

The Structure of Language

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Introduction

What do teachers know? Because of concerns about teacher preparation for reading instruction, The American Federation of Teachers asked an expert, Louisa Moats, Ed.D, to prepare a paper on this topic. "Teaching Reading IS Rocket Science: What Expert Teachers of Reading Should Know and Be Able to Do" (Moats, 1999) provides a detailed presentation of the information teachers need if they are to be effective with students with persistent reading problems. Dr. Moats proposes a research-driven teacher training curriculum including the following topics relating to the knowledge of language structure necessary for effective reading instruction: phonetics, phonology, morphology, orthography, semantics and syntax and text structure. In this unit, you will be introduced to these topics and given suggestions for further study.

Phonetics and Phonology

PHONETICS:

is the study of speech sounds (phonemes) and how they are produced in a language. Teachers need to be able to pronounce phonemes correctly and understand the characteristics of vowels and consonants.

PHONOLOGY:

is the scientific study of the rules that govern the order in which speech sounds can be produced. For example, the consonant sequence NP is never used in English.

The next section on sound production introduces you to some basic characteristics of consonant and vowels and provides a model for the correct pronunciation of individual sounds. You are encouraged to use this information to practice your sound production skills until you are competent in this area. Throughout this program, when you see letters represented this way / t /, it indicates the sound rather than the name of the letter.

Sound Production

VOICED AND UNVOICED SOUNDS

Consonant sounds can be voiced or unvoiced. For unvoiced sounds there is no vibration of the vocal folds (voice box; larynx). In voiced sounds there **is** vibration of the vocal folds. Many pairs of sounds differ **only** in voicing. For example, /s/ /z/ are produced with the same motor movements but /s/ is unvoiced and /z/ is voiced. All vowels are voiced sounds.

Teachers can guide the student to discover characteristics of several sounds including what parts of the mouth are used to produce the sound as well as whether the sounds are voiced or unvoiced.

OPEN AND CLOSED SOUNDS

All consonants are produced by moving air and are considered "closed" sounds because the air stream is stopped or closed off in some way. All vowels are "open" sounds because the air stream is not interrupted.

EMPHASIZING THE PRONUNCIATION OF INDIVIDUAL PHONEMES

When phonemes (individual sounds) are pronounced in isolation, it is important to distort the sounds as little as possible.

Vowels can be simply stretched out (/a a a a / ple/).

Continuant consonants (/m/ /f/ /n/ /s/ /z/ /v/ /sh/) can be stretched out but be careful not to put an extra vowel (/mmmmm/ rather than /muh/)

Stop consonants should either be whispered (for unvoiced sounds /p/ /t/ /k/) or "clipped" (for voiced sounds such as /d/ /g/ /b/) being careful to add as little "extra" sound as possible.

MORE ABOUT CONSONANT SOUNDS

Consonants can be grouped according to the motor movements used to produce them as shown below.

Consonant sounds made with lips touching

- /p/ as in pin and /b/ as in bin - lips touch and pop open with puff of air

- /m/ as in may - lips closed and hum; air comes out nose

- /wh/ as in whale and /w/ as in wail - lips in a circle and blow lightly. Compare the amount of air produced for /wh/ and /w/.

Consonant sounds made with teeth and tongue

- /f/ as in face and /v/ as in vase - top teeth on lower lip

- /th/ as in thin and /th/ as in then - tongue on top teeth

- /t/ as in tip and /d/ as in dip - tongue taps behind teeth

- /n/ as in not - tongue on roof of mouth - air out nose

- /l/ as in lip - tongue on roof of mouth - air over sides of tongue

- /s/ as in sue and /z/ as in zoo - blow air down center of tongue

CONSONANT SOUNDS MADE WITH TONGUE ON HARD PALATE

- /sh/ as in ship and /zh/ as in measure

- /r/ as in rip - the sound of a motor starting

- /ch/ as in chin and /j/ as in jeep - these sounds are a combination of /t/ and /sh/

- /y/ as in yip

OTHER CONSONANT SOUNDS

Here are some additional sounds made with a variety of motor and breath actions.

- /k/ as in Kate and /g/ as in gate - back of tongue raised

- /ng/ as in sing - back of tongue raised; air out nose

- /h/ as in hip - made with air only

- /qu/ as in quit - combination of /k/ and /w/

- /x/ as in ox - combination of /k/ and /s/

MORE ABOUT VOWEL SOUNDS.

Vowels are often described as having “short” or “long” sounds. These are educational terms and have nothing to do with the actual production of the vowels. “Short” sounds are best presented in key words in which the vowel sound is at the beginning and is not distorted.

- /a/ as in apple

- /i/ as in itch

- /u/ as in up

- /o/ as in octopus

- /e/ as in edge or Ed

Long vowel sounds are simply the name of the vowel:

- /a/ as in acorn

- /i/ as in pie

- /u/ as in uniform

- /o/ as in open

- /e/ as in even

Vowel digraphs are single sounds represented by two letters. For example: /a/ as in tail; /e/ as in jeep; /o/ as in boat.

Vowel diphthongs are two sounds that slide together: /oi / as in coin and boy and /ow/ as in plow and out.

Morphology and Orthography

MORPHOLOGY:

is the study of morphemes which are the smallest units of meaning in English. Morphemes can be whole words (e.g., base in baseball), word roots (e.g., port as in transport), prefixes (e.g., sub- as in submarine), suffixes (-ful as in hopeful) and grammatical endings (-s as in houses). Most content vocabulary in English is based on morphemes from Greek and Latin and knowledge of these morphemes allows students to read and understand unfamiliar multisyllable words they will encounter in their social studies, science and language arts courses. For example, a student who has some knowledge of the root spect, the suffix -tion and the prefix circum- has a good chance of understanding the word 'circumspection' the first time it is encountered in text.

ORTHOGRAPHY:

is the study of the writing system of a language and includes correct or standard spelling. Teachers need to know the common spellings for vowels, consonants and syllable patterns as well as the major spelling rules and how these are related (e.g., the relationship between closed syllables and the spelling rule for doubling l, f, s and z).

Semantics and Syntax

SEMANTICS: (I can't get this space between this line and the next out of here.)

is the knowledge of word meanings and includes information about idioms and figurative language which are sometimes difficult for students. SYNTAX refers to information about the sequence of words within phrases or sentences, the rules of grammar that govern English, and the structure of sentences. These areas are crucial for reading comprehension and writing.

History of the English Language

Knowledge of the development of the English language provides an important framework for the study of word structure and meaning. One of the best ways to introduce older students to "remedial" reading instruction is to present the material as a study of the structure of language and to begin with the history of written languages. Students who have failed to learn to read well often can be enticed to study "language structure" and enjoy learning information (e.g., syllable types) and terms (e.g., 'phoneme') that their peers do not know
