DOCUMENT RESUME

ABSTRACT
        How linguistic principles can be incorporated into
reading instruction was shown by examining the interrelationships of
certain linguistics ideas to learning to read. First, the acquisition
of oral language was discussed as to the developmental stages:
phonological, morphological-lexical, and syntactic. It was suggested
that reading instruction should follow the same sequencing: that is,
learning letters of the alphabet, blending letters or letter clusters
into whole words, and learning syntactical and semantic elements.
Second, the relationship of oral language to printed language was
illustrated by a graph depicting the various stages, layers, or
strands of spoken and printed language. However, it was noted that
many elements of speech cannot be replicated in our printed language.
Finally, a graph based on principles advocated by linguists for
teaching reading delineated the scope and sequence of decoding
reading skills considered to be mechanical in nature. It was noted
that the order of skills shown by the second graph parallels the
sequence of language layers in the first graph. Tables and references
are included. (DH)

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USEFUL LINGUISTIC PRINCIPLES IN TEACHING READING

Linguistics is a discipline primarily concerned with describing man's

physiological and psychological uses of language. Since reading is a form of

language expression, many of the tenets advocated by linguistic scholars deserve

close examination by professionals whose main concern is teaching children about

the processes of reading. From an examination of the literature one must conclude

that there is not a linguistic method of teaching children to read. Rather, there

are various linguistic principles and phenomena that have been employed, most

frequently by educators, as methods and procedures to be used in reading instruc-

tion. The purpose of this paper is to briefly demonstrate how some of these

linguistic principles may be integrated with generally accepted practices in

reading instruction.

The following linguistic ideas will be examined in an attempt to show some

degree of inter-relationship to reading instruction: 1) The acquisition of oral

language, 2) The relationship of oral language to written language, 3) A criterion

based   scope and sequence chart combining reading skills and linguistic principles.

Reading as an outgrowth of acquired oral language

Considerable controversy rages between linguists and psychologists concerning

the means by which children acquire language. Colleagues and students of Chomsky,

frequently called nativists, tend to endow the young child with innate mechanisms

for the self-discovery of the theories of his language. Behavioral psychologists

tend to reject endowed early language mechanisms in children. Instead, they

propose that reinforcement theory, applied by adult models in the child's social

environment, explains how we acquire language.

While little agreement between these two groups may be reached concerning the

means of language acquisition, both camps would concur regarding the end product

of language acquisition. Scholars seem to agree that language is acquired in a

predictable way with distinct, but overlapping developmental stages. Hodges,

(1970) after reviewing pertinent literature, reported that language tends to

unfold or develop along a continuum of three stages: phonological, morphological-

lexical, and syntactic. He quoted data indicating that the age at which functional

mastery of the phonemic stock of an individual's dialect ranges from about $4\frac{1}{2}$ to

10 years. He also indicated that the average six year old is able to correctly

articulate practically all the phonemes of English. John and Moskovitz (1970)

refer to the early phonological development of children as the prelinguistic stage.

They indicate this stage begins to develop in infants at about five months of age.

The early vocalizations are at first vowel saturated; cooing then becomes inter-

spersed with consonants. The prelinguistic or early phonological stage rapidly

meld into the morphological stage. Hodges states, "The child's control of morphol-

ogy proceeds, as do other language features, along a course of mastering the highly

predictable and productive features toward the mastering of uncommon forms of

limited distribution -- for example, derivational suffixes and irregular inflections"

(1970, p. 217). At the age of about one, lexical development begins to take place

and the first words of communicative effectiveness begin to appear. These one-word

utterances or holophrases, tend to be nouns, verbs, or interjections. The form is

frequently that of a repeated syllable, e.g. "da-da" is "daddy", etc. At later

stages of language development, children begin to combine words forming simple

sentences. This early grammatical or syntactic stage of language growth is

characterized by telegraphic speech. Children combine words into simple sentences

but omit inflections and function words. Finally, the mastery of the syntax of

one's language requires the remainder of childhood and adolescence.

During the time the child is learning to articulate the sounds of his dialect,

blend these sound into meaningful words and arranges these words into cohesive

sentences, he is also learning that words have meaning. He learns that language

is used, for both communication and thought. So while the child is gaining mech-

anical mastery of his language, he is also attempting to gain cognitive mastery of

his language. The average six-year-old pupil, then, seems to enter school with

some functional control, depending upon the depth and breath of his preschool

language experiences, of his dialect of the English language.

