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ABSTRACT

This study attempted to compare the phoneme shifting ability of nonreading adults, and remedial elementary and good elementary students. The Phoneme Shifting Test was used to evaluate the phoneme shifting skill, specifically the shifting of the first and the last letters of words. Individual testing was done during October 1974. Phoneme shifting skills were found to be a variable that can discriminate among reading groups. Results indicated a difference existed between the good and the remedial groups and the adult group and the good group in the way they responded to the phoneme shifting measure. The remedial group and the nonreading adult group did not seem to differ in the way they responded. The discrepancy between the good readers' responses and those of the illiterate adults provides some evidence that the adult would not profit from a traditional developmental program. (Author/JM)

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A COMPARISON OF PHONEME SHIFTING RESPONSES BETWEEN A SAMPLE OF NON-READING ADULTS AND GROUPS OF ELEMENTARY PUPILS

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Effective reading instruction for the illiterate adult has long been the concern of reading instructors. Unresolved is the question of procedures to follow in an instructional program. In most instances, the use of materials designed for use with children have been found to be unsuitable for the adult. Techniques used in instructing children and adults must be studied. Will a developmental program of skill development meet the needs of the non-reading adult, or should a remedial program similar to that used with children be planned for the adult?

Empirical evidence reveals similarities and great differences in the learning characteristics of children and adults. Neff (1972) and others in adult basic education purport that the experience in living that the adult brings to the classroom gives the student an advantage over younger students. The learning experience is professed to enrich and make learning easier. In comparing adults with children, Zahn (1967) states: "Adults learn more and more quickly, than children if the learning is based on their past experience."

O'Donnell (1973) states: "While the adult has lived longer and has a highly developed perceptual system, the application of sensory skills to reading can often be a formidable problem." Dale (1956) presents the view that the adult student may have an adequate experience background, and yet feel inadequate because of inefficient skills. He supports the position that something may be wrong with the adult's perceptual habits, and the student will need remedial guidance.

Zahn (1967) states that methods of teaching children reading must be changed if they are to be successful with adults. Burnett (1966) and Fox (1964) suggest that the sight method be used at first in instructing adults, and that phonics instruction should begin at about the same time.

There is some evidence, as reported by Guerin (1954), that word recognition errors of adults are similar to those made by children. Perceptual discrimination exercises similar to those used with children are suggested by O'Donnell (1973). The role of auditory training in adult reading as compared to children also needs investigation for no studies were found. Savin (1972) purports that children who do not perform successfully in school in reading tasks are those same children who can't do Pig Latin. In discussing the role of Pig Latin, Savin (1972) states that

Pig Latin: ". . . requires one to modify English by shifting the initial consonant cluster (part of a syllable) of each word to the end of the word and then add the sound /ei/." It is suggested by Savin (1972) that for the literate adult the syllable is a more natural perceptual unit than is the phoneme. Phoneme shifting may be a task that is difficult for illiterate adults. He also suggests . . "adults 'sound-out' unfamiliar written words syllable by syllable, never phoneme by phoneme, in the fashions of school children who have just begun to master reading." The inability to readily translate into Pig Latin, or to phoneme shifting, may be a skill that if undeveloped perhaps indicates that the syllable not the sound is a more natural unit for instruction.

There remain many unanswered questions regarding the similarities and differences in learning to read of children and adults. Studies that compared the skills of children with adults were scarce, and there were not any found that dealt with phoneme shifting.

Questions and Hypotheses

Studies were not found that compared the ability of adults to shift phonemes with children. To investigate the relationship between the phoneme shifting ability of good elementary readers, remedial elementary readers, and illiterate adults the following question was posited for evaluation. Does the illiterate adult perform on phoneme shifting more like remedial elementary students, or more like good reading elementary students? One hypothesis assuming a significant difference among, illiterate adults, remedial elementary, and good reading elementary students was generated to test the posited question. The .05 level of significance was used in testing the hypothesis. The .05 level was chosen because this was an ex-

ploratory study using an experimental instrument.

PROCEDURES

Sample

A sample of 43 individuals made up the three groups used in the study. The first group (Group I) used in the study was composed of 15 teacher-identified good readers of Oak Grove Elementary School, Oak Grove, Mississippi. There were eight girls and six boys. Students were chosen from each of the third-, fourth-, and fifth-grade classrooms. The second group (Group II) drawn for the study were 14 third-fourth- and fifth-grade poor readers in a tutoring program at Oak Grove Elementary School, a suburb of Hattiesburg, Mississippi. Informal reading inventories (IRIs) yielded scores ranging from pre-primer to third grade. There were four girls and ten boys in this subsample. The third group (Group III) consisted of 15 adults in an Adult Basic Education class in southwest Mississippi. Their reading range on the Gray Oral Test (GOT) was from 1.2 - 3.9. There were six males and nine females ranging in age from 17 to 56.

