

DOCUMENT RESUME

ED 086 018

FL 004 774

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TITLE The Effects of Dual Information Processing of Standard and Nonstandard English in Nonstandard Speakers.
PUB DATE [71]
NOTE 11p.
EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS American English; Analysis of Variance; *Comparative Analysis; English Education; Experimental Groups; *Information Processing; Language Instruction; Language Standardization; Listening Comprehension; Listening Skills; Negro Education; *Negro Students; *Nonstandard Dialects; Oral English; Questioning Techniques; Reading Comprehension; Reading Skills; *Standard Spoken Usage; Tables (Data)

ABSTRACT

The effect of processing information in standard and nonstandard English was investigated using an equivalent standard and nonstandard English passage as the stimulus. Eight literal and eight inferential questions derived from the passage were used as the index of comprehension. Two hundred Black students were randomly assigned by class to one of the eight treatment conditions. The experimenter was also Black. The design called for 25 subjects per cell. The conditions were: printed SS, SN, NS, NN, and auditory SS, SN, NS, NN (S=standard, N=nonstandard). An analysis of variance within groups with certain planned comparisons was carried out. A linear trend was also applied to the data. The results revealed four out of ten planned comparisons to be significant. The NN printed condition facilitated learning more than any other condition. The NN condition collapsed across sensory modes (printed and auditory) was found to facilitate retention more than any other collapsed combination.
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THE EFFECTS OF DUAL INFORMATION PROCESSING OF STANDARD
AND NONSTANDARD ENGLISH IN NONSTANDARD SPEAKERS

Richard M. Mizelle

Abstract

The effect of processing information in standard and non-standard English was investigated using an equivalent standard and nonstandard English passage as the stimulus. Eight literal and 8 inferential questions derived from the passage were used as the index of comprehension. Two hundred Black students were randomly assigned by class to one of the eight treatment conditions. The experimenter was also Black. The design called for 25 subjects per cell. The conditions were: Printed SS, SN, NS, NN, and auditory SS, SN, NS, NN. An analysis of variance within groups with certain planned comparisons was carried out. A linear trend was also applied to the data.

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When a Black child who speaks Black English enters school, should he be required to learn to read or process information using standard English materials? Some researchers (Bernstein, 1969, Bereiter, 1966) would suggest that using standard English would be better because it is "less restricted and more logical than Black English." Other researchers (Baratz and Shuy, 1969, Lobe 1969) would conclude that taking advantage of the child's natural language would facilitate learning in an academic situation. The issues partly hinge on the existence or nonexistence of a distinct language difference between so called standard and nonstandard English. For purposes of this paper, nonstandard English (Black dialect) will refer to certain structural, semantic, and unorthodox uses of traditional American English.

Reading ability is an important success variable in American Schools and society in general. The consistency in which children process information determines to a large degree performance levels on achievement tests. The present educational system has failed to solve the problem of teaching Black children to read. One of the most critical problems of teaching reading to children lies in defining what actually constitutes reading. According to Wiener and Cromer (1967), this particular issue can be shown by comparing Identification versus Comprehension in reading. They assert that identification is the skill of recognizing and pronouncing words correctly. Whereas comprehension is characterized as "the ability of the reader to paraphrase, to abstract the contents, to answer questions about the material, or to deal critically with the contents."

In terms of ultimate importance, one must logically conclude that "comprehension of" and "adequate processing of" information is the goal of reading. This goal presents particular problems when a child uses a different linguistic system than the one which is presented in the printed textbook. If a dialect is a fully developed linguistic system, then reading materials presented in a different linguistic system with different semantic and syntactic premises would present problems of encoding in the memory and reading process. According to Wolfram and Fasold (1969), "the speech behavior of many lower socio-economic class Blacks was simply considered comparable to that of lower socio-economic White citizens who spoke a variety of nonstandard English." William Stewart (1967), presented strong evidence to the contrary.

The varied reading problems presented previously project the dilemma faced by the American educational system. Although there is some evidence to suggest continued use of the traditional approach to reading, the stronger solution appears to be the use of the mother tongue (the language that the child speaks before he enters school) to facilitate acquisition of reading skills. This author bases the premises of this paper on the approach taken by Baratz and Wolfram and Fasold. The study, using materials designed by Wolfram and Fasold, tested empirically the effectiveness of using standard and nonstandard materials in an academic setting. More specifically, this experiment was designed to investigate the effects on comprehension of

presenting two different but equivalent verbal passages to fifth and sixth grade students. The effects of presenting the materials in printed and auditory form were also tested. Subjects were presented two passages (Stimulus materials). Whether the passages were standard, non-standard, or a combination of the two depended upon the treatment condition. (See figure 1 for a pictorial design of the treatment conditions). The language used in the directions and the test questions was consistent with the type of passage presented. That is, subjects who were presented the Black English passage were given directions and asked questions in Black English. The same procedure was used for subjects who were presented the standard passage.

The following specific questions were asked:

1. Is there a difference in the comprehension level of students who are presented the standard passage treatment, the nonstandard passage treatment, or the standard-nonstandard combined passage treatment?
2. Is there a difference in the comprehension level of students who are presented the standard passage first and the nonstandard passage second, or when the nonstandard passage is presented first and the standard passage second?
3. Does the level of comprehension differ significantly for subjects who are presented the passages in printed and auditory form?
4. In ascending order, which treatment conditions are most effective in terms of comprehension?

Planned comparisons were used to answer the questions listed above. It was hypothesized that the following planned comparisons would be significantly different from each other: SSV vs. SNV and NSV, SSP vs. SNP and NSP, RNP vs. SNV and NSV, NNP vs. SNP and NSP, SSV vs. NNP, V. condition vs. P condition, SSV vs. NNVP, SSV vs. NNV, and SSP vs. NNP.

Method

Subjects

The Ss consisted of 200 Black fifth and sixth grade students in a midwestern city of 80,000 people. There were 25 Ss per cell for the eight cells in the design. There were 93 males and 107 females used in this study. There were no significant differences in number of male and female subjects in any cell. Although there were more sixth grade subjects than fifth grade subjects, it was felt that this distribution would not influence the results of the study.

Materials

The stimulus passages used were developed by Wolfram and Fosold (1969). They employed an established piece of literature, the Bible, and translated the passage into idiomatic Black English. The Spache Formula (1970), a readability measure, was used by the writer to assess the reading difficulty of the material to be used. The materials were found to be adequate for fifth and sixth grade students. Sixteen comprehension test questions, eight literal and eight inferential, were developed from the passages. The items were developed from procedures recommended by Bormuth (1970) for the writing of literal and inferential measures of passage comprehension. A multiple choice format was used, with four alternatives per item. These comprehension test items were also presented in standard and nonstandard English form depending upon the treatment conditions.

Design

A 2 x 4 fixed effects factorial design was used employing all possible combinations (SS, SN, NS, and NN) in the printed presentation method, and all possible combinations (SS, SN, NS and NN) in the auditory presentation method.

Procedure

The Ss were randomly divided by class into eight groups. Four groups were presented the passages in printed form and four groups were presented the passages in auditory form. Instructions were presented to each group based on the treatment conditions. For example, in the standard-standard condition, standard directions were given when instructing the S concerning the first stimulus passage. Standard directions were also used to instruct subjects concerning the second passage in the standard-standard condition. In the case of the standard-nonstandard condition, standard directions were given when instructing the S concerning the first stimulus passage. Non-standard directions were used to instruct Ss concerning the second passage in the standard-nonstandard condition.

In the auditory condition, the stimulus materials were presented by tape. In the printed condition, the stimulus materials were presented on a single sheet (long) of paper. The stimulus presentation time consisted of five minutes per treatment condition (two passages). Immediately following the last passage, the comprehension test was administered. The time interval allowed for responding to test questions was five seconds per item. The test questions were presented in booklet form, with one item per page, and one random order of the items being used for all Ss.

Analysis of data

In order to answer the previously stated questions, an analysis of variance within groups with certain planned comparisons was carried out. A linear trend analysis was also applied to the data.

Results

The main results for the treatment conditions in terms of mean comprehension scores suggested that the treatment condition most easily learned was the nonstandard-nonstandard printed (mean = 9.52) condition. See Figure 2 for a graphic description of the retention scores for the verbal and printed treatment conditions. The collapsed combinations of the nonstandard-nonstandard printed and nonstandard-nonstandard verbal conditions (combined mean = 8.78) were found to be the most easily learned of any collapsed combination. The next most easily learned collapsed combination was the nonstandard-standard printed and verbal conditions (combined mean = 8.54). The next most easily learned collapsed combination was the standard-nonstandard conditions (combined mean = 8.22). The collapsed combination of the standard-standard printed and verbal conditions were found to be the most difficult (combined mean = 8.14). The sequence of these collapsed treatment combinations is consistent with the expectations of the experiment. See Figure 3 for a graphic description of the retention score means collapsed across all treatment conditions.

Ten planned comparisons were computed to answer previously stated questions. The resultant F-ratios were compared to the critical F values to determine significance. The analysis suggested that the greatest significant difference was between SSV vs. NNP ($F = 4.00$). The next most significantly different comparison was between SNP and NSP ($F = 3.79$). The comparison of SSV vs. NNP also proved significant at the .05 level with an F score of 3.72.

