

Analysis of the longer word *misunderstanding*.

The word *misunderstanding* is composed of four major parts: The two prefixes **mis-** and **under-**, the base word **stand**, and the suffix **-ing**.

The base word **stand** is composed of two simple parts, the initial consonant blend **st** plus the word family sound **-and**. There are many common words that begin **st-** such as:

stop stand stick step stare

There are at least 87 common words that belong to the **-and** family such as:

and			
band	hands	handed	handing
sand	sands	sanded	sanding
land	lands	landed	landing
brand	brands	branded	branding
grand			
hand	hands	handed	handing
stand	stands		standing

The suffix **-ing** is one of the most commonly occurring suffixes in English.

The prefix **under** is a common word by itself and a common prefix as well. Even its parts are common. **-Un** is a common base sound in the **-un** family with words like **run, sun, fun**, etc. **-er** is a common sound occurring in both prefixes and suffixes such as **per-** and **greater** as well as common words such as **her**. The medial sound **/d/** in **under** is a common sound in initial positions in common words such as **dog**, ending positions in common words such as **bad**.

The prefix **mis-** is a common and very important prefix in many commonly used words such as **mistake** and **mis**spell.

Going backwards — or from the end of the word it becomes clear that **all** the word parts of the long word *misunderstanding* are short and are commonly occurring elements.

	-ing	3 letters
and	anding	3 letters + 3 = 6 letters
st	standing	2 letters + 3 + 3 = 8 letters,
er	erstanding	2.letters + 2 + 3 + 3 = 10 letters
d	derstanding	1 letter + 2 +2 + 3 + 3 = 11 letters
un	understanding	2 letters + 1+ 2 + 2 + 3 + 3 = 13 letters
mis	misunderstanding	3 letters + 2 + 3 + 2 + 3 + 3 = 16 letters.

Analysis of the spelling of the word *psychiatry*.

The word *psychiatry* is composed of two major parts, the morpheme **psych** and the suffix **-iatry**. The base word is composed of three parts, the initial consonant sound **/s/** represented by the letters **ps**, the sound of the **long i** represented by the letter *y* and the ending consonant sound **/k/** represented by the letters *ch*.

Common spellings would yield "**sike**" for **/sik/** instead of **psych**. Words that start with the silent **p** are nearly always polysyllabic words that occur rather infrequently such as **p**neumonia, **p**neumatic, **p**seudonym, **p**sykter, and **p**sychopathic.

The **long i** sound in the medial position in common words is almost always spelled with an **i** and a silent ending letter **e** as in words such as **like**, **nice**, **ride**, **life**, **fine**, **pipe**, etc.

The **/k/** sound in the ending position preceded by the **long i** sound is almost always spelled with the letter *k* as in **bike**, **strike**, **like**, **Mike**, etc. However, in the base morpheme **psych** the **/k/** sound is spelled with the letters **ch**. In the little single syllable words which are very common in our language, the letters **ch** usually represent the sound of **/ch/** as in **chip**, **chop**, **choke**, **church** and **teach**. Beginning readers are almost always presented with words with the **ch** spelling representing the **/ch/** sound and are taught the phonic relationship between the sound **/ch/** and the letters used to represent the sound, **ch** and **-tch**. What beginning readers are almost never taught is that in "big" words especially **technical** words having to deal with science or religion (such as **mechanics**, **chemistry**, and **Christianity**) the letters **ch** have the **/k/** sound.

The **-iatry** suffix which indicates medical treatment is not commonly used in everyday writing and speech. And even its component parts are not common. For example, starting at the end, the letter *y* in simple single syllable words is almost always sounded as the **long i**. For example, **try**, **cry**, **fly**, **sy**, **fly**, etc. Beginning readers are taught this, and if not taught, at least encounter this relationship in their reading. On the other hand, when a polysyllabic word ends with the letter *y* (or the letter combination **-try**), it almost always is pronounced as a **long e** to sound just like the word "*tree*" as in **sentry**, **country**, **pantry** and **psychiatry**.

The letters **ia** in **psychiatry** pose another problem. Here the letter *i* represents the sound of the **long i** and is accented. In small words the letter *i* is almost never used to represent the sound of **long i** without a signal letter such as the *silent e*. The letter **a**, on the other hand has only the schwa sound (or unaccented short u). In other words, what beginning readers are taught about small words (which are true in the majority of cases) rarely apply to the big words.

IMPLICATION: Those phonic principles that apply only to big words but not to small words are generally left to the beginning readers to discover for themselves. This AVKO would like to see remedied.

Comparison of the length of syllables in *misunderstanding* and *psychiatry*.

mis / un / der / stand / ing
psy / chi / a / try

5 syllables, average length 3.2 letters

4 syllables, average length 2.5 letters

What should be readily apparent is that the difficulty factor has more to do with the relative frequency that certain patterns, suffixes, and prefixes occur and with the **INTENSITY** of the **TEACHING** of the same.

The patterns, prefixes, and suffixes in the word *misunderstanding* are all common and are rather intensively taught in **ISOLATION!** That is, **mis-** is taught as a prefix; **under** is taught BOTH as a word and as a prefix; **stand** is taught as a word and a word part; and **-ing** is taught as a word part for thousands of words.

On the other hand, the initial sound of **/s/** spelled as **ps** is not generally taught in basal readers. Both the base word **psych** and the suffix **-iatry** are not taught. Researchers and teachers both are invited to help AVKO in a further analysis of what needs to be taught if our nation is to become a nation of spellers and readers.

Constructing Spelling Progress Evaluation Tests

Although most teachers (as well as all researchers) know how to construct a valid pre- and posttest to determine gains, there remain two major problems with the normal method. The first problem has to do with the students who are absent for one or the other test. For statisticians this poses no great problem. They have special formulas they can follow that do an excellent job of approximating, but it remains "approximating." The second problem has to do with the teachers (and some students) knowing that the posttest has to be composed of words from the pretest. This can lead to unusual emphasis in instruction time by a few teachers on the pretest words when they occur in regular lessons — and outside of lessons!

There is a way to avoid both problems. And that is — an administrator can develop a single test that is BOTH A PRE- & A POSTTEST at the same time! That's right! One test that is given just once and is both a pre- and a posttest at the same time! For example, the person in charge of the testing program can construct a twenty word test that is both a pre- and a posttest by first selecting ten words at random from the spelling words the students studied in the months of October and/or November. The testmaker then consults the AVKO Spelling Difficulty Dictionary and finds ten words that have the exact same statistical spelling difficulty as the first ten, making sure that the words selected have **NEVER** been studied in that grade or any previous grade. The test should then be administered at least three months after the last unit in which a word on the test occurred.

For the gains to be truly significant, the administrative staff can set the criterion for gain prior to the testing. For example, the administrative staff might decide that they would give a passing grade to THE SPELLING PROGRAM (not the students themselves or even the teachers) if 50% of the students who didn't know a word, learned the word as a direct result of THE SPELLING PROGRAM.

How is this determined? Easily. You assume that the number of students who couldn't spell the word in question is exactly equal to the number of students who couldn't spell ITS EQUIVALENT. Let's look at figure 1. This is a summary sheet of the results of a test in which the words in column one were selected from the spelling program and the words in column two were selected from the AVKO *Spelling Difficulty Dictionary* as equivalents that NEVER appeared previously in the spelling program. Notice that the first word in column 2, (# 2) *milk* was missed by 20 students. The assumption then is that had the same test been given in September the word **about** would have been missed by 20 students. Since only ten students actually missed the word after having studied it, we can assume that exactly half of the students who didn't know the word, learned the word because of the program and not because of incidental learning.