Method and Analysis

The Phoneme Shifting Test (PST) was constructed by McNinch (1974) to evaluate the phoneme shifting skill. The test is composed of three sample and ten test items. Given a picture clue of a three letter word, and the phonemes of the words orally, the subjects were asked to select from a choice of three pictures the word that contained the same phonemes as the stimulus words but in different order. The ten stimulus words

chosen when reversed would become real words i.e. tab/bat, lip/pill. The actual spelling of the word was disregarded. The shifting of the first and last letters of the words were evaluated. The medial sound remained constant. In some instances, there was a slight distortion of the medial sound, however, it always remained an allophone of the original phoneme. The instrument is experimental and has no established reliability or validity. However, by definition, the instrument does test phoneme shifting and therefore has implied validity. Individual testing was done in the mornings during October, 1974, by the investigators with the aid of two advanced graduate students trained in the administration of the instrument. To test the hypothesis of significant differences, a one-way analysis of variance was computed. The number of correct responses was used in the analysis. A Scheffe test was applied to locate the source of variance when a significant overall F was found.

Results

The hypothesis was concerned with the mean difference of good reading elementary children, remedial elementary readers, and illiterate adults on the phoneme shifting task. The computed F ration ($F = 16.62$; d.f. = 2, 40; $p < .05$) revealed significant differences did exist among the three groups. Phoneme shifting seemed to be a variable that can discriminate among reading groups. A Scheffe test was done to locate the source of significant variance within the reading groups. Significant differences at the .05 level ($F^1 = 6.46$) were revealed between groups 1 and 2 and between 1 and 3. These results indicated that there was a difference between the good and the remedial groups and the good and the adult groups in the way they responded to the instrument used to measure phoneme

shifting. The remedial children and the illiterate adults did not differ on the phoneme shifting task.

CONCLUSION

This study attempted to determine if good reading elementary children, remedial elementary children, and illiterate adults reacted differently to phoneme shifting within words. The study sought to determine if the subjects when given a picture clue of a three letter word and the phonemes of that word orally could select from a choice of three pictures the word that contained the same phonemes as the stimulus word but in a different order. Phoneme shifting was constructed in order to measure the subject's ability to shift sounds within words. The generalizations and conclusions from the study are confined to the sample and the instrument.

The data suggests that good elementary readers do not respond to phoneme shifting in the same manner as remedial elementary children or illiterate adults. The good readers demonstrated the phoneme shifting ability within words and the remedial elementary students and the illiterate adults displayed difficulty in the ability to hear the rearrangement of phonemes within a word. Savin (1972) purported that poor readers can not learn Pig Latin. He considered phoneme shifting to be a prerequisite to learning Pig Latin. This study substantiated Savin's findings that poor readers can not shift phonemes. Since the good readers were able to perform the phoneme shifting task it would appear that phoneme shifting might be an early skill used in word recognition. The study supported Guerin's (1954) statement that ". . . word recognition errors of illiterate adults tend to be similar to those of children." Perhaps remedial tasks of these auditory skills could be developed for remedial children and illit-

erate adults.

Fox (1964) and Burnett (1966) suggest that the sight method be used at first with adults and then phonetic instruction begun. A plausible suggestion might be to check the adult's ability to discriminate between different sounds before any actual instruction has begun.

As there was a discrepancy between the good readers responses and the illiterate adult responses, there seems some evidence that the adult would not profit from a traditional developmental reading program; or as suggested by Savin, a syllabic program would be more beneficial. Results of the study, indicate that the adult illiterate responded similarly to the remedial elementary reader and thus indicates that an individualized remedial program would be more expedient in time than the traditional developmental program.

Authorities agree that experience is an important asset that adults bring to the reading act. Results of this study indicate that perhaps experience does not compensate for the insufficient skills, i.e. lack of phoneme shifting ability. Chronological maturation does not develop sound shifting sophistication.

Observation of the test behavior of the remedial children and illiterate adults revealed that the better readers responses were of much shorter latency than those of the remedial readers and the adults illiterates. Both poor reading groups showed a tendency to select responses in which the initial consonant sound was the same as the stimulus word even though on the samples they evidenced an understanding of the directions to find the words that have the same sound but in a different order.

The similarities between remedial children and illiterate adults indicates a need for other investigations in this area. Instructional plans for remedial children and adult illiterates might be influenced by findings of studies in this area.

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