How does this brief summary of language acquisition provide some direction to

teachers regarding reading instruction? First, the language the pupil brings with

him to school will be different from the language of the teacher and the school.

We might refer to the child's language as home talk or out-of-school talk. The

pupil will be expected to master "school talk" as a result of his public school

career. He won't master it, however, in the first grade. As teachers we must

become accepting of the child's language productions. Frequent admonitions asking

the child to substitute, "I do not have a pencil" for "I ain't gotsa pencil" will

not change the child's "quality" of verbal output. Perhaps the best thing for a

first grade teacher to do when a pupil responds, "I ain't gots no pencil", is to

get him one! Early language development was a slow, natural process; we should

expect similar speed with the development of school talk.

Secondly, we ought to consider utilizing the child's level of mastery of home

talk in providing initial reading instruction. Charles fries has said, "learning

to read in one's native language is learning to shift, to transfer, from auditory

signs for the language signals, which the child has already learned, to visual or graphic signs for the same signals." (1963, p, 188) Perhaps we might utilize Fries' observation and provide children the opportunity of reading their own talk. This implies that when children dictate stories for language experience charts, we must write all of what the pupil says, exactly as he says it in order to provide a language experience. If the pupil says, "My gramma, she cook greens," perhaps that ought to be the first verbal message the child attempt to decode. After the child has learned that the visual symbols the teacher has printed on the experience chart are his and only his talk, he may learn there are other ways of expressing home talk.
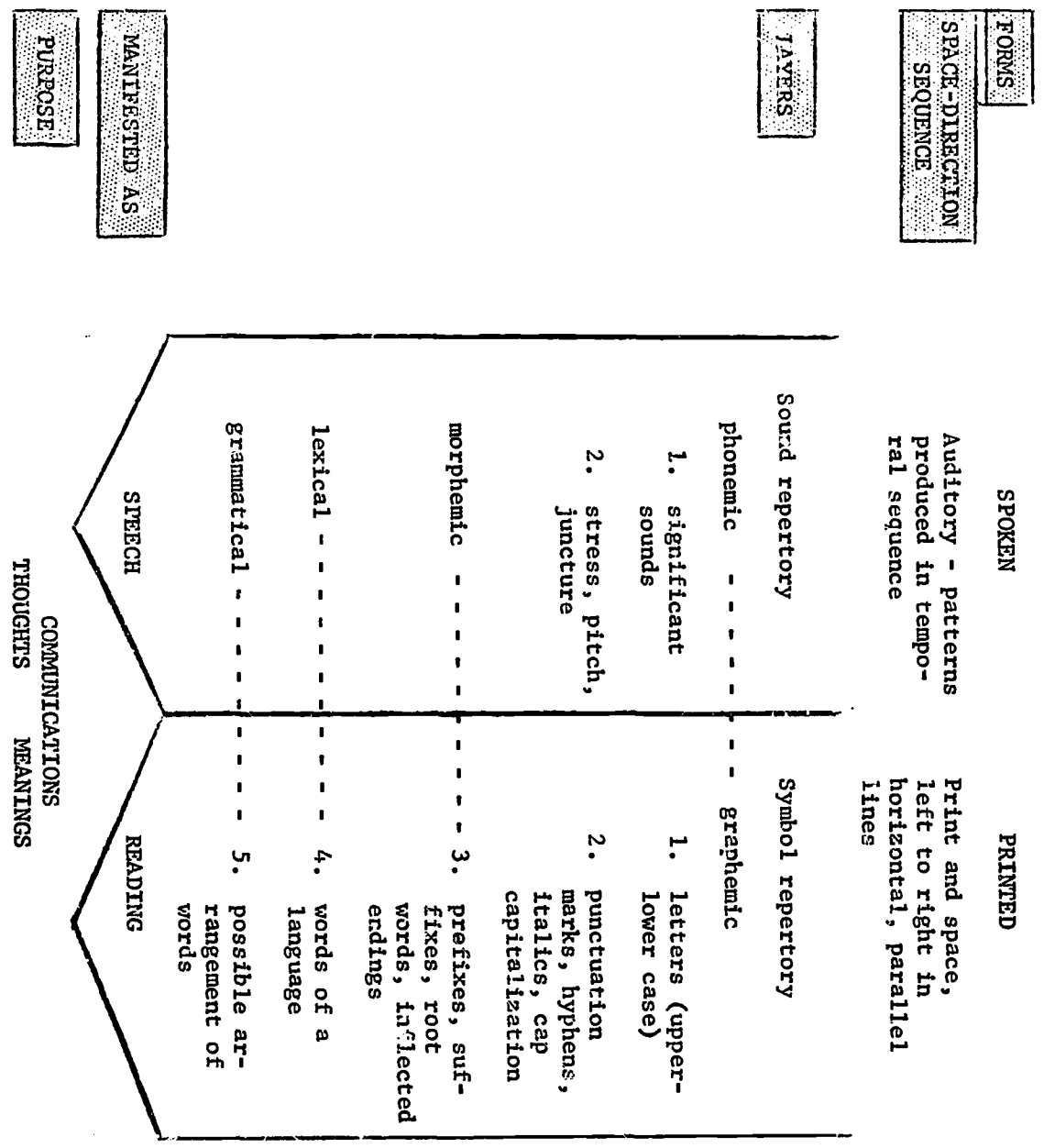
Finally, the predictable and developmental sequences through which children pass in acquiring oral language may point the way to more efficient methods of reading instruction. For example, if children master the phonological elements of their language first, then the symbolic referents to the phonological system should be introduced first. Following this reasoning, beginning reading instruction should be limited to learning the letters of the alphabet. If in learning to speak, the morpho-lexical stage is mastered next, then in reading instruction, we ought to consider teaching pupils how to blend symbolic referents into whole words. Formal reading and other language arts instruction should continue in a similar manner. Instruction in syntactical and semantic elements would follow if one were to attempt to simulate the developmental stages of oral language acquisition.

