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ABSTRACT

This study investigated the effect of two social dialects, Black English (BE) and standard English (SE), and word frequency on performance in blending and word recognition. The subjects were 60 second-grade children from three ethnic groups: 20 white SE speaking children, 20 black BE speaking children, and 20 black SE speaking children. The subjects were from elementary schools in the southwest area of Los Angeles and all were administered the Peabody Picture Vocabulary Test and were then instructed to put together the separate sound they heard on a test tape. The students then took a 48-item test consisting of 12 words in SE form, 12 words in BE form, and 24 non-words. An analysis of the results showed that there are two sequential and partially independent factors in sound blending. The first factor, blending, is an auditory-articulatory skill which is not significantly affected by word frequency, while the second factor, word recognition, is affected by word frequency. The relatively poor performance of BE speakers on sound blending seems to indicate that they may need additional instruction in mastering this auditory-articulatory skill when it is a component of a beginning reading program. (TS)

The Effect of Social Dialect on Sound Blending and Word Identification

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The combination of isolated phonemes into approximation of words is a standard task in "phonics based" reading programs. Performances on this task, usually termed "sound blending" has been extensively investigated with speakers of standard English dialect (Balmuth, 1968; Coleman, 1970; Desberg, 1969a: Takken, 1971).

The present authors (Desberg, 1969b; Marsh & Desberg, 1973) believe that "sound blending" consists of two sequential processes: 1.) the first process is an auditory articulatory skill involving oral production of the isolated phonemes (Marsh & Sherman, 1971), and their co-articulation in an approximation of a word or pseudo-word; and, 2.) the second process is the matching of this production to words in semantic memory, which the authors term word recognition. The processes are thought to be partially independent in that sound blending and word recognition are affected by different variables, (Calfee, 1974). Sound blending is affected by articulatory factors such as phoneme type (Desberg, 1969) and phoneme sequence (Coleman, 1970) while word recognition is affected primarily by word frequency.

Ability to blend letter sounds into word approximations will give the beginning reader another heuristic device to identify unknown words in addition to other clues such as sentence context etc (Goodman, 1965). It may be the only heuristic available in certain situations (e.g., when dealing with words in isolation).

The purpose of this study was to investigate the effect of two social dialects, Black English (BE) and Standard English (SE), and word frequency on performance in blending and word recognition. Although reading performance of black dialect speakers has been extensively discussed (e.g., Baratz & Shuy, 1969) the particular problems of non-standard dialect on performance in phonics

reading tasks has thus far received little investigation. One exception is a study by Melmed (1970) which demonstrated that dialect speakers had considerable difficulty in auditory discrimination of isolated word pairs which were homophones in their dialect (e.g., pin-pen). The BE speakers, however, had little difficulty identifying these words in sentence context.

The BE speaker might be expected to have similar difficulty if the blended phonemes do not closely approximate the isolated word as it is pronounced in his dialect. For example, if asked to blend the sounds (læ st) into the word last, the BE speaker may successfully do so, but fail to recognize the word because it is pronounced (laes) in his dialect. The authors hypothesized that social dialect would therefore primarily affect word recognition rather then sound blending.

In addition, it would be expected that BE speakers would surpass SE speakers in word recognition performance with BE materials, while the opposite be the case with SE materials. Such an outcome was obtained by Baratz (1969) in a sentence repition task.

Method

Subjects: The Ss were sixty second-grade children from three ethnic groups. There wete 20 white SE speaking children; 20 black BE speaking children and 20 black SE speaking children. The latter group was included to determine whether or not social dialect rather than ethnicity was the relevant variable.

A child was classified as a BE speaker if he demonstrated less than 75% standard subject-verb agreement on the Dialect Differentiation Measure (Pfaff & Berdan; 1973). The subjects were obtained from elementary schools in the southwest area of Los Angeles. The sex and mean age and

IQ of subjects in three groups is shown in Table 1.