		Cell 1		2		3		4	
PRINTED PRESENTATION	1	Standard English	1 Standard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English
	2	Standard English	2 Nonstandard English	2 Standard English	2 Standard English	2 Standard English	2 Nonstandard English	2 Nonstandard English	2 Nonstandard English
	3	(Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)
		Cell 5		6		7		8	
AUDITORY PRESENTATION	1	Standard English	1 Standard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English	1 Nonstandard English
	2	Standard English	2 Nonstandard English	2 Standard English	2 Standard English	2 Standard English	2 Nonstandard English	2 Nonstandard English	2 Nonstandard English
	3	(Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)	3 (Test)

Figure 1: Design of the Study. Numbers above the cells are for identification of cells.

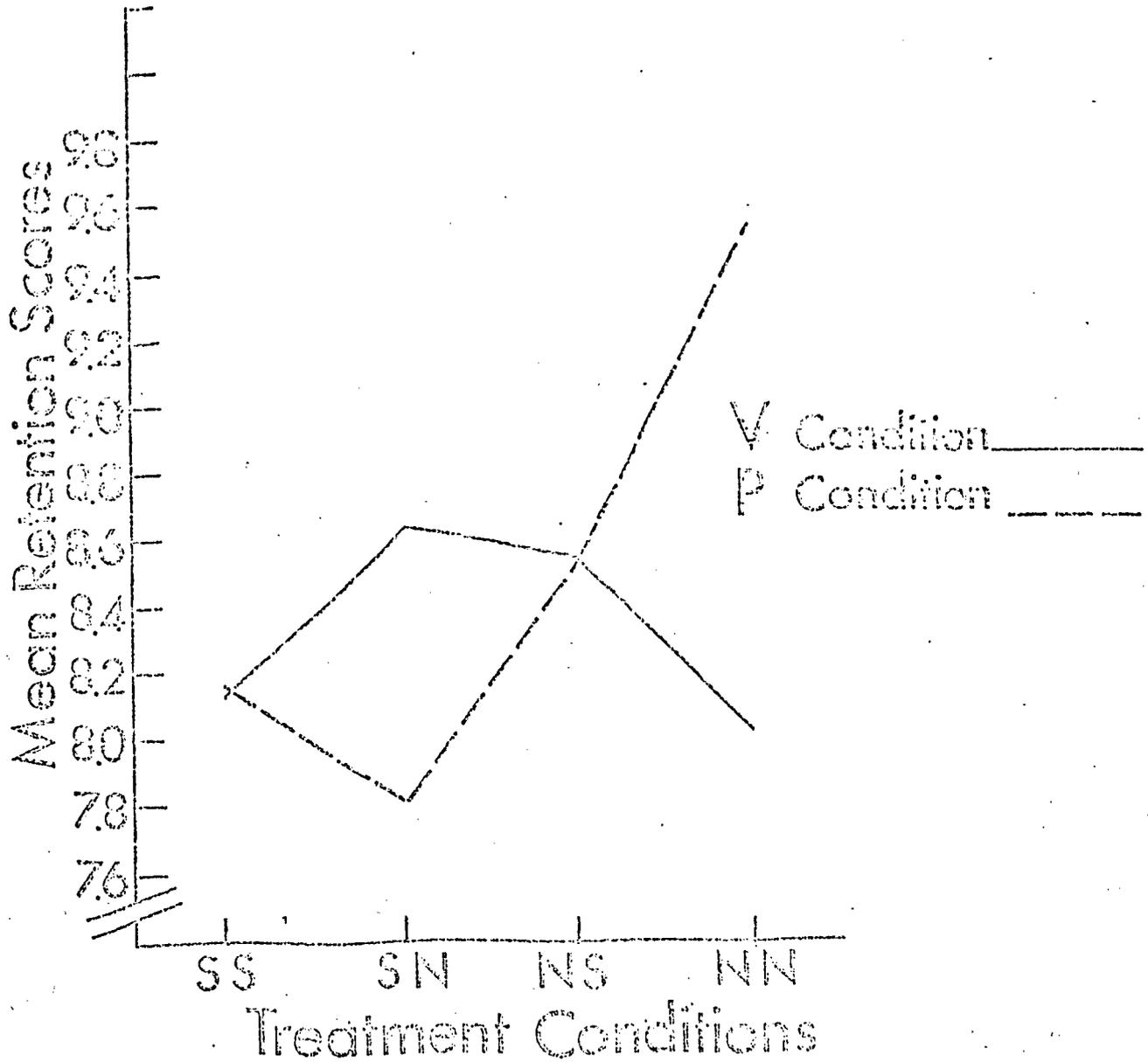


Figure 1: Mean retention scores for the Printed and Verbal treatments.

