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ABSTRACT

Two crucial factors in teaching spelling are the teacher's understanding of the material to be learned and the teacher's understanding of the nature of the learner. Psycholinguistics is relevant to both the material and the learner. In teaching spelling, it is possible to draw insights from behavioral and cognitive psychology as well as from Noam Chomsky's theory that language has both deep and surface structure. The English spelling system which reflects the underlying abstract meaning of words is discussed in its relationship to students' syntactic maturity. Teachers must select words and ideas within the possible range of students' understanding. It is concluded that English spelling patterns are definitely related to sound sequences. (TS)

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# SPELLING: A PSYCHOLINGUISTIC RATIONALE FOR TEACHING

English spelling has a bad reputation and often elicits contradictory social actions and reactions. Employers brag about being bad spellers but demand secretaries who can spell well. Parents want the teacher to force their children to be good spellers because they themselves have always had so much trouble spelling. Teachers use spelling tests for relaxation and ego-building. We all know that spelling tests are easy to give and easy to mark, and they build egos because whoever holds the book knows the answers.

Such actions and reactions defraud students, who rarely perceive that English spelling is a system, not chaos. Students never learn that English spelling can be understood and does not have to be merely memorized. Understanding any system decreases confusion and increases pleasure; and pleasure enhances learning, and learning is the true objective of teaching. The two crucial factors in teaching spelling are the teacher's understanding of the material to be learned and the teacher's understanding of the nature of the learner.

Psycholinguistics is relevant to both the material and the learner. What is spycholinguistics? The word psycholinguistics is a blend of two other words: psychology and linguistics. Let's talk about each in turn.

Psychology today usually reflects one of two different schools of thought: behavioral or cognitive. In teaching spelling we can draw insights from both schools of thought.

Behavioral psychologists believe that learning is habit formation, and that habits are formed by the reinforcement of a response to a stimulus. Behavioral psychology is relevant to the habitual aspects of spelling. One ultimate goal of teaching spelling is helping students acquire a motor memory

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of the words they need to write frequently. These are the words that we write automatically--as we write our names--without having to stop and think about their spelling. Such motor-memorized spelling is as automatic as putting on a coat.

On the other hand, cognitive psychology holds that the process of learning means the acquisition of knowledge, not merely the formation of habits. The acquisition of knowledge cannot be physically observed because it involves the human brain as it perceives and organizes information. Cognitive psychology is relevant to perceiving relationships and patterns within the spelling system. The second ultimate goal of teaching spelling is helping students acquire spelling power. Spelling power is the ability to spell not only the words we have been taught but also many of the new words we hear. Spelling power enables students to cast about intelligently in their minds to discover a related word that contains the key to their spelling problem. Teachers interested in giving students spelling power encourage them to take risks with the spelling system, to make educated guesses.

The linguistics of the word psycholinguistics means essentially the generative transformational grammar of Noam Chomsky. The single most relevant concept in Chomsky's theory to the teaching of spelling is that language has both deep and surface structures. The deep structure of a sentence gives us its meaning; the surface structure gives us the words for expressing that meaning. The deep structure is the abstract mental picture we have in our heads; the surface structure is merely the words that represent the abstract underlying meaning. As Carol Chomsky says, "Good spellers, children and adults alike, recognize that related words are

spelled alike even though they are pronounced differently. They seem to rely on an underlying picture of the words that is independent of its varying pronunciations."[1] The English spelling system reflects the underlying abstract meaning while the English pronunciation system provides the concrete word to be spoken.

For example, the rules of pronunciation tell us that the sounds of English words change as the position of the word stress changes. Compare the sound of the vowels in these three related words:

| photograph | photography | photographic |
|---|---|---|
| /fowtəgræf | fətɔgrəfiy | fowtəgræfik/ |

In spite of their surface-structure differences in pronunciation, they all have the same underlying meaning: image produced on a sensitized surface by the action of radiant energy. We cannot represent our mental picture of this meaning without using the concrete letters p-h-o-t-o-g-r-a-p-h. Our spelling rules hold these letters constant and firm even while our pronunciation rules guide us to different sounds for their vowels.