Procedure

The subjects were individually administered the Peabody Picture Vocabulary Test (PPVT). The subjects were then instructed to put together the separate sounds they would hear on the test tape. They were given a few practice items consisting of two compound words (cow-boy and base-ball); a polysyllabic word (yel-low) and a one syllable word (c-at) to ensure that they understood the task. Six subjects who were unable to perform three out of four of these items correctly were eliminated from the study. The subjects were then presented with a 48 item test, which consisted of 12 word items in SE form and 12 word items in BE form and 24 non-words. The non-words were constructed by the substition of a different phoneme into the real word. If the phonemes were identified as a real word the subject was requested to tell its meaning or to use it in a sentence as a further check on word recognition process.

Results

The performance on the task was analyzed in a 3 x 2 x 2 analysis of variance where the between subject factor was ethnic-dialect group (white-SE, Black-SE, and Black-BE) and the within subject factors were item types (BE vs SE) and real vs non-real words. The analysis was done separately for performance on sound blending and word recognition components. The mean performance on these two task components is shown in Table 3.

The social dialect variable was significant in performance on the blending task (F 6.36 $df=2/57$; $p<.01$), but not on performance on word recognition task ($F>1$). The real word vs non-word factor was significant on

word recognition task ($F=7.16$ $df=1/57$ $p<.01$), but not on the sound blending task ($F=2.28$ $df1/57$; $p>.01$). The dialect word type (SE vs BE) factor was significant for blending task ($F=104$ $df=1/57$, $p<.01$). In addition to the main effects, there were several significant interactions in word recognition performance; they were between dialect group and the real vs nonsense word factor ($F=7.20$ $df=1/57$ $p<.01$), and dialect group and dialect word type ($F=9.90$ $df=1/57$ $p<.01$). A significant interaction was also found between the two subject factors real vs non-word and dialect type for both sound blending ($F=18.55$ $df=1/57$ $p<.01$), and word recognition ($F=159.0$ $df=1/57$ $p<.01$). Correlations were run between performance on sound blending and word recognition performance and IQ scores on PPVT. There were no significant correlations.

Discussion

The results of the present experiment support the authors' hypothesis that there are two sequential and partially independent factors in "sound blending". The first factor is an auditory - articulatory skill (blending) which is not significantly affected by word frequency, while the second factor of word recognition is affected by this factor. The present results support those obtained by Coleman (1970) who also found that blending was affected only by auditory - articulatory factors such as phoneme type (e.g., stops vs continuants) and sequence (vowel-consonant vs consonant-vowel) and not by word frequency. Desberg (1969a) who found a word frequency effect included a word recognition component in his task. Non-word as well as real words can apparently be used to assess blending, as well as be of value in teaching this component skill.

Contrary to the authors initial hypothesis dialect group did affect the sound blending process. BE speaking children were inferior to both Black and White SE speakers on blending both BE and SE words. All three ethnic groups, however, performed better on SE words than on BE words in both the sound blending and word recognition tasks.

This indicates that the BE speaking children in this study are bi-dialectal in that their performance on the SE form of this blending and word recognition tasks, in a school setting, was superior to performance on a BE version of these tasks. The authors concluded that SE materials may be preferable in assessing these skills even in BE speaking children.

The failure to find an effect of word recognition performance as a function of dialect groups is due to the large interaction between dialect group and the performance on the SE and BE versions of the task. As expected, BE speakers were superior to SE speakers in the identification of BE words, while the opposite was true for SE speakers and SE words. The fact that dialect does interact with the word recognition component but not with sound blending component, even though overall performance for both SE and BE dialect groups was superior on SE materials, indicates that social dialect is an important variable in word recognition.

The relatively poor performance of BE speakers on sound blending was unexpected, but it seems to indicate that BE speakers may need additional instruction in mastering this auditory - articulatory skill when it is a component of a beginning reading program. The mean difference between dialect groups, although statistically

significant, was not large in absolute terms, so it does not appear that radically different strategies of reading instruction are indicated for BE speakers. However, teachers should be sensitive to possible phonetic differences between the target word in blending task and that word as it is realized in the child's social dialect.