DOCUMENT RESUME

ED 132 874 FL 008 298

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TITLE Training Prospective Teachers in Coding Dialect Features.
PUB DATE [76]
NOTE 18p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Auditory Discrimination; *Autoinstructional Aids; Distinctive Features; English; *Language Attitudes; Language Skills; Language Usage; *Language Variation; Linguistics; *Nonstandard Dialects; *Phonology; Reading Skills; Social Dialects; Sociolinguistics; Spanish Speaking; *Teacher Education

ABSTRACT

Research on language attitudes and performances of prospective teachers shows the need for special training to prepare teachers to work with "linguistically different" students. An attempt was made to develop, and test the effectiveness of, such training. Twenty-six prospective teachers conducted an Informal Reading Inventory on the reading of a student who exhibited features of Spanish. One group worked on a self-instructional module which presented practice in coding features and discriminating them from miscues unrelated to language differences. Significant differences were found between groups and between pre and post-test, but trained subjects were far less accurate than judges. Implications were that special training can be effective but must provide auditory discrimination practice as well as coding practice. (Author)

Training Prospective Teachers in Coding Dialect Features

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Training Prospective Teachers in

Coding Dialect Features

A major concern of teacher-educators is in the preparation of prospective teachers to work with students whose language differs from their own. Such students have been described as "linguistically different" because their language has features of a "non-standard" dialect or of a language other than English. The concern has support from numerous studies of language attitudes and of performances in diagnosis by teachers and prospective teachers. This article reports the results of an experimental treatment specially designed to improve skills of prospective teachers in conducting an Informal Oral Reading Inventory (IORI) with a student whose oral reading in English shows features of Spanish.

Studies of language attitudes demonstrate a need for such training. Horn (1971) saw a failure of teacher education programs to develop in teachers "realistic, positive attitudes toward differing dialects" (p. ix), as evidenced by the studies of Williams (1969, 1970, 1971). In a review of research, Ford cited studies by Williams and others which, taken together, show that teachers and prospective teachers react negatively to language differences and when presented with samples of speech that exhibit non-standard features, negatively characterize students' personalities and form negative expectations of students' performance.

There is support for the need for special training experiences directly related to assessment of "linguistically different" students. In two studies (Lamberg, 1976; Lamberg and McCaleb, 1976), subjects

were prospective teachers who had received training in conducting an IORI through an introductory reading methods course, taught as a practicum. Subjects were asked to administer an IORI from a taped reading by a student who exhibited features of Black dialect and a student who exhibited features of Spanish. Subjects were highly accurate in recording and identifying miscues unrelated to dialect but highly inaccurate in recording and correctly identifying instances of dialect.

In a related study (Lamberg and Tomas, 1976), subjects were prospective teachers who had differing preparation. One group had training in administering the IORI as well as experience in working with students with a Spanish-language background. The second group had the same kind and amount of training but not the special experience. The third group had no training or experience. Each group had some subjects who had two or more semesters of Spanish. In administering an IORI from a taped reading by a student who exhibited Spanish features, all groups showed little accuracy in recording and correctly coding dialect features when compared with responses by three judges. The mean for the judges was 10.00; the mean for the first group was .64; for the second, .49; for the third, 1.50. A comparison between subjects within each group who did and did not have Spanish showed no significant differences in correct or incorrect responses. Those subjects who had the study of Spanish, the training, and the special experience did have significantly fewer incorrect responses ($p. < .05$) than those in the other two groups who had Spanish. The implication of the study was that study of Spanish, training in the IORI, and

experience with the "linguistically different student" were not sufficient preparation.

The Study

This article reports a study of the effects of one kind of training experience on the accuracy of prospective teachers in conducting an IORI with a "linguistically different" student, specifically a student who exhibits Spanish-features in his oral reading in English. The training consisted of a self-instructional module on administering an inventory to a student with a Spanish-language background.

The self-instructional module was developed through the process of "discrimination programming" (Smith, 1967). Discrimination programming results in instruction (1) that focuses on those responses most important to the objectives of the instruction; and (2) that consists of discrimination exercises. The first step in the process is a task-analysis which identifies key responses to be mastered. In doing an inventory with a "linguistically different" student, the teacher must have more than a knowledge of the language differences. He must be able to apply the knowledge by making appropriate auditory discriminations (i.e., distinguishing between oral reading responses which match and do not match the text). Once he has recorded the departures or miscues, he must, when analyzing the miscues, make appropriate coding responses (i.e., distinguishing miscues he has recorded that are characteristic of the reader's dialect from those that are not).

For this study, the decision was made to limit the practice in auditory training to the two trials on the task which were used as a

pre- and post-test for the module and to focus on training in coding within the module. Students were introduced to ten phonological features identified as frequently occurring in the English of some students with a Spanish language background. These features, identified by other investigators (Lance, 1969; Natalicio and Williams, 1971; Matluck and Mace, 1973), were: substitution of /b/ for /v/, /y/ for /ǰ/ and /ǰ/ for /y/, /t/ for /θ/, /d/ for /ð/, /č/ for /š/ and /š/ for /č/, /s/ for /z/ in the final position, /s/ for /z/ in the initial position, and /i/ for /l/. Each feature was presented through a generalization, one or two examples, and one to three discrimination exercises. (See Figure 1 for sample exercises from module). By responding to the exercises, the student demonstrated his understanding of the language difference as well as his skill in discriminating the dialect feature from a miscue unrelated to dialect and made in response to the same word in the text.

The question addressed in this study was: How accurately would prospective teachers, with and without special training, distinguish dialect features from miscues unrelated to dialect, given the miscues they recorded in conducting an IORI. Accuracy was measured in two ways: (1) a count of the number of miscues correctly coded as dialect features; and (2) a count of the number of miscues unrelated to dialect which were incorrectly coded as dialect features.

Subjects

Subjects were undergraduate students taking elementary reading courses in the Department of Curriculum and Instruction, The University

of Texas, during the Spring Term, 1976. All subjects had completed an introductory, three-hour practicum, during which they had conducted five or more inventories. All subjects had studied two or more semesters of Spanish. There were 13 subjects in both the experimental group and the control group.

Procedures

Subjects in both groups completed the same task: conducting an IORI from a taped reading of a one-hundred word passage. They were provided with a worksheet which had a copy of the passage. Instructions were:

> Listen to the tape of the student reading the passage. . . . As you listen, record all miscues made by the student. Write in variant pronunciations, substitutions, and insertions above the word. Indicate omissions by circling the word.

The following definition of "miscue" (Goodman, 1973) was provided:

> Goodman has defined a 'miscue' as 'a response in oral reading which does not match the expected response' or a departure from a standard reading of the text. (p.5.)

Subjects were asked to record miscues that they thought might be dialect features as well as those that they thought were not related to dialect. They listened to the tape twice and were allowed to make any revisions of their responses after the second listening. The decision to play the tape twice was arbitrary. Generally a teacher would have only one chance to listen to a student's reading of a passage, if the assessment were based on sight-reading of the text. However, many teachers use tape recorders when conducting inventories, allowing for

as many listenings as the teacher can manage.

After the subjects had recorded the miscues, they were asked to identify or code those which they believed to be characteristic of some students with a Spanish-language background. Their coding response consisted of putting a box around the item.

The experimental group worked through the module. They then repeated the task, described above, as a post-test on the module. The control group took a break before repeating the task. On the second trial, both groups followed exactly the same procedures as for the first trial. They used a different copy of the worksheet (with the same passage and instructions) and did not refer to their responses on the first trial. All subjects listened to the same tape a total of four times, twice for each trial.

Subjects' responses were compared, for agreement or disagreement, with the responses of three judges. The three judges had experience in giving the IORI and in doing research on language differences. The judges completed the module before doing the task.

Null Hypotheses

1. There will be no significant differences between the mean scores on the second trial for the experimental group and the control group when compared on:

1.1. Miscues correctly coded as dialect features.

1.2. Miscues incorrectly coded as dialect features.

2. There will be no significant differences between the mean scores on the two trials (pre and post-tests) for the experimental group when compared on:

2.1. Miscues correctly coded as dialect features.

2.2. Miscues incorrectly coded as dialect features.

3. There will be no significant differences between mean scores on the two trials for the control group when compared on:

3.1. Miscues correctly identified as dialect features.

3.2. Miscues incorrectly identified as dialect features.

Recording and Analysis of Data

Each subject had two scores: one point for each dialect feature correctly coded, and one point for each incorrectly coded. If positive changes occurred from the first trial to the second, the first score would increase; the second would decrease.

Mean scores were computed for both groups for the two variables on the two trials. A t-test was run to measure differences for each variable (1) between inter-group mean scores, and (2) between intra-group mean scores. In addition, the range was determined for each group for comparison with the judges' responses to the task.

Results

Before comparing the groups' performance on the second trial, a comparison was made of their scores on the first trial using a t-test for independent means to determine whether significant differences existed before treatment. In correctly coding recorded miscues as dialect features, the experimental group mean (.54) was identical to the control mean (.54). For incorrectly coding non-dialect miscues as dialect features, the experimental group mean (1.08) was significantly different ($t = 3.65$, $p < .01$) from the control mean (6.30). The results are reported in Table 1.

The experimental group's performance on the second trial was compared to the control's performance using a t-test for independent means. In correctly coding recorded miscues as dialect features, the experimental group mean (2.54) was significantly different ($t = 9.70$, $p < .001$) from the control mean (.46). On the second trial for incorrectly coding dialect features, the control group mean (5.31) was significantly different ($t = 2.28$, $p < .05$) from the experimental (1.46). Hypotheses 1.1 and 1.2 were rejected. Table 1 reports these results.

Table 1 about here

A comparison of the first and second trials of the experimental group revealed that the difference between the mean scores for correctly coding dialect features (.54 to 2.54) was significant at the .01 level ($t = 2.87$). Although there was an increase in incorrect responses (1.08 to 1.46), the difference was not significant ($t = 1.06$) Hypothesis 2.1 was rejected; hypothesis 2.2 was not rejected. Table 2 reports the results.

A comparison of the mean scores of the control group on the two trails revealed a negative change in the scores for correctly coding dialect features (.54 to .46). There was a positive change in the scores for the second variable, a decrease in incorrect responses (6.30 to 5.31). Neither of the differences was significant ($t = .44$ for the first, $t = .87$ for the second). Hypotheses 3.1 and 3.2 were rejected. Table 2 reports these results.

Table 2 about here

To provide a further analysis of the data, the ranges for both scores for each group were determined. On the first trial, scores for correct responses ranged from 0 (9 subjects) to 2 (3 subjects) for the control group; 0 (6 subjects)to 1 (7 subjects) for the experimental group. Scores for incorrect responses ranged from 1 (2 subjects) to 15 (1 subject) for the control group; 0 (6 subjects) to 4 (1 subject). On the second trial, scores for correct responses ranged from 0 (9 subjects) to 2 (1 subject) for the control group; 0 (2 subjects) to 10 (1 subject) for the experimental. Scores for incorrect responses ranged from 0 (2 subjects) to 18 (1 subject) for the control group; 0 (4 subjects) to 4 (2 subjects) for the experimental.

Finally, a comparison was made to determine the numbers of subjects in each group who made positive changes in each variable from the first to the second trial. In the control group, for correct responses, 1 of the 13 showed a gain; 9 showed a decrease; 3, no change. In the experimental group, for correct responses, 8 showed gains, none showed a decrease; 4 showed no changes. In the control group, for incorrect responses, 7 had fewer, 2 had more, and 3 showed no change. In the experimental group, for incorrect responses, 2 had fewer incorrect responses; 3 had more; and 10 showed no change.