Consonants, too, obey similar spelling rules, which hold underlying roots constant and firm even while the pronunciation rules demand differing pronunciations. Here are several interesting illustrations. In each pair the abstract root is spelled identically but pronounced differently. The spelling records our mental picture while the pronunciation tells us how to verbalize the word.

| native:nation | signal:sign | right:righteous |
|---|---|---|
| bombard: bomb | soft:soften | medical:medicine |

On the other hand, spelling often separates homophones by recording the differences in meaning underneath the surface sound-alikes. That is,

the words are spelled differently even though they sound the same. For example, just as spelling ties right and righteous together, it also separates right from its three homophones: rite, write, and wright. Another example: spelling relates sign to signal but separates it from the sine of trigonometry.

Probably the most important function of the teacher of spelling is to alert students to as much of the spelling system as they are mature enough to perceive. This kind of help is very different from giving students so-called "memory jogs" for remembering "spelling demons." The "memory jog" that works for one person may not work for another. For example, take the jingle: "I before e except after c. . ." Memorizing the "memory jog" does not guarantee the correct spelling of believe and receive, and besides the jingle has exceptions that make students doubt the validity of the whole business.

More important in this context is students' syntactic maturity. Syntactic maturity is a concept formalized by Kellogg Hunt about 1965. First, he defined a new and practical index for identifying sentences in writing. This new index is the "minimal terminable unit," or "T-unit," for short. A T-unit is one main clause plus whatever full or reduced clauses are embedded within it. Using the T-unit, Hunt analyzed the increasing complexity of students' writing as they progress through school and correlated this developing complexity with levels of syntactic maturity. His data showed that students move steadily toward more complex sentence structure in their writing as they advance through school.

Spelling can reflect a similar development toward maturity, if teachers adopt a psycholinguistic rationale for teaching it. This means endeavoring

to make students aware, at every step of their development, of the regularities of the spelling system. Obviously, teachers must select words and ideas within the possible range of the student's understanding. For example, young children could not be expected to use the word malignant to help them know that there is a g in malign. Nor could they probably associate critical with criticize to be able to guess that the /s/ sound in criticize is spelled with a c. However, as children mature, their command of the "learned vocabulary" increases. Their reading of literature and their study of language are two important sources of this increase.

The study of foreign languages can be especially helpful since many irregularly spelled English words owe their unusual spelling to their foreign origin. Examples are bourgeois from French, disciple from Latin, patio from Spanish, and sauerkraut from German. English has had contact with many, many languages throughout the world through trade, exploration, and colonization. From every contact language, we have borrowed words and adopted them into English, usually without changing their foreign spelling. From all these sources, plus all the others that constantly impinge upon the students' development, psycholinguistically oriented teachers can develop a dynamic framework into which new words can be fitted as new examples of related words are met in the course of students' development toward syntactic maturity.

Of course, as realistic teachers, we must recognize that such large powerful generalizations as we have been discussing cannot solve all problems of everyday English spelling. Our generalizations serve chiefly to convince us as teachers that it is really true that English spelling patterns are related to sound sequences, a fact which many discouraged

spelling teachers utterly fail to see and use. But in the end, there are indeed certain wild inconsistencies that we must recognize and have students motor-memorize. Here is a cheery poem to point out some of the worst of these.

Hints on Pronunciation for Foreigners

I take it you already know
Of tough and bough and cough and dough?
Others may stumble but not you,
On hiccough, thorough, laugh, and through.
Well done! And now you wish, perhaps,
To learn of less familiar traps?

Beware of heard, a dreadful word
That looks like beard and sounds like bird,
And dead: it's said like bed, not bead--
For goodness' sake don't call it "deed"!
Watch out for meat and great and threat
(They rhyme with suite and straight and debt.)

A moth is not a moth in mother
Nor both in bother, broth in brother,
And here is not a match for there
Nor dear and fear and bear and pear,
And then there's dose and rose and lose--
Just look them up--and goose and choose,

And cork and work and card and ward,
And font and front and word and sword,
And do and go and thwart and cart--
Come, come, I've hardly made a start!
A dreadful language? Man alive.
I'd mastered it when I was five.

T.S.W.
(only initials of writer known) [2]

FOOTNOTES

1. "Reading, Writing, and Phonology," Harvard Educational Review (May 1970), p. 303.

2. From a letter published in the London Sunday Times (January 3, 1965), from J. Bland. Cited by Mackay and Thompson, "The Initial Teaching of Reading and Writing," Programme in Linguistics and English Teaching, Paper no. 3, University College, London, and Longmans Green and Co., Ltd., London and Harlow, 1968, p. 45. Quoted by Carol Chomsky in "Reading, Writing, and Phonology," p. 309.

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