The frequency of miscues, repetitions of miscues, and the correction of miscues at the phoneme-grapheme, phoneme-morpheme, and the grammatical levels of linguistic structure were considered in a study conducted in Southern Alberta. A comparison of the miscues of 75 Indian students at three different grade levels—2, 4, and 6—was made. Oral readings of science materials were taped and analyzed. The types and frequencies of errors peculiar to the different grade levels are discussed in this paper, and the value of auditory discrimination training, the use of context clues, and the necessity of understanding the grammatical components of English are emphasized. References are included. (RT)
AN ANALYSIS OF MISCUES IN THE ORAL READING OF CANADIAN INDIAN CHILDREN

Dialect Problems in Reading Thursday May 1, 1969 10:45 - 11:45 A.M.

Introduction

Until the early 1900's, oral reading held a dominant place in both the theory and practice of reading instruction. However, with the increased availability of reading materials and research findings indicating the need for more silent reading, the emphasis on oral reading began to decrease.

During the 1920's there was a tendency in some schools to limit instruction in oral reading to the first two or three grades. However, by the 1940's the values of oral reading for specific purposes were recognized, and the use of oral work was again included in elementary developmental reading programmes.

Throughout school oral reading can be used to present information related to a problem, to provide general knowledge, to clarify meanings,
to provide instructions, to participate in plays and dramatic dialogues, and to share material for entertainment, for appreciation, and for recreation. (1) At beginning reading levels, oral reading is a prime consideration, for the oral response facilitates comprehension in reading (6) and assists the beginning reader in relating auditory and visual images. (2) The oral reading of sentences gives clues to words recognition because of the order in which words appear in sentences, because of syntax in sentence structure, and because of the recurring word patterns in the child's language. (5)

Oral reading closely parallels silent reading in the basic sensory and perceptual skills required. Consequently, oral reading can be used to obtain valuable diagnostic information about a pupil's reading. By listening to a child read orally, the teacher can note the particular difficulties the child encounters. By examining the pupil's errors in oral reading, the teacher may also gain insight into how a pupil recognizes individual words and relates these words to the larger language structures. (4) Thus, oral reading can play an important role in the total reading programme -- as an instructional and diagnostic instrument, as a communication tool, and as a fine art. (2)

Importance of the Study

A substantial portion of research in reading has been devoted to examinations of errors in oral reading. Such studies, along with formal diagnostic tests and informal checklists have provided systems to classifying reading errors. However, there are two problems associated with some of the research and some of the classification systems -- firstly, the failure of many investigators to take into account the various levels of linguistic structure and, secondly, the failure to indicate whether or not the error might be appropriate to the context. (7)

Although many articles have been devoted to discussions of the reading problems encountered by children for whom English is a second language, and children whose use of English deviates noticeably from standard English pronunciation, this investigator was unable to locate
any literature related to an examination of the miscues in the oral reading of such children. Many authors have indicated that something more than word recognition is needed when children are required to read material which is structurally different from the conversational English they use; however, the specific facets of English which require attention have not been effectively described.

Statement of Problems

The purpose of the study was to analyze the miscues in the oral reading of Indian children in grade two, grade four, and grade six in schools operated by the Department of Indian Affairs and Northern Development in Southern Alberta. The frequencies of miscues, repetitions of miscues, and corrections of miscues at the phoneme-grapheme, the phoneme-morpheme, and the grammatical levels of linguistic structure were considered in the investigation. Three basic problems were examined in relation to each linguistic level included in the study:

1. Is there a significant difference between each of the grades two, four, and six in the different types of miscues, repetitions of these miscues, and corrections of these miscues?

2. Is there a significant difference between each of the grades two, four, and six in the miscues, repetitions of these miscues, and corrections of these miscues occurring in different positions?

3. Is there a significant difference within each of the grades two, four, and six in the different types of miscues, repetitions of these miscues, and corrections of these miscues occurring in different positions?

At the phoneme-grapheme level, the problems considered phonemic miscues occurring as insertions, omissions, and substitutions in the initial, medial, and final positions in words. Phonemic miscues occurring as insertions, omissions, and substitutions in the roots and suffixes of words were examined at the phoneme-morpheme level. Morphemic (word) miscues appearing as insertions to the text, omissions from the text, and substitutions in the text in ten different parts of speech were analyzed at the grammatical level.
Definitions of Terms

For the purposes of this study, the following definitions were used:

1. **Insertion.** Insertion referred to the addition of one or more phonemes to the words in the selected passage during the oral reading by the individual subjects.

2. **Insertion to the Text.** Insertion to the text referred to the addition of one or more words to the selected passage during the oral reading by the individual subjects.

3. **Miscues.** Miscue referred to an oral response to the printed stimulus which differed from the expected response.

4. **Morphemic (Word).** Morphemic (word) was used to describe the miscues occurring within the words at the grammatical level of the study.

5. **Omission.** Omission referred to the omitting of one or more phonemes from the words in the selected passage during the oral reading by the individual subjects.

6. **Omission from the Text.** Omission from the text referred to the omitting of one or more words from the selected passage during the oral reading by the individual subjects.

7. **Responses.** Responses included the miscues, repetitions of miscues, and corrections of miscues which were tabulated for each subject at each linguistic level considered in the study.

8. **Substitution.** Substitution referred to the replacing, with another response, of one or more phonemes in the words of the selected passage during the oral reading by the individual subjects.

9. **Substitution in the Text.** Substitution in the text referred to the replacing, with another response, of one or more words in the selected passages during the oral reading by the individual subjects. This category included miscues resulting from the insertion, omission, or substitution of one or more phonemes in the stimulus word, provided that the response given was a meaningful word. Miscues resulting from the insertion, omission, or substitution of one or more phonemes in the stimulus word, provided that the grammatical sequences of the text was affected were also included in this category.
10. **Repetitions of Miscues.** Repetitions of miscues were considered as occurring when the subject repeated the miscue when the stimulus word reappeared in the selected passage.

11. **Corrections of Miscues.** Corrections of miscues were considered as occurring when the subjects made a miscue, then re-read the stimulus word correctly before proceeding with the reading of the remainder of the passage.

**Procedures**

Twenty-five subjects selected randomly from each of grade two, grade four, and grade six classes in four schools operated by the Department of Indian Affairs and Northern Development in Southern Alberta were required to read orally tests composed of science content.

Each test passage increased in length with corresponding grade level. Readability indices were calculated for each selection: the Spache Readability Formula was applied to the grade two oral reading selection; while mean readability indices were determined for the grades four and six passages by using the Dale-Chall Readability formula, the Lorge Formula for Estimating the Grade Placement of Reading Materials, and the Spache Readability Formula.

The oral reading of each pupil was tape recorded, and analyzed later by the experimenter. To determine the reliability of the experimenter's markings of the responses, two independent evaluators assessed the reading of ten randomly selected subjects from each grade.

The chi square test for two independent samples was the statistical procedure used in the study. The five per cent level of significance was selected. The degree of agreement between the experimenter and the two independent raters was measured with the coefficient of concordance test. Again, the five per cent level of significance was chosen.

**Discussion**

The analysis of the data indicated that there were many significant differences on individual comparisons. At the phoneme-grapheme level of
linguistic structure, the substitution of phonemes in the medial position in words was a common miscue for grade two subjects. Rather than omitting unfamiliar words, the subjects tried many, though not always efficient, alternatives. The attempts to decode unknown words revealed that the subjects were using such graphemic cues as external shape, internal pattern, particular dominant letters, and length of word.

Subjects at all grade levels encountered difficulties reading the voiced th phoneme in such words as the, there, they, and thousands. The phonemes /d/ as in dad and /t/ as in tap were frequently substituted for the /ð/ phoneme.

Omission of final phonemes was a miscue common to all subjects in grades four and six. These final omissions most often related to the inflectional endings of nouns, verbs, adjectives, and adverbs; however, the final /d/ phoneme was also frequently omitted.

Despite the frequencies with which some words recurred in the reading selections, and the frequencies with which subjects repeated miscues, the corrections of phonemic miscues did not appear as a significant finding. The miscues may have been left uncorrected because the readers had lost the meaning of the selection, or because the meaning of the passage was not affected by the miscues. At the grade two level, the subjects' reliance on graphic information in their reading appeared to limit their capacity for making corrections of miscues. Consequently, when the subjects selected a response which seemed appropriate to them, they maintained this response throughout the reading, even though it may not have been meaningful within the context of the reading selection. Subjects in grades four and six usually corrected medial phonemic miscues which disturbed the meaning of the selection. However, miscues which affected the grammatical sequence were rarely corrected.

Phonemic miscues appearing as insertions, omissions, and substitutions on inflectional and derivational suffixes were apparent in the reading of subjects at all grade levels for the examination of miscues at the phoneme-morpheme level of linguistic structure. The most commonly inserted and omitted suffixes were the s inflections on nouns and verbs. In other instances, the ed and ing endings on verbs
were substituted without regard for the graphemic cues present. Recent psycholinguistic research indicates that children acquire inflectional suffixes at an early age. However, with these subjects for whom English was a second language, inflectional suffixes did not appear to be meaningful entities, for they were inserted, omitted, or substituted with little attention being paid to the graphic symbols present in the stimulus words.

Morphemic (word) miscues occurring as omissions from the text and substitutions in the text were the most outstanding miscues appearing at the grammatical level of linguistic structure. The majority of these miscues occurred on nouns and verbs in the reading passages. In each of the grades, substitutions in the text consistently out numbered other types of miscues, with the majority of these substitutions appearing on nouns. However, in nearly every noun substitution, as well as in substitutions on other parts of speech, the grammatical function of the stimulus word was maintained.

The omission of nouns from the reading selection was a serious problem for many of the grade two subjects. It appeared that the subjects who omitted nouns were reading the sentences as lists of isolated words rather than as grammatical wholes. The many meaningless word substitutions made by the grade two subjects, and left uncorrected, seemed to indicate that the subjects were so absorbed in trying to solve phoneme-grapheme correspondences that they overlooked, or perhaps were unaware of, other cues available to them in the sequence of the language. If meaning-bearing words are frequently omitted or modified during the course of reading, the reader's comprehension of the material is likely to be seriously affected. Unfortunately, it was beyond the scope of the present study to examine the subject's comprehension of the assigned reading passage.

At the grades four and six levels, noun substitutions most often resulted from changes in the inflectional endings. Although such miscues resulted in ungrammatical sequences, they were usually left uncorrected as the meaning of the selection was not disrupted. In instances where the subjects substituted a completely different word for the stimulus word, corrections were made if the meaning was not appropriate. Miscues which involved the substitution of a synonym for the stimulus word
such was world for earth) were seldom corrected.

Morphemic (word) miscues appearing as substitutions in the text for adjectives indicated significance in some of the grade four and grade six comparisons. The most common miscue here was the insertion of the $s$ morpheme to words which commonly appeared as nouns when used in an adjective function in the sentence. In this particular context, the subjects appeared to be using the $s$ morpheme as a genitive.

**Implications**

The study of phonemic and morphemic (word) miscues in the oral reading of Indian children in grade two, grade four, and grade six indicated certain aspects of reading a selection in English which presented problems for them.

In the analysis of phonemic miscues, it was found that subjects at all grade levels experienced difficulty with the voiced $th$ phoneme, occurring in the initial position in words. If this phoneme, or other phonemes, is not a part of the subjects' linguistic background, then special instruction must be provided so that the pupils learn to hear as well as to pronounce the phonemes used in English. Auditory discrimination training can assist pupils in learning to hear sounds which are not in their cultural background. As a result of such training, pupils can learn to produce these unfamiliar sounds. Furthermore, auditory discrimination training can provide pupils with a basis on which to analyze words in terms of their constituent parts.

The inattention of the subjects displayed in their reading of inflectional endings on nouns and verbs particularly, may be indicative of divergent language use. Although it was beyond the scope of the present study to examine the subjects, oral language, it is possible that the subjects do not make use of inflectional endings in their regular speech. Consequently, they would not attend to these patterns in their oral reading.

Many of the substitution miscues revealed that the subjects were making use of graphemic cues in their attempts to read the words. Graphic input is only one source for the recognition of printed symbols. However, it
appeared that these subjects were limited to no use of this source.

The context in which words occur can be used to facilitate the reading task. However, in the examination of the miscues appearing in the oral reading of subjects in this study, the use of context clues was minimal at all grade levels. The general weakness of the subjects in drawing on syntactic and semantic information may be the result of the fact that it is often assumed that the children have command of the grammatical components of English. Instruction in word recognition may be sufficient for the native speaker of English who is able to supply grammatical components of meaning as he has learned the language, however, for the non-native speaker of English, an awareness of syntactic and semantic constraints needs to be taught.

The lack of self-correction of miscues which appeared in the reading of subjects at all grade levels was a further indication that the subjects were not making adequate use of syntactic and semantic information. The most outstanding examples of this appeared in the inconsistent responses to words with inflectional endings at the grades four and six levels.

For the most part, it was apparent that the subjects did not possess the grammatical information which would have allowed them to correct the miscues, the subjects provided an alternative word which was the same part of speech as the stimulus word. This finding reveals some awareness of syntactic relationships, and could well serve as a starting point in further developing the pupils' ability to manipulate grammatical structures and syntactic constraints in their reading.

The findings of this investigation indicated that for non-native speakers of English, something more than word recognition preparation is required in the teaching of reading. For such pupils additional emphasis is needed in learning to manipulate the grammatical components of English, and in using the syntactic and semantic relationships in their reading.
SELECTED REFERENCES


