they attended and their spontaneous questions during daily activities were recorded and analyzed to determine pragmatic functions.

The results of the analysis indicated that the 5-year-old children used more questions as directives than the 2-year-old children. In contrast, the 2-year-old children did not use any questions as directives. Although the 2-year-old children did

not use questions as directives, they made considerable use of desire statements, possibly intended as directives. The 3-year-old children were beginning to use questions as directives, however, they used only the question types they had previously used to serve other pragmatic functions, that is, information seeking and conversational purposes. The 4-year-old children's questions served primarily to obtain and hold other people's attention. James and Seebach (1982) concluded that:

Children used new question types for the earlier developing, well-established pragmatic functions first. Once they had mastered these new types, they used them for the directive function which is later developing. (p. 7)

Garvey (1977) also found a developmental progression in the production of directives. She observed 36 preschool children, ages 3;6 to 5;7, during play activities. Then, she analyzed the children's speech samples for the presence of direct, indirect, and inferred requests. Results showed that the younger children produced equally as many direct requests as their older peers, however, the older children produced approximately twice as many indirect requests. Once again, a developmental trend in directive production was observed.

One other study by Prinz and Ferrier (1983) examined preschool children's production of directives.

Their study included 30 language impaired children, ages 3;6 to 9, who were required to make requests using puppets. Each time the children made a request, they were told to ask "even nicer". Analysis of the requests revealed that the younger children generally made use of imperatives as directives. Thus, it was concluded that the preschool language impaired children experienced difficulty producing indirect request forms.

Production of Directives by the
School-age Child

Prinz and Ferrier (1983) also included school-age children in their study. Following analysis of the children's requests, the authors concluded that the older children were capable of producing more indirect requests than the younger children. Although they were capable of producing appropriate indirect requests, the older children continued to produce more direct requests than indirect. Prinz and Ferrier attributed the children's difficulty in producing indirect requests to limited social experiences and "'sociolinguistic training' received from parents and teachers" (p. 51). Their study underscores the importance of teachers' language.

Changes in Directive Types

When a child fails to respond to a directive, the speaker assumes the child did not comprehend it and adjusts the directive to match the child's comprehension ability. Thus, changes in directive presentation may be observed.

Schneiderman (1983) observed mothers while they were interacting with their children, ages 1;6 to 3;6, in play situations. Analysis of the mothers' directives indicated a development in directive presentation as the children aged. That is, the imperative forms (e.g., "Pick up your toys.") were used most frequently with the younger children, whereas, the proportion of implied directives (e.g., "We need to go home.") increased with age. Results of a second observation indicated that the mothers used fewer standard imperatives and more implied directives. Therefore, Schneiderman observed a developmental change in directive usage. Schneiderman then concluded that "mothers have a mental picture of their children's comprehension abilities; and mothers have intuitions of the appropriateness of speech styles, such that they know which style to use when" (p. 366).

Bellinger (1979) noted the same direct-indirect shift as he observed mothers with their children from

1 to 5 years old. Bellinger observed 40 mother-child pairs in a semi-structured playroom setting. The mothers' speech samples were recorded and analyzed to determine changes in directive types across age levels. In short, the results indicated that as the age of the children increased, the mothers' directives became less direct in form. The change noted in the speech of the mothers seemed to be influenced by the feedback supplied by the children. "When children fail[ed] to respond to an indirect directive, mothers often rephrase[d] the command in a more direct form" (p. 457). There were some instances of an indirect-direct shift. Bellinger explained that "this shift appears to result from the mother's judgment that the child's noncompliance is due more to contrariness than to noncomprehension" (p. 457).

Other adults also change their speaking habits when addressing young children. Bohannon and Marquis (1977) observed 20 students, 15 undergraduates and 5 graduates, interacting with 1 subject, Nat. The undergraduates first was Nat when he was 2 years, 8 months old; whereas, the graduate students did not see Nat until 4 months later when he was 3. Teams of 2 and 3 subjects were recorded while interacting with Nat. They were told simply to engage Nat in

conversation. Upon analyzing the recordings, Bohannon and Marquis (1977) found that:

The students reduced their length of utterance more following noncomprehension feedback... Nat's mother also demonstrated this pattern, further supporting the notion that adults adjust their speech to the comprehension skills of the listening child. (p. 1005)

A second study was conducted by Bohannon and Marquis (1977) to bring the signals of comprehension and noncomprehension under control in order to examine the effect of children's feedback on adults' utterances. Subjects for the study included 20 undergraduate students and an 8-year-old accomplice. The subjects were recorded during three experimental conditions. During the first condition, the subjects told a story to an adult experimenter. In the second condition, they told the story to a pretend child, and the third condition required the subjects to tell the story to the child accomplice who had been instructed to signal comprehension for 1 minute and noncomprehension for 1 minute. When the recordings were analyzed, the results revealed that the "subjects produced a lower MLU when the child signaled noncomprehension than when she signaled comprehension" (p. 1006), indicating that "the presence of a child may be sufficient condition for the appearance of Motherese... and that

noncomprehension feedback had an immediate effect on adult utterance lengths" (p. 1007).

Summary

Children's abilities to comprehend various language structures depend upon the length and complexity of utterances (Rampp, 1976), the literal meaning, use of context clues, and understanding the speaker's intentions (Gordon & Lakoff, 1971 as cited in Clark & Lucy, 1975; Rees & Shulman, 1978). Previous studies of children's language comprehension skills indicate that skills increase with age (Ackerman, 1978; Carrow, 1968; Leonard et al., 1978; Prinz & Ferrier, 1983). Therefore, mothers seem to adapt their language to suit their children's comprehension skills by using more direct utterances with younger children (Bellinger, 1979; Schneiderman, 1983). When children do not understand an utterance, they use signals of noncomprehension. The speaker, then, adjusts the utterance to match the children's comprehension abilities (Bohannon & Marquis, 1977). This adjustment also may be demonstrated by teachers. Therefore, the present study was conducted to examine teachers' directives addressed to their students.

Chapter 3
METHODS AND PROCEDURES

Subjects

Twelve teachers participated in this study, including 4 first-grade teachers, 4 third-grade teachers, and 4 fifth-grade teachers. All of the subjects were employed by a public school system in northwestern North Carolina. Their years of experience ranged from 6 to 41 years and their highest educational level ranged from a Bachelor of Science to a Master of Education degree. See Table 1 for pertinent subject characteristics.

Procedures

Each teacher was observed in her classroom during regular educational activities on three separate occasions for 45 minute sessions. The sessions were scheduled for 8:00 a.m., 9:00 a.m., and 10:00 a.m. on 12 separate days over a period of a month and a half.

To determine observation times and dates, each teacher was assigned a number. The numbers were drawn randomly to determine who would be observed on the first, second, third, ... twelfth dates during the

Table 1

Subject Characteristics

Subject	Grade	Experience in Years	Degree
1	1	7	BS
2	1	14	MA
3	1	14	BS
4	1	26	BS
5	3	41	MA
6	3	14	MA
7	3	15	BS
8	3	6	BS
9	5	21	BS
10	5	12	BS
11	5	23	MEd
12	5	17	BS

8:00 a.m. time slot. The same procedure was repeated to determine the order of teacher observations during the 9:00 a.m. and 10:00 a.m. time slots. See Table 2 for the observation schedule.

During each observation, the researcher obtained audio recordings of the classroom activities. The recordings were played back later and the teachers' directives were transcribed. Following transcription, each directive was analyzed and coded as being a direct, indirect, or inferred directive involving classroom management or classroom instruction. See definitions and examples of directive types in the Appendix.

This researcher then selected a random sample of 108 utterances to code a second time to insure reliability. There was a 97% agreement between the two codings. The 3% disagreement was resolved when context clues provided by utterances preceding the samples were utilized.

Data Analysis

In order to analyze the data, the frequency for each directive type (direct, indirect, and inferred) and function (management or instruction) was calculated for each subject, grade level, and for all grade levels combined. Then, the data were subjected to analyses

Table 2

Observation Schedule

Subject	Time Period a.m.		
	8:00	9:00	10:00
1	11-26-84	11-14-84	10-24-84
2	12-05-84	11-26-84	11-21-84
3	10-31-84	12-03-84	12-05-84
4	12-03-84	11-28-84	12-07-84
5	10-24-84	12-05-84	10-31-84
6	11-28-84	11-07-84	12-03-84
7	12-10-84	11-21-84	11-26-84
8	11-07-84	10-24-84	11-30-84
9	11-21-84	10-31-84	11-14-84
10	11-14-84	11-30-84	12-10-84
11	11-30-84	12-07-84	11-28-84
12	12-07-84	12-10-84	11-07-84

of variance, repeated measures design, to determine significant differences within grade levels and one-way analyses of variance to determine significant differences across grade levels. Upon finding significant differences, post hoc analyses using the Scheffe test were performed to determine which of the results were significant.

Summary

Twelve teachers in the first-, third-, and fifth-grades were observed in their classrooms for three 45 minute sessions. Recordings were made during each observation in order to obtain samples of the teachers' directives. The directives were transcribed and coded for type (direct, indirect, or inferred) and function (classroom management or classroom instruction). The frequency of each directive type and directive function was computed for each subject and each grade level. The data were then subjected to analyses of variance, repeated measures design, to determine significant differences within grade levels and one-way analyses of variance to compare results across grade levels. Post hoc analyses using the Scheffe test were performed to determine which of the results were significant.

Chapter 4
RESULTS AND ANALYSIS

Results

Directives Used by First-Grade Teachers

The results of the study, as presented in Table 3, showed that the first-grade teachers produced a combined total of 471 direct directives, with individual productions ranging from 68 to 183. The mean number of direct directives used was 117.75, with a standard deviation of 48.13. The total number of indirect directives produced by the first-grade teachers was 35. Individual productions ranged from 2 to 22, with a mean of 8.75 and a standard deviation of 9.07. The total number of inferred directives produced by the first-grade teachers was 315. Individual productions ranged from 71 to 89, with a mean of 78.75 and a standard deviation of 8.73.

The first-grade teachers produced a combined total of 160 management directives, with individual use ranging from 32 to 48. The mean number of management directives was 40, with a standard deviation of 6.73. The total number of instructional directives produced by the first-grade teachers was 661, with individual

Table 3

Number of Directives Used by First-, Third-, and Fifth-Grade Teachers

Subjects	Direct			Indirect			Inferred			Total		
	M	I	M&I	M	I	M&I	M	I	M&I	M	I	M&I
1	15	168	183	0	2	2	27	56	83	42	226	268
2	26	77	103	2	20	22	20	51	71	48	148	196
3	12	105	117	0	7	7	26	63	89	38	175	213
4	12	56	68	0	4	4	20	52	72	32	112	144
Total	65	406	471	2	33	35	93	222	315	160	661	812
5	11	30	41	12	35	47	15	31	46	38	96	134
6	15	67	82	8	14	22	18	24	42	41	105	146
7	15	66	81	0	0	0	3	22	25	18	88	106
8	18	50	68	3	2	5	18	35	53	39	87	126
Total	59	213	272	23	51	74	54	112	166	136	376	512
9	31	38	69	8	9	17	53	54	107	92	101	193
10	28	74	102	3	3	6	24	73	97	55	150	205
11	25	34	59	3	18	21	31	77	108	59	129	188
12	11	65	76	2	6	8	15	52	67	28	123	151
Total	95	211	306	16	36	52	123	256	379	234	503	737
Grand Total	219	830	1049	41	120	161	270	590	860	530	1540	2070

M = Management, I = Instructional

productions ranging from 112 to 226. The mean number of instructional directives was 165.25, with a standard deviation of 48.02.

When management and instructional directives were subdivided further into types, the following results were obtained. The first-grade teachers produced a total of 65 direct management directives with a range of 12 to 26, a mean of 16.25, and a standard deviation 6.65. The total number of indirect management directives produced by first-grade teachers was 2 with a range of 0 to 2, a mean of .5, and a standard deviation of 1.0. The total number of inferred management directives produced by the first-grade teachers totaled 93 with a range of 20 to 27, a mean of 23.25, and a standard deviation of 3.77. The total number of direct instructional directives produced by the first-grade teachers was 406, with a range of 56 to 168, a mean of 101.5, and a standard deviation of 48.66. First-grade teachers produced a total 33 indirect instructional directives, ranging from 2 to 20, with a mean of 8.25, and a standard deviation of 8.10. Inferred instructional directives produced by the first-grade teachers totaled 222, with a range of 51 to 63, a mean of 55.5, and a standard deviation of 5.45.

Directives Used by Third-Grade Teachers

The results of the study showed that the third-grade teachers produced a combined total of 272 direct directives, with a range of 41 to 82, a mean of 68, and standard deviation of 19.10. The total number of indirect directives produced by the third-grade teachers was 74, ranging from 0 to 47, with a mean of 18.5, and a standard deviation of 21.20. Third-grade teachers produced a total of 166 inferred directives, ranging from 25 to 53, with a mean of 41.5, and a standard deviation of 11.9.

The third-grade teachers produced a total of 136 management directives, with a range of 18 to 41, a mean of 34, and a standard deviation of 10.73. The total number of instructional directives produced by the third-grade teachers was 376, ranging from 87 to 105 with a mean of 94, and a standard deviation of 8.37.

The following results were obtained when management and instructional directives types were subdivided further. The third-grade teachers produced a total of 59 direct management directives with a range of 11 to 18, a mean of 14.75, and a standard deviation of 2.87. The total number of indirect management directives produced by the third-grade teachers was 23, with a range of 0 to 12, a mean of

5.75, and a standard deviation of 5.32. The number of inferred management directives produced by third-grade teachers totaled 54, with a range of 3 to 18, a mean of 13.5, and a standard deviation of 7.14. The total number of direct instructional directives produced by the third-grade teachers was 213, with a range of 30 to 67, a mean of 53.25, and a standard deviation of 17.35. The third-grade teachers produced a total of 51 indirect instructional directives ranging from 0 to 35, with a mean of 12.75, and a standard deviation of 16.07. Inferred instructional directives produced by the third-grade teachers totaled 112, with a range of 22 to 35, a mean of 28, and a standard deviation of 6.06.

Directives Used by Fifth-Grade Teachers

Results of the fifth-grade teachers' production of directives showed that they used a combined total of 306 direct directives, with a range of 59 to 102, a mean of 76.5, and a standard deviation of 18.38. The total number of indirect directives produced by the fifth-grade teachers was 52, ranging from 6 to 21, with a mean of 13, and a standard deviation of 71.6. The total number of inferred directives used by fifth-grade teachers was 379, with a range of 67 to 108, a mean of 94.75, and a standard deviation of 19.16.

The fifth-grade teachers produced a total of 234 management directives, with a range of 28 to 92, a mean of 58.5, and a standard deviation of 26.24. The total number of instructional directives produced by the fifth-grade teachers was 503, ranging from 101 to 150, with a mean of 125.75, and a standard deviation of 20.16.

Further analyses of management and instructional directive types were undertaken indicating the following results. The fifth-grade teachers produced a total of 95 direct management directives, with a range of 11 to 31, a mean of 23.75, and a standard deviation of 8.85. The total number of indirect management directives produced by the fifth-grade teachers was 16, with a range of 2 to 8, a mean of 4, and a standard deviation of 2.71. The number of inferred management directives produced by the fifth-grade teachers totaled 123, ranging from 15 to 53, with a mean of 30.75, and a standard deviation of 16.21. The total number of direct instructional directives used by the fifth-grade teachers was 211, with a range of 34 to 74, a mean of 52.75, and a standard deviation of 19.75. The fifth-grade teachers produced a total of 36 indirect instructional directives ranging from 3 to 18, with a mean of 9, and a standard deviation of 6.48. Inferred

instructional directives used by the fifth-grade teachers totaled 256, with a range of 52 to 77, a mean of 64, and a standard deviation of 12.83.

Types of Directives Produced Across Grade Levels

The total number of directives produced across grade levels by individual teachers ranged from 106 to 268, with a mean of 172.5, and a standard deviation of 45.80. Use of direct directives ranged from 41 to 183, with a mean of 87.42, and a standard deviation of 36.58; whereas, use of indirect directives ranged from 0 to 47, with a mean of 13.42, and a standard deviation of 13.28. The range of inferred directives was 25 to 108, with a mean of 71.67, and a standard deviation of 26.50.

The production of management directives across grade levels varied from 18 to 92, with a mean of 44.17, and a standard deviation of 18.71. The total number of instructional directives varied from 87 to 226, with a mean of 128.33, and a standard deviation of 41.06.

When management and instructional directives were subdivided further by type, results across grade levels were as follows. The number of direct management directives ranged from 11 to 31, with a mean of 18.25, and a standard deviation of 7.25. Use of indirect management directives ranged from 0 to 12,

with a mean of 3.42, and a standard deviation of 3.89. The total number of inferred management directives ranged from 3 to 53, with a mean of 22.5, and a standard deviation of 11.99. For direct instructional directives, the range was 30 to 168, with a mean of 69.17, and a standard deviation of 37.48. The indirect instructional directives ranged from 0 to 35, with a mean of 10, and a standard deviation of 10.20; whereas, production of inferred instructional directives ranged from 22 to 77, with a mean of 49.17, and a standard deviation of 17.90.

Analysis

In order to test the major null hypothesis, data were subjected to a one-way analysis of variance. Results of the analysis, as presented in Table 4, revealed a significant difference ($F = 5.57$, $df = 2,9$, $p = .027$) in the types of directives used in the classroom by first-, third-, and fifth-grade teachers during instruction and management. In view of these findings, the major null hypothesis was rejected.

Further analyses were conducted to determine the significance of relationships within and across grades 1, 3, and 5. In order to test null subhypotheses 1 through 12, 12 analyses of variance for repeated measures were undertaken and the results are presented in Tables 5 through 16.

Table 4

ANOVA - Directives Used by First-, Third-, and Fifth-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	12763.5000	2	6381.7500	5.57	.027
Within Groups	10309.4956	9	1145.4995		
Total	23072.9920	11			

Table 5

ANOVA - Repeated measures design: Directive Types Used by First-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	2611.58333	3	870.52778		
Within People	29217.33333	8	3652.16667		
Between Measures	24402.66667	2	12201.33333	15.20	.004
Residual	4814.66667	6	802.44444		
Total	31828.91667	11	2893.53788		
Grand Mean = 68.41667					

Table 6

ANOVA - Repeated measures design: Management/Instructional Directives Used by First-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	3917.37500	3	1305.79167		
Within People	34512.50000	4	8628.12500		
Between Measures	31375.12500	1	31375.12500	30.00	.012
Residual	3137.37500	3	1045.79167		
Total	38429.87500	7	5489.98214		
Grand Mean = 102.62500					

Table 7

ANOVA - Repeated measures design: Types of Management Directives Used by First-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	45.33333	3	15.11111		
Within People	1219.33333	8	152.41667		
Between Measures	1086.16667	2	543.08333	24.47	.001
Residual	133.16667	6	22.19444		
Total	1264.66667	11	114.96970		
Grand Mean = 13.33333					

Table 8

ANOVA - Repeated measures design: Types of Instructional Directives Used by First-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	2306.25000	3	768.75000		
Within People	22476.66667	8	2809.58333		
Between Measures	17392.16667	2	8696.08333	10.26	.012
Residual	5084.50000	6	847.41667		
Total	24782.91667	11	2252.99242		
Grand Mean =	55.08333				

Table 9

ANOVA - Repeated measures design: Directive Types Used by Third-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	282.66667	3	94.22222		
Within People	7494.00000	8	936.75000		
Between Measures	4908.66667	2	2454.33333	5.69	.041
Residual	2585.33333	6	430.88889		
Total	7776.66667	11	706.96970		
Grand Mean = 42.66667					

Table 10

ANOVA - Repeated measures design: Management/Instructional Directives Used by Third-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	424.00000	3	141.33333		
Within People	7332.00000	4	1833.00000		
Between Measures	7200.00000	1	7200.00000	163.64	.001
Residual	132.00000	3	44.00000		
Total	7756.00000	7	1108.00000		
Grand Mean = 64.00000					

Table 11

ANOVA - Repeated measures design: Types of Management Directives Used by Third-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	115.33333	3	38.44444		
Within People	337.33333	8	42.16667		
Between Measures	190.16667	2	95.08333	3.88	.083
Residual	147.16667	6	24.52778		
Total	452.66667	11	41.15152		
Grand Mean = 11.33333					

Table 12

ANOVA - Repeated measures design: Types of Instructional Directives Used by Third-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	70.00000	3	23.33333		
Within People	5064.66667	8	633.08333		
Between Measures	3347.16667	2	1673.58333	5.85	.039
Residual	1717.50000	6	286.25000		
Total	5134.66667	11	466.78788		
Grand Mean =	31.33333				

Table 13

ANOVA - Repeated measures design: Directive Types Used by Fifth-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	542.25000	3	180.75000		
Within People	16456.66667	8	2057.08333		
Between Measures	14731.16667	2	7365.58333	25.61	.001
Residual	1725.50000	6	287.58333		
Total	16998.91667	11	1545.35606		
Grand Mean = 61.41667					

Table 14

ANOVA - Repeated measures design: Management/Instructional Directives Used by Fifth-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	813.37500	3	271.12400		
Within People	11515.50000	4	2878.87500		
Between Measures	9045.12500	1	9045.12500	10.98	.045
Residual	2470.37500	3	823.45833		
Total	12328.87500	7	1761.26786		
Grand Mean = 92.12500					

Table 15

ANOVA - Repeated measures design: Types of Management Directives Used by Fifth-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	688.33333	3	229.44444		
Within People	1896.66667	8	237.08333		
Between Measures	1539.50000	2	769.75000	12.93	.007
Residual	357.16667	6	59.52778		
Total	2585.00000	11	235.00000		
Grand Mean = 19.50000					

Table 16

ANOVA - Repeated measures design: Types of Instructional Directives Used by Fifth-Grade Teachers

Source of Variation	SS	DF	Mean Square	F	Probability
Between People	406.25000	3	135.41667		
Within People	8138.66667	8	1017.33333		
Between Measures	6754.16667	2	3377.08333	14.64	.005
Residual	1384.50000	6	230.75000		
Total	8544.91667	11	776.81061		
Grand Mean = 41.01667					

Directives Used by First-Grade Teachers

When the results of the first-grade teachers' directives were analyzed, there was a significant difference ($F = 15.20$, $df = 3,8$, $p = .004$) in the use of directive types (direct, indirect, and inferred) (see Table 5). A post hoc analysis using the Scheffe test was performed to determine which of the comparisons was significant. Results indicated a significant difference ($F = 6.50$, $df = 2,9$, $p = < .05$) between first-grade teachers' production of direct and indirect directives. That is, the first-grade teachers produced a significantly greater number of direct directives when compared to the number of indirect directives used. In view of these findings, null subhypothesis 1 was rejected. No significant difference was found between the first-grade teachers' production of direct and inferred ($F = .83$, $df = 2,9$, $p = > .05$) or indirect and inferred ($F = 2.7$, $df = 2,9$, $p = > .05$) directives.

When use of management and instructional directives by first-grade teachers was compared, a significant difference ($F = 30.00$, $df = 3,4$, $p = .012$) was obtained. Teachers produced a significantly greater number of directives that served to instruct rather than manage (see Table 6). According to these results, null subhypothesis 2 was rejected.

As shown in Table 7, there was also a significant difference ($F = 24.47$, $df = 3,8$, $p = .001$) in the use of management directive types (direct, indirect, and inferred) for first-grade teachers. Results of the Scheffe test indicated a significant difference ($F = 6.79$, $df = 2,9$, $p = <.05$) between production of inferred and indirect management directives. That is, the first-grade teachers used a significantly greater number of inferred directives to manage the students' behavior. No significant difference was found between the first-grade teachers' production of direct and indirect ($F = 3.5$, $df = 2,9$, $p = >.05$) or direct and inferred ($F = .64$, $df = 2,9$, $p = >.05$) management directives. As a result of these findings, null subhypothesis 3 was rejected, indicating a significant difference in the use of management directive types (direct, indirect, and inferred) for first-grade teachers.

When instructional directive types (direct, indirect, and inferred) were analyzed, there was a significant difference ($F = 10.26$, $df = 3,8$, $p = .012$) for first-grade teachers. Results of the Scheffe test revealed a significant difference ($F = 6.19$, $df = 2,9$, $p = <.05$) between first-grade teachers' production of direct and indirect instructional directives, with teachers producing a significantly

greater number of direct directives during instructional activities. Results of the Scheffe test indicated no significant difference between teachers' production of indirect and inferred ($F = 1.59$, $df = 2,9$, $p = >.05$) or direct and inferred ($F = 1.51$, $df = 2,9$, $p = >.05$) directives during instructional activities. Table 8 includes an analysis of these data. As a result of this analysis, null subhypothesis 4 was rejected.

Directives Used by Third-Grade Teachers

Analyses undertaken to determine differences in third-grade teachers' use of directives indicated a significant difference ($F = 5.69$, $df = 3,8$, $p = .041$) in use of directive types (direct, indirect, and inferred) (see Table 9). Results of the Scheffe test indicated a significant difference ($F = 5.24$, $df = 2,9$, $p = <.05$) between production of direct directives and indirect directives. That is, the third-grade teachers produced a significantly greater number of direct directives when compared to their production of indirect directives. No significant difference was found between production of direct and inferred ($F = 1.50$, $df = 2,9$, $p = >.05$) or indirect and inferred ($F = 1.13$, $df = 2,9$, $p = >.05$) directives. On the basis of these findings, null subhypothesis 5 was rejected.

When use of management and instructional directives were compared, there was a significant difference ($F = 163.64$, $df = 3,4$, $p = .001$) for third-grade teachers. These teachers produced a significantly greater number of directives that served to instruct (see Table 10). As a result of these findings, null subhypothesis 6 was rejected.

Further analysis of management directive types indicated no significant difference ($F = 3.88$, $df = 3,8$, $p = .083$) among direct, indirect, or inferred directives for third-grade teachers. Although the results were not significant at the .05 level, the differential use of management directive types approached significance ($p = .08$). Based upon these findings, as presented in Table 11, null subhypothesis 7 was not rejected.

When use of instructional directives was analyzed, results indicated a significant difference ($F = 5.85$, $df = 3,8$, $p = .039$) among direct, indirect, and inferred directives for third-grade teachers (see Table 12). Results of the Scheffe test revealed a significant difference ($F = 5.18$, $df = 2,9$, $p = <.05$) between production of direct and indirect instructional directives. That is, the third-grade teachers used a significantly greater number of direct directives during instructional activities. Other results of the

Scheffe test indicated no significant difference between production of indirect and inferred ($F = .734$, $df = 2,9$, $p = >.05$) or direct and inferred ($F = 2.01$, $df = 2,9$, $p = >.05$) directives during instructional activities. As a result of these findings, null subhypothesis 8 was rejected.

Directives Used by Fifth-Grade Teachers

When fifth-grade teachers' directives were analyzed, a significant difference ($F = 25.61$, $df = 3,8$, $p = .001$) in the use of directive types (direct, indirect, and inferred) was obtained (see Table 13). Results of the Scheffe test indicated a significant difference ($F = 6.50$, $df = 2,9$, $p = <.05$) between use of indirect and inferred directives. That is, the fifth-grade teachers used a significantly greater number of inferred directives when compared to their use of indirect directives. No significant difference was found between production of direct and indirect ($F = 3.92$, $df = 2,9$, $p = >.05$) or direct and inferred ($F = .32$, $df = 2,9$, $p = >.05$) directives. According to these findings, null subhypothesis 9 was rejected.

Use of instructional and management directives was analyzed indicating a significant difference ($F = 10.98$, $df = 3,4$, $p = .045$) for fifth-grade teachers. The fifth-grade teachers produced a

significantly greater number of directives that served to instruct. Based upon the results, as presented in Table 14, null subhypothesis 10 was rejected.

Further analysis of the results showed that there was a significant difference ($F = 12.93$, $df = 3,8$, $p = .007$) in the use of management directive types (direct, indirect, and inferred) for fifth-grade teachers. Results of the Scheffe test showed a significant difference ($F = 6.04$, $df = 2,9$, $p = < .05$) in the production of inferred and indirect management directives. That is, the fifth-grade teachers used significantly more inferred directives to manage their students' behavior. No significant difference was found between the production of direct and indirect ($F = 3.29$, $df = 2,9$, $p = > .05$) or direct and inferred ($F = .41$, $df = 2,9$, $p = > .05$) management directives. On the basis of these results, null subhypothesis 11 was rejected (see Table 15).

Finally, there was a significant difference ($F = 14.64$, $df = 3,8$, $p = .005$) in the use of instructional directive types (direct, indirect, and inferred) by fifth-grade teachers. According to the Scheffe test, there was a significant difference ($F = 5.95$, $df = 2,9$, $p = < .05$) between use of indirect and inferred instructional directives, with inferred directives being used significantly more during

instructional activities. No significant difference was found between the use of direct and indirect ($F = 3.76$, $df = 2,9$, $p = >.05$) or direct and inferred ($F = .25$, $df = 2,9$, $p = >.05$) instructional directives. On the basis of these results, null subhypothesis 12 was rejected (see Table 16).

Types of Directives Used Across Grade Levels

To test subhypotheses 13 through 23, one-way analyses of variance were conducted to examine differences in the use of directives across grade levels. The results are presented in Tables 17 through 27.

Analysis of directive types (direct, indirect, and inferred) produced across grade levels revealed the following. There was no significant difference in the use of direct ($F = 2.82$, $df = 2,9$, $p = .112$) or indirect ($F = .49$, $df = 2,9$, $p = .627$) directives, but there was a significant difference in the use of inferred directives. The first- and fifth-grade teachers used a significantly ($F = 15.32$, $df = 2,9$, $p = .001$) greater number of inferred directives when compared to third-grade teachers'. Based upon these findings, as presented in Tables 17, 18, and 19, null subhypothesis 13 and 14 were not rejected; however, null subhypothesis 15 was rejected.

Table 17

ANOVA for Direct Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	5665.1773	2	2832.5886	2.82	.112
Within Groups	9057.7458	9	1006.4160		
Total	14722.9210	11			

Table 18

ANOVA for Indirect Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	191.1668	2	95.5834	.49	.627
Within Groups	1749.7500	9	194.4167		
Total	1940.9165	11			

Table 19

ANOVA for Inferred Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	5972.1754	2	2986.0876	15.32	.001
Within Groups	1754.4998	9	194.9444		
Total	7726.6718	11			

Table 20

ANOVA for Management Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	1304.6721	2	652.3359	2.31	.156
Within Groups	2546.9995	9	282.9998		
Total	3851.6714	11			

Table 21

ANOVA for Instructional Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	10193.1745	2	5096.5859	5.50	.028
Within Groups	8347.4997	9	927.4998		
Total	18540.6710	11			

Table 22

ANOVA for Direct Management Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	186.0000	2	93.0000	2.13	.174
Within Groups	392.2500	9	43.5833		
Total	578.2498	11			

Table 23

ANOVA for Indirect Management Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	57.1667	2	28.5833	2.34	.152
Within Groups	109.7500	9	12.1944		
Total	166.9167	11			

Table 24

ANOVA for Inferred Management Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	598.5000	2	299.2500	2.74	.118
Within Groups	984.5000	9	109.3889		
Total	1582.9998	11			

Table 25

ANOVA for Direct Instructional Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	6273.1751	2	3136.5874	3.08	.096
Within Groups	9178.4956	9	1019.8328		
Ttotal	15451.6670	11			

Table 26

ANOVA for Indirect Instructional Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	46.5000	2	23.2500	.19	.830
Within Groups	1097.4997	9	121.9444		
Total	1143.9995	11			

Table 27

ANOVA for Inferred Instructional Directives Used Across Grade Levels

Source of Variation	SS	DF	Mean Square	F	Probability
Between Groups	2832.6727	2	1416.3362	18.40	.001
Within Groups	693.0000	9	77.0000		
Total	3525.6726	11			

When management directives were compared across grade levels, no significant difference ($F = 2.31$, $df = 2,9$, $p = .156$) was found. In view of these results, as presented in Table 20, null subhypothesis 16 was not rejected.

A comparison of instructional directives produced across grade levels indicated a significant difference ($F = 5.50$, $df = 2,9$, $p = .028$). Results of the Scheffe test revealed significant differences between the first- and third-grade teachers and between the third- and fifth-grade teachers. That is, the third-grade teachers produced a significantly fewer number of instructional directives than either the first- or fifth-grade teachers. According to these results, as shown in Table 21, null subhypothesis 17 was rejected.

Further analyses of management directive types produced across grades 1, 3, and 5 were undertaken. Results indicated no significant differences in the use of direct ($F = 2.13$, $df = 2,9$, $p = .174$), indirect ($F = 2.34$, $df = 2,9$, $p = .152$), or inferred ($F = 2.74$, $df = 2,9$, $p = .118$) management directives. Based upon these findings, subhypotheses 18, 19, and 20 were not rejected (see Tables 22, 23, and 24).

Finally, analyses of instructional directive types used across grade levels were undertaken. The

results indicated that the use of direct instructional directives approached significance ($F = 3.08$, $df = 2,9$, $p = .096$), however null subhypothesis 21 was not rejected (see Table 25). A significant difference ($F = 18.40$, $df = 2,9$, $p = .001$) was obtained in the use of inferred instructional directives. Results of the Scheffe test showed that the first- and fifth-grade teachers used a significantly greater number of inferred instructional directives as compared to third-grade teachers (see Table 27). Based upon these findings, null subhypothesis 23 was rejected. There was no significant difference ($F = .19$, $df = 2,9$, $p = .830$) in the use of indirect instructional directives; therefore, null subhypothesis 22 was not rejected either. See Table 26 for the results.

Summary

Overall results indicated a significant difference in directive types used by first-, third-, and fifth-grade teachers during management and instructional activities. Further analysis of directive use indicated that first- and third-grade teachers used more direct directives; whereas, fifth-grade teachers used more inferred directives. When management and instructional directives were compared, all teachers used more instructional directives. Additional analyses of management

directive types showed that first- and fifth-grade teachers produced more inferred directives to manage students' behavior, whereas, third-grade teachers did not significantly differ in their use of directive types for classroom management. Analyses of instructional directives indicated that first- and third-grade teachers used more direct directives during instructional activities, whereas, fifth-grade teachers used more inferred directives to instruct.

When results were compared across grade levels, significant differences were found for the use of inferred, instructional, and inferred instructional directives. That is, first- and fifth-grade teachers used more inferred than direct or indirect, more instructional than management, and more inferred instructional directives than third-grade teachers. These results and analyses will be discussed further in Chapter 5.

Chapter 5

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

The purpose of this study was to compare the types of directives (direct, indirect, and inferred) used by classroom teachers in the first-, third-, and fifth-grades during management and instructional activities. Twelve teachers, 4 first-grade, 4 third-grade, and 4 fifth-grade, participated as subjects. The teachers were observed in their classrooms for three 45 minute sessions and recordings were made during each observation to obtain samples of their use of directives. These directives were transcribed and coded as direct, indirect, or inferred as they related to classroom management or instruction. Then, the frequency of each directive type (direct, indirect, and inferred) was computed for each subject and grade level. Data were subjected to analyses of variance, repeated measures design, to examine relationships within grade levels with respect to directive types (direct, indirect, and inferred) and directive functions (management and instruction);

data were submitted also to one-way analyses of variance to examine relationships across grade levels. Results of the analyses revealed a significant difference in the first-, third-, and fifth-grade teachers' use of directive types and functions. Overall, the first- and fifth-grade teachers used significantly more directives than the third-grade teachers.

In the first grade, teachers used significantly more direct than indirect directives. Also, their use of instructional directives was significantly greater than their use of management directives. Significant differences were found also in the use of directive types during management and instruction. During classroom management, teachers used more inferred directives; whereas, during instruction, they used a greater number of direct directives.

The third-grade teachers used significantly more direct than indirect directives overall. In addition, they used more instructional than management directives, and more direct instructional than indirect instructional directives. No significant difference was found in their use of management directive types.

Production of directives by the fifth-grade teachers differed significantly in their use of

inferred, instructional, inferred management, and inferred instructional directives. It was noted that fifth-grade teachers used more inferred directives in management and instructional activities.