Discussion

Results of this study must be interpreted in light of limitations of the study. The number of subjects was relatively small (N = 13 for each group). Subjects may not be typical of prospective teachers of

reading, given their practicum experience in the introductory course in reading. In some teacher-education programs, practicum experiences are not available at all or are available only to graduate students. In addition, in the practicum course, much emphasis is placed on competence in using the IORI, though not with the special procedures for analyzing miscues. This emphasis may not be typical.

Another limiting factor was an unexpected result which the investigators have not been able to explain: the significant difference on trial one between the incorrect scores for the control and experimental groups. When the first trial scores for correct responses were found to be identical for the two groups, it was assumed that the scores and ranges for incorrect responses would be in close agreement, but that was not the case.

The groups were composed of students who had taken the practicum (in which they had been trained in giving an IORI) from two different instructors. The presentations by the instructors and their responses to the students' performance in the practicums could have had an effect. A possibly, more notable difference between the groups involved the number of subjects who had some experience working with students who had a Spanish-language background. In the experimental group, 10 of the 13 had that experience; in the control, only 4 of the 13 did. It should be noted, however, that a study cited earlier (Lamberg and Tomas, 1976) did not find experience with Spanish-language students, by itself, a significant variable.

Implications

Given the limitations of the study, it appears that instruction specially designed to train the prospective teacher to diagnose the reading of students with particular language differences is both needed and potentially effective. When asked to record and then distinguish between dialect features and miscues unrelated to dialect, subjects in both groups (1) did not recognize all of the features they did record , and (2) incorrectly identified miscues unrelated to dialect as dialect features. In a "real-life" situation, such a performance might result in a teacher's failing to note possible symptoms of skill deficiencies by incorrectly seeing departures from the text as consistent with the student's dialect.

The potential effectiveness of the instruction was shown by the significant difference between groups in correct responses on the second trial and the significant differences between trials for the experimental but not the control group. The need for improvement of the instruction, though, was demonstrated by the low accuracy of the control group when compared to the judges' responses to the same task.

Though in the form of a self-instructional module, the instruction may be representative of the kind of learning experience prospective teachers have for study of language differences and reading; i.e., seeing generalizations about and examples of the language differences that might be exhibited in oral reading. It would appear that much more training in auditory discrimination is needed. The

effect of this training can be controlled by providing the same module with additional auditory discrimination exercises.

4. /t/ for /θ/

When reading English, the student with a Spanish-language backgroundmay substitute the sound of the letter t /t/ for the sound of the letters th /θ/

taught
He thought he was right.

fort
He came in fourth.

Which would be characteristic of some Spanish speakers?

(a.) What is that ting thing?

b. What is that there thing?

a. That cat is a black pather panther.

(b.) That cat is a black panter panther.

(a.) Give the dog a bat bath.

b. Give the dog a back bath.

Figure 1. Exercises from module.

Table 1

Comparison between Groups of Trained and Untrained Prospective Teachers on Means Scores on Two Trials in Conducting an IORI

Groups	Correct Responses		Incorrect Responses	
	Trial 1	Trial 2	Trial 1	Trial 2
Control	.54	.46	6.30	5.31
Experimental	.54	2.54	1.08	1.46
t	0	9.70[a]	3.65[b]	2.28[c]

[a] $p < .001$
[b] $p < .01$
[c] $p < .05$

Table 2

Comparison Between First and Second Trial Scores of Trained and Untrained Subjects in Conducting an IORI

	Control Group			Experimental Group		
	Trial 1	Trial 2	t	Trial 1	Trial 2	t
Correct	.54	.46	.44	.54	2.54	2.87[a]
Incorrect	6.30	5.31	2.87	1.08	1.46	1.06

[a] $p < .01$

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