Discussion

The main finding of the present study was that irrespective of mode of presentation (auditory or printed) or sequence of presentation (SS, SN, NS, NN V-P), the subjects in this study scored higher in the nonstandard-nonstandard printed treatment condition than any of the other treatment conditions. This finding is particularly significant in view of theoretical expectations concerning the influence of the "aurally learned linguistic systems" previously mentioned. The question which must naturally arise from these results is "why did the NN-V condition not prove superior over all others since it most closely represents the mother tongue?" One possible explanation for this finding could be attributed to the unique nature of the stimulus materials. The subjects involved (Black, inner city) were accustomed to hearing nonstandard English but very few of them had ever seen the language in printed form. An arousal interpretation of this situation would conclude that the uniqueness and novality of the printed nonstandard English materials would elicit stronger orienting responses and thereby more learning would take place (Berlyne, 1960).

Another possibility concerning these results is the matter of "appropriateness of language styles" in different settings. Students in American schools are drilled in many intricate ways to use standard English in classroom settings. Coupled with the inappropriate language style and the public (aural) nature of the material presentation, subjects in the NN-V condition may have become antagonistic and embarrassed by the stimulus materials and thereby learned less. The basic difference between the printed vs. auditory method of stimulus presentation may also be a factor. When one listens to materials and attempts to comprehend, the subject can still visually see other things going on in his immediate environment. Many people try to do both at the same time. When one reads printed materials and attempts to comprehend, visual focus must be directly on the object materials and the influence of outside auditory events also must be ignored. With these conditions apparent, encoding would perhaps be an easier process when reading materials. However, since the total printed condition in this experiment did not exceed the total auditory condition in all circumstances and the two conditions were not significantly different from each other, a stronger point is made for the superiority of the NN-P condition.

The finding that Black students in this experiment performed superior in a NN condition is consistent with the difference model and possibly bicultural model also. According to the difference position, subjects who possess the nonstandard English linguistic system should perform better when presented materials in that manner. However, it should be added that certain researchers (Lobov, 1970, Quay, 1971, Terrey, 1969) suggest the possibility that Black children are bidialectal aurally. The previously mentioned theory may reflect reasons why the NN-V condition was not significantly different from other conditions and the NN-P was.

The bicultural model (Valentine, 1970) suggests that Blacks possess a linguistic system which is more a combination of traditional English and Black dialect rather than a distinctive language system. The previously mentioned point concerning appropriateness implied this biculturalization. That is, many phrases which are considered to be standard phrases now were previously considered to be nonstandard phrases. Many traditional English speakers are becoming proficient in several language styles. So, it appears that some biculturalization is taking place in many facets of American culture. However, the common bond and bondage that Black people share in the United States no matter what part of the world they come from, serves to perpetuate certain language styles and variants of traditional English.

The second most interesting finding of this study was the ascending order of the conditions after having been collapsed across presentation modes (printed vs. auditory). As mentioned previously in the results, the NV V-P condition was superior in terms of comprehension scores. This finding is also consistent with the difference model. Although the four collapsed conditions did not differ significantly from each other, the results in terms of condition rank reflected the predictive capacity of the difference theory. In terms of using Black English in classroom situations, it might be important to note the influence of using a combination printed and auditory presentation method. These modes of presentation may be reinforcing to each other and thereby facilitate learning and retention. The implication here is that teachers would have to be able to produce as well as interpret the linguistic system of Black dialect. This would involve much additional education for teachers presently in the school system.

The results of the middle groups (SN-P, NS-P, SN-V, NS-V) did not prove to be significantly better than any other treatment condition. When these middle groups were presented aurally, the comprehension scores were higher than for the middle group when presented in printed form. These results are consistent with the findings of Lobov (1970), Quay (1971), and Terrey (1969) in that children who are bidialectal aurally should not experience as much interference from competing language styles when the materials are aural in nature. According to their theories, Black children are not necessarily bidialectal readers and this point is reflected in this experiment.

The results of this study suggest that relevant materials would facilitate information processing in Black children. However, much additional research and inquiry must be performed in order to make the procedure a valid endeavor. The boundaries and limits of the various theories (difference, bicultural) must be established in more empirical terms. As emphasized by Valentine (1970), one cannot just categorize all Black people as total Black dialect speakers. Do Black girls differ in linguistic variation more than boys? Does geographical region influence the linguistic system (Mississippi-born Black people vs. South Carolina-born Black people vs. Detroit-born Black people)? How does size of family and/or parental income influence linguistic variation? Is nonstandard English more arousing to certain Blacks than to other Blacks or the general population? The area of nonstandard English is open for much more psychological research.

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