Across grade levels, significant differences were found in teachers' use of inferred directives. The first- and fifth-grade teachers used significantly more inferred directives. The first- and fifth-grade teachers used significantly more inferred directives than the third-grade teachers. Also, the first-grade teachers produced a significantly greater number of instructional directives when compared to the third-grade teachers'. A significant difference was found in the first- and third-, and fifth- and third-grade teachers' use of inferred instructional directives. The third-grade teachers used significantly fewer inferred directives during instructional activities.

Discussion

Results of the study revealed significant differences in the third-grade teachers' use of directive types when compared to that of first- and fifth-grade teachers'. These differences may be due to the reduced number of total directives used by the third-grade teachers. These teachers produced only

512 directives as compared to 812 used by the first-grade teachers and 737 used by the fifth-grade teachers. Observations of third-grade teachers were conducted during times when the students were involved in individual seatwork activities such as mathematics, whereas, the first- and fifth-grade teachers were observed during group activities. Therefore, the first- and fifth-grade teachers had additional opportunities to use directives.

Results also indicated that first- and third-grade teachers used more direct directives during instructional activities. In contrast, the fifth-grade teachers used inferred directives to instruct. Both the first- and fifth-grade teachers used more inferred directives to manage their students' behavior, whereas, the third-grade teachers used all types (direct, indirect, and inferred) equally. These findings support the existence of a developmental progression in directive presentation as suggested by Ackerman (1978), Bellinger (1979), Bohannon and Marquis (1977), and Schneiderman (1983). Although Ackerman (1978) found that third-grade students were beginning to use context clues to interpret inferred meaning, the present study did not indicate that third-grade teachers used more indirect of inferred directives than the first-grade teachers,

however, the fifth-grade teachers used more inferred directives. An analysis of a larger sample of directives used by third-grade teachers may have supported Ackerman's results.

Schneiderman (1983) and Bellinger (1979) found a developmental change in the directives mothers addressed to their children. Mothers used more direct types when addressing younger children and more indirect types for older ones. Bohannon and Marquis (1977) also observed changes in directive types used by other adults. They found that adults were sensitive to the nonverbal signals of noncomprehension, thus, changing the directives to shorter, simplified types. The teachers observed in the present study also demonstrated this pattern. The fifth-grade teachers' use of inferred directives to their older students were more complex than those direct directives used by first- and third-grade teachers with their younger students. These results also support the findings of Schneiderman (1983) and Bellinger (1979) since the teachers, like mothers, also used direct directives when addressing younger students and less direct ones when addressing older students.

Vocabulary used may have been an influencing factor in teachers' choice of directive types.

Carrow (1968) found that children understood words and word categories that were specifically direct. Although vocabulary was not an issue of concern in testing the hypotheses of the present study, it could have been possible that the directives presented to the younger children contained a limited vocabulary, thus, limiting the force of the directives. A study of the teachers' vocabulary would certainly be revealing, but such a study was not within the realm of the present investigation.

Since the results of previous studies (Bellinger, 1979; Bohannon & Marquis, 1977; Schneiderman, 1983) have supported the assumption that adults read nonverbal cues and change directive types depending on the age and comprehension skills of children, it seems that a study of directive types used in conjunction with nonverbal cues would be most revealing.

Recommendations

On the basis of the results of the present study, the following recommendations are made for future research.

1. A replication of this study should include a larger sample of teachers as subjects.

2. Observations of lessons should be controlled to eliminate variability of the subject matter being taught.

3. The study should be expanded to examine the students' comprehension of and responses to the various directive types.

4. A replication of the study should focus on nonverbal cues presented in conjunction with the various directive types.

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APPENDIX
Definitions and
Examples of Directive Types

APPENDIX

Definitions and Examples of Directive Types

I. Definitions

A. Directives

Utterances produced by a speaker when the speaker desires an initiation or cessation of a specific action by the listener.

B. Direct directives

Directives that are strictly imperative in form.

C. Indirect directives

Directives that are interrogative in form with an embedded imperative.

D. Inferred directives

Personal need or desire statements, hints, question directives that omit the desired act or actor, and any other utterances that require an inference as to the intended meaning.

E. Management directives

Directives that serve to manage students' behavior.

F. Instructional directives

Directives that serve to instruct during educational activities.

II. Examples

A. Direct Management

1. "Chris, sit up."
2. "Clear your desks completely."
3. "Raise your hand."
4. "Listen."
5. "Go put your things up."

B. Direct Instructional

1. "Write the sentence down."
2. "Say those two words."
3. "Read them to me."
4. "Copy each word five times."
5. "Mark the word that makes sense in the sentence."

C. Indirect Management

1. "Joy and Kelda, would you get the paper for us?"
2. "Can you speak a little louder, please?"
3. "Would everyone please lay your pencils down?"
4. "Would everyone return to your seats?"
5. "Kim, would you go and get Peter, please?"

D. Indirect Instructional

1. "Would you read the sentence, please?"
2. "Missy, can you do this one?"
3. "Can you tell me that word?"
4. "Would you say the words out loud?"
5. "How about answering the question?"

E. Inferred Management

1. "Eric, you're holding us up."
2. "Kelda, Jason needs some paper."
3. "Shane, you're doing too much talking."
4. "If you've got your lunch box, you need to go get it."
5. "It's lunch time."

F. Inferred Instructional

1. "I want you to give me the average temperature in Hawaii in Farenheit."
2. "Watch those endings."
3. "I want you to write the recipe on the back of your news."
4. "It's your time to read first."
5. "I'd like for you to find the word 'sleekness'."

VITA

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