INSERT FIGURE 1 ABOUT HERE

Relationship of oral language to printed language.

Figure one is an attempt to show graphically the various stages, layers or strands of spoken and printed language. The large arrows superimposed over the forms of each language expression are meant to imply that each of these forms is learned in a predictable and developmental way. For example, spoken language is primarily made up of each individual's sound repertory. The sound repertory

Figure 1

LANGUAGE

FORMS

SPACE-DIRECTION SEQUENCE

LAYERS

MANIFESTED AS

PURPOSE

SPOKEN

Auditory - patterns produced in temporal sequence

PRINTED

Print and space, left to right in horizontal, parallel lines

Sound repertory ---------- Symbol repertory

phonemic ---------- graphemic

1. significant sounds

2. stress, pitch, juncture

1. letters (upper-lower case)

2. punctuation marks, hyphens, italics, cap capitalization

morphemic ---------- 3. prefixes, suffixes, root words, inflected endings

lexical ---------- 4. words of a language

grammatical ---------- 5. possible arrangement of words

SPEECH

READING

COMMUNICATIONS
THOUGHTS
MEANINGS

consists of several overlapping layers or strands. An individual begins to experiment with language production by articulating single sounds, then combines sounds to form morphemic units, which become later, lexical units. Parts of the lexical units, r 's, are combined in various manners to form the grammatical or syntactic layer of the language. All the layers are interrelated and manifested in the form of speech behavior or spoken language. It should be noted that both dialect, and paralinguistic expressions, non-verbal communications, have been omitted from Figure one. These two additional layers of spoken language are difficult to represent in printed language forms and hence were purposely omitted.

Printed language is represented at the right of the model. The space and direction sequence of spoken language is represented in printed language as print and space, arranged in English in a left to right order in horizontal parallel lines. We attempt to represent all the layers of the sound repertory that are listed in Figure one in our printed language. Note the connecting lines between phonemic layers, in the sound repertory and the graphemic layers in the symbol repertory. At each layer of the spoken language, there is an approximate corresponding layer represented in our printed language. The column headed printed language is really more wishful thinking than fact since there are many elements of our spoken language which cannot be replicated accurately in our printed language. Finally, the model shows that the purposes of spoken English, as manifested in speech, and of printed English as manifested in reading, are the same.

A criterion based scope and sequence chart combining reading skills and linguistic principles.

Before prescribing a specific sequence of skills to be employed in beginning reading instruction, it would be appropriate to look at the following principles advocated by linguists for the teaching of reading:

1) The first step involved in reading is that of decoding the printed message. Decoding is a process of reconstructing speech from the printed message. It is suggested by many linguists, that decoding is a mechanical process of interpreting sound to symbol correspondences. Meaning will only be available to a reader, according to many linguists, after decoding has taken place.

2) The words used in initial reading instruction should be chosen to show spelling--to sound relationships in the language that are consistent and hence predictable. The four major spelling patterns suggested by linguists are: (1) one-syllable words shaped (consonant), vowel, consonant, (C)VC e.g., cat, pit, plan, witch; (2) one-syllable words of the shape (consonant), vowel consonant, silent e. (C)VCe, e.g., made, slide, stripe; (3) one-syllable words shaped (consonant), vowel, vowel, consonant (C)VVC, (this pattern has more limited applicability than those previously mentioned), in this pattern the second vowel is silent, the first is "long," e.g., road, bait, feet; (4) one-syllable words of the shape (consonant) vowel (C)V, frequently called the open syllable, e.g., me, she, go.

3) Phonemes are represented by graphemes. The important distinction linguists wish to impress upon teachers is that letters do not make sounds; they stand for them.

4) In order to learn to read, pupils must be required to learn symbol to sound relationships. This is not to say that a pupil should learn sounds. Linguists contend pupils already know sounds when they enter school; their first task is to learn which letters represent which sounds.

5) Symbol to sound relationships must be taught as parts of words and not as isolated sound units matched with individual letters. Very few English sounds occur in isolation.

6) Sentence patterns should be regulated and introduced in the manner in which vocabulary words are presently controlled in basal readers.

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7) Pupils must study more than isolated words in order to grasp complete
meanings. Linguists maintain that meanings are carried by the arrangements
of all of the words in an utterance. Therefore, in order to concentrate
on meaning one must grasp the importance of the complete, whole sentence.

INSERT FIGURE 2 ABOUT HERE

Figure two illustrates a suggested scope and sequence of decoding skills in
reading that seem to be mechanical in nature. Mechanical skills are defined as
those that are readily observable and easily measured. They appear to be basic
to beginning reading instruction and might also be called decoding skills. In
addition, this order of skills parallels the sequence of language layers shown in
the printed language scheme illustrated in figure one.

The vertical arrow at the left of figure two depicts the suggested order in
which the skills should be presented to beginning readers. The horizontal arrow,
at the top of figure two, delineates the scope or magnitude of the decoding skills.
The three categories of mechanical skill have been labelled phonic analysis,
structural analysis and related language activities.

Phonic analysis skills would be those that teach pupils about the symbols or
letters used in English spelling. Other phonic activities would prepare pupils
to associate the symbols or letters with the sounds they represent. In addition,
pupils would be taught to name the letters of the alphabet and match upper with
lower case letters.

The term blending, also a phonic analysis skill, is used to describe a process
and also to illustrate to pupils the alphabetic nature of English spelling. Be-
ginning readers should internalize the spelling system used in English while
learning to read. This process involves understanding that letters represent
sounds in words. And, that these sounds represented by letters, occur in a left
to right order. When teaching pupils about our spelling system, it is suggested
that initial instruction be limited to words in which the sound and symbol

Figure 2

SCOPE AND SEQUENCE OF MECHANICAL READING SKILLS

Phonic Analysis	Structural Analysis	Language Activities

1. Letters
  - Naming (upper and
    lower case)
  - Matching
  - Auditory discrimination
  - Naming vowels
		1. Manuscript formation
		   of letters

2. Blending
  - Predictable
    spelling patterns
    (C)VC as in the
     word mat
    (C)VCe as in the
     word mate
    (C)VVC as in the
     word meat
    (C)V as in the
     word me
	1. Initial and final
	   consonants
	2. Initial and final
	   clusters
	3. Medial vowels
		2. Spell and write all
		   predictable pattern
		   words

	4. Inflection of
	   (C)VC single
	   syllable words
	   (s, es, possessives)
		3. Spelling and write
		   endings
		   add ff, ll, ss, ck at
		   end of one-syllable
		   words

	5. Inflection of other
	   pattern words
	6. Other endings: ing,
	   ed, est, ion, er	

3. Variant predictable
  spelling patterns
   r controlled vowels
    bar, bear, bare
   vowel clusters
    aw, oi, ow
   soft c, g, ph as
    /f/
   silent letters
	7. Contractions	

	8. Patterned syllabication
	   Compound words
	   (mail man)
	   spelling patterns
	   (pic nic) i.e.,
	   (C)VC/(C)VC
		4. Write and read sentences in basic patterns
		   NV
		   NVN

4. Unpredictable
  spelling patterns
   ild, ild, ost
	(stale mate) i.e.,
	   (C)VCe/(C)VCe
	   before (C)le
	   (ta ble)
	   common syllables
	   (tion, ed, ing)
		NLvN
		   NLvA

correspondence is at an optimal level. Consequently, words that conform to the previously mentioned predictable spelling patterns, i.e., (C)VC, as in the word mat, (C)VCℓ as in the word mate, (C)VVC as in the word meat and (C)V as in the word me, should be used for initial reading instruction.

Words that are spelled so that their spelling provides some clues for pronunciation but the symbol to sound correspondences are not as consistent as the previously mentioned words may be called predictable spelled with some variations in sounds. For example, the sound associated with the letter "a" in the word ball is different from the sound of the same letter in the word cat. While the sounds differ in these two words, for decoding purposes the "l" controlled vowel sound in the word fall is consistent as long as decoding is limited to "l" controlled vowels. It is suggested, then, that these words be taught in families. For example, by substituting varying initial consonants the pupils can generate a list of words that rhyme, such as: ball, fall, and tall. The other entries on figure two, "r" controlled vowels, vowel clusters, and silent letters also provide similar clues for pronunciation and should be taught in rhyming lists.

The last group of words under the column phonic analysis conform to the previously mentioned spelling patterns but their pronunciations differ and hence they are called unpredictable patterns. For example, while the word mild could be classified a (C)VC word, the vowel sound associated with the letter "i" is "long." On the other hand, the word mint, also a (C)VC word, has a "short" vowel sound. The same situation exists when examining the pronunciation of the words love and lone, both (C)VCℓ words, but with different vowel sound associations for the letter "o." These words may need to be taught in word families or rhyming lists. Some of them may need to be taught individually.

Finally, words that do not conform to spelling patterns but are important in signaling meaning, such as structure or function words, need to be presented to pupils early in the sequence of reading instruction. These words have traditionally been defined as articles, conjunction, linking verbs, etc. Words such as the, was,

their, should be presented to pupils utilizing traditional developmental reading methods.

Structural analysis skills should be taught to provide pupils with methods of decoding whole words and their parts. It is suggested that pupils begin to blend predictably spelled words first by alternating initial consonants, e.g., change the word man to the word tan, then final consonants, changing the word man to the word map. Secondly, pupils should be able to spell and read consonant clusters in the initial position, i.e., change man to plan then in the final position, lad to lamp. When pupils have mastered these spelling alterations they should then be taught to substitute one middle vowel for another, i.e., change bat to bet to bit, etc.

The reaminder of the structural analysis skills as depicted in figure two illustrate skills that should be presented to show pupils how to read and spell various words.

Patterned syllabication activities should be provided so that pupils may decode words utilizing some of the phonic analysis skills previously taught. Pupils should receive instruction in order to decode unfamiliar printed words. The suggested sequence illustrates the specific syllabication skills that should be presented to pupils. Pupils should first attempt to decode words utilizing their knowledge of predictably spelled words. Secondly, familiar words, compound words should be divided into syllables. Then words containing (C)le, such as han/dle and ta/ble might be presented as syllabication exercises. Finally, common syllables should be used as a means of dividing words into syllables.

The column headed Language Activities delineates skills that are related to spelling, writing, and reading words, phrases, and sentences. And as such is an attempt to correlate the phonic and structural analysis skills previously presented.

In conclusion, this scope and sequence chart of mechanical reading skills was designed to implement some of the major tenets of linguistic scholars. The skills, ✓ if presented in this sequence would parallel the sequence of language layers as represented in figure one.

REFERENCES

Fries, C. C. Linguistics and Reading. New York: Holt, Rinehart and Winston, Inc., 1963.

Hall, R. A., Jr. An Essay on Language. Philadelphia: Chilton Co., 1968.

Hodges, R. E. "Part I: Language development: the elementary school years." In Linguistics in School Programs, Part II, 69th Yearbook NSSE (Marckwardt, A. H., ed.). Chicago: University of Chicago Press, 1970.

Ives, S. and Ives, Josephine P. "Part I: Linguistics and reading." In Linguistics in School Programs, Part II, 69th Yearbook NSSE (Marckwardt, A. H., ed.). Chicago: University of Chicago Press, 1970.

John, Vera P. and Moskovitz, Sarah. "Language acquisition and development in early childhood." In Linguistics in School Programs, Part II. 69th Yearbook NSSE (Marckwardt, A. H., ed.). Chicago: University of Chicago Press, 1970.

McNeill, D. "Developmental psycholinguistics." In The Genesis of Language. (Smith, F. and Miller, G. A., eds.). Cambridge, Mass: MIT Press, 1966.

Wardhaugh, R. Reading: A Linguistic Perspective. New York: Harcourt, Brace, & World, Inc., 1969.