

# **American Spelling Instruction: What History Tells Us**

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In recent years, there has been considerable controversy regarding the best way to teach spelling. Some educators favor the use of traditional spelling books featuring the weekly spelling list (Templeton, 1991); others argue that arbitrary list learning should be abandoned and that spelling instruction should be integrated with other subject areas (Wilde, 1990). The first position maintains that English spelling is learned developmentally through formal study of some 3,000 words across grades 2 to 8, emphasizing that the internalization of these words and the patterns they represent provides an important foundation for spelling and reading the English orthography (Chomsky & Halle, 1968; Henderson, 1981; Schlagal, 1992). In this framework, spelling textbooks offer the teacher an organization of developmentally appropriate word patterns for students to learn at each level. The other position argues that a spelling curriculum is unnecessary (and undesirable) because a teacher can best facilitate spelling development through rich, varied writing opportunities where spelling errors can be responded to as they come up (Bean & Bouffler, 1987; Wilde, 1990, 1992.)

This controversy has found its way to schools where the once uniform and often perfunctory business of spelling instruction has been transformed, as the old tools of spelling instruction have given way to a remarkable variety of approaches. Here are a few of the ways that teachers handle spelling in one fairly conservative and predominantly rural county near our own:

One teacher approaches the teaching of spelling in mini-workshops that she convenes to address problem words she identifies from her students' reading or writing--the Opportunistic Approach. Another teacher in the same school has students record words they have misspelled in a special notebook; students use these notebooks as references and the teacher draws from them to construct individual word lists for weekly spelling tests--the Individualized Approach. In another school teachers create lists for weekly tests from content vocabulary students are encountering in their various subjects. Sometimes new science words comprise the list, at other times social studies words, and so on--the Content Vocabulary Approach. And in one case the teacher, in order to make students more attentive to the meanings of words and to context as a whole, places all of her content words into a paragraph which students must master in its entirety--the Context Approach. In a middle school in the same county, the administration has concluded that students often enter middle school with deficiencies in both vocabulary and spelling. In response, the school requires students to memorize (read, spell, and define) 30 or more Latin and Greek derived words each week, drawn serially from a large alphabetically ordered corpus of words. No effort is made to organize these lists around specific roots and combine forms to illustrate the spelling-meaning connections readily available among these low-frequency words. Nor is there any effort to control difficulty. Instead words are simply presented as individual items to be memorized one at a time--the Greek and Latin Vocabulary Approach. In most cases teachers using these approaches remain somewhat dissatisfied with the results.

One particularly frustrated teacher threw up her hands in despair and pulled out the old basal speller. “I know I’m not supposed to do this,” she told us. “The spelling books are supposed to be bad, but I don’t know what else to do. I don’t feel like anything that I’ve tried has made any difference.”

Where did all of these approaches come from? How did such variety appear so suddenly in an area of instruction which has long been dominated by the study of carefully prepared word lists presented in spellers? For the most part, the approaches we have described have arisen as logical responses--at times a kind of desperate logic--to an unspecified spelling curriculum. They are, in essence, stop-gap measures used to teach spelling skills in the absence of organized, sequential spelling texts.

We all know what accounts for the loss of the traditional spelling curriculum. On the promise that skills develop best when rooted in natural, meaningful contexts (Bean & Bouffler, 1987; Wilde, 1990; Wilde, 1992)--not when studied or practiced in isolation--and with the encouragement of state department personnel, many schools have eliminated their spelling texts. But poor showings on end of grade spelling measures, parental reactions to their children’s same persistent invented spellings, and a growing teacher sense that students just weren’t “getting it,” led most teachers to return to some kind of direct spelling work. While many of the approaches described above seem reasonable, teachers have adopted them without knowing whether their new approaches would work any better or worse than the traditional programs replaced and without any consideration of a century long history of spelling instruction and research--a history which reveals that most of these “new” strategies have been tried out directly or in variants in the past and have been discarded as ineffective.

While there are decided shortcomings to be found in contemporary basal spellers--shortcomings which should not be ignored--they possess some clear and proven strengths. It is important at this juncture to see what both historic and contemporary research tell us about spelling instruction. In this paper, we present a very brief overview of the major findings in the history of spelling research; and we report some recent research which we believe points in a direction which if taken should improve the quality of spelling instruction.

### **Historic Research on Spelling Instruction**

Spelling texts like Webster’s “Blue-backed Speller” were central to the teaching of reading in the 19th century. Such texts were designed not only to teach spelling but also pronunciation as well as grammar, and they provided passages for reading and moral and religious improvement. Lists were extremely long and were presented as tasks for rote memory and personal improvement. (Included in such spelling lists were many relatively rare and erudite words that the literate adult *should* but didn’t necessarily know.) Efforts to adjust the difficulty of the words to an audience of school children were almost non-existent. Interestingly, an examination of the word lists of these early spellers shows them to be similar in many respects to the lists of Latin and Greek derived words being used with the middle school students, who like their 19th century counterparts are being asked to learn new meanings, new concepts, pronunciations, and spellings all at once.

In the early 20th century the focus of spelling books narrowed, leaving behind the larger issues of the language arts to focus more directly on spelling. But the books continued the practice of testing children on large numbers of words--as many as fifty--each week (Hanna, Hodges, & Hanna, 1971). Like their predecessors, these spellers offered words for memorization with no particular orthographic principle to guide their selection and presentation. Some books presented lists in alphabetical order; others made a rough effort to control difficulty by number of syllables, with one and two syllable words taught before three and four syllable words. The words were presented as separate units to be memorized one-by-one.

Serious research on spelling began at this time and was directed toward the issue of memory and questions of whether it was more advantageous to teach spelling words by a context versus a list method. Also researchers looked into the question of the relative value of a study-test versus test-study-test approach to spelling.

It was not until the 1930s that educators began to organize spelling lists around words most frequently used in reading and writing (Rinsland, 1945; Thorndike, 1921). Lists were graded for difficulty by their frequency--the more commonly used words being taught first--and by word length. The advent of frequency lists allowed for a much finer control of difficulty as well as some guarantee that the words that children learned to spell would be the ones that they needed for their writing. In fact, it has been demonstrated that the 4000 most frequently used words constitute nearly 98 per cent of the vocabulary used by children and adults in and out of school. However, this core vocabulary does not represent the total spelling needs of any individual (Horn, 1969). As an effort, therefore, to better meet individual needs and incorporate incidental types of learning into the formal study of spelling, students were asked to compile individual notebooks—My Own Words--comprised of words they had misspelled or needed in their writing (Hanna, et al., 1971).

Memory research was combined with the new controlled word lists, and in the 1930s and 40s there evolved new strategies for dealing with word learning (Hanna, et al.). The familiar and useful *study method* arose in which students (1) looked at a word, (2) pronounced the word, (3) closed their eyes and spelled the word, (4) wrote the word, and (5) checked the spelling of the word, repeating all the steps if necessary. The antiquated practice of writing words repeatedly until they were committed to memory gave way to the *practice method* wherein missed words were rewritten correctly three times. Respecting this more modest practice, Henderson (1990) states that the aspirin principle should apply: "One helps a lot; two are almost twice as helpful, a third adds very little more, and four are bad for the stomach" (p. 90). In fact, copying a word over correctly more than three times appears to be counter productive, effecting the quality of attention and inducing students to apply desperate measures like writing all the first letters first, then all the second letters, and so on, destroying the kinesthetic image which is a legitimate part of word knowledge (Fernald, 1943; Gillingham & Stillman, 1997; Hildreth, 1955).

Also during this time, the preponderance of investigations favoring a test-study-test approach led to the regular use of a *pre-test* prior to study in spelling practice. Particularly when the pre-test is *self-corrected* (calling attention to the words and parts of words that children need to attend to), the test-study-test method was shown to lead to greater spelling gains than any other instructional plan (Horn, 1947; Reid & Hieronymous, 1963). Attention to the results of pre-tests

also led investigators to an increasing awareness of individual differences among students, a topic we will return to. This increased awareness led authorities to exhort teachers that “The varying needs of individuals be considered. The learning of the gifted child,” said Fitzgerald (1951, p.8), “should not be limited to that of the average, nor should the very slow child be overwhelmed in the hopeless undertaking of studying the normal allotment of words for the average child.” In addition to the weekly plan of instruction, the practices of *periodic review* and of *distributing small amounts of study across the week* (as opposed to a massed period of instruction) found continued support and were adopted into the instructional scheme (Horn, 1969). And last, experts recognized that there should be a balance between known and unknown spellings prior to the study of list of words, a balance which is crucial in predicting the likelihood mastering and retaining correct spellings from the exercise (Henderson, 1990).

In the 1950s spelling experts began to respond to criticisms about the presentation of words in the spellers. Although words were controlled for difficulty, they were not organized to promote orthographic generalization. That is, they did not serve to illustrate any spelling patterns which might be grasped and applied to other contexts. The obvious feature being neglected in the word lists was the phoneme-grapheme correspondence which must obtain in any alphabetic orthography. During this era the first major computerized investigation into the nature and consistency of phoneme-grapheme correspondences in English spelling was conducted (Hanna, Hanna, Hodges, & Rudorf, 1966). The results demonstrated a surprising degree of consistency in the system--a consistency which extended well beyond the basic high frequency vocabulary taught in spellers. Further studies have substantiated and extended these results, taking account of the morphophonemic character of English spelling (Venezky, 1967). Subsequently, basal spellers moved toward *word lists designed to illustrate the orderly functioning of the spelling system*. Unfortunately, however, these efforts have not always been driven by a thorough knowledge of the principles that inform English spelling (Cummings, 1988).

More recently researchers have turned away from questions about what words to teach and how to teach them; instead they have focussed their attention on how learners acquire orthographic knowledge (Nelson, 1989). The developmental nature of orthographic knowledge has been described and documented (Henderson, 1990; Henderson & Beers, 1980; Read, 1975; Schlagal, 1992; Templeton & Bear, 1992). These descriptions show how learners appear to move in logical ways from simple concrete sound-letter mapping to pattern driven spelling to a growing awareness and control of the meaning-by-pattern spellings of low-frequency Latin and Greek derived vocabulary. This developmental research has had some influence on contemporary basal spellers (the current versions of the Houghton Mifflin and Zaner-Bloser series, for instance), affecting the particular kind and order of features presented for study. And it has led to the elaboration of highly individualized *developmentally driven plans for the systematic teaching of the orthography* (Bear, Invernizzi, Templeton, & Johnston, 1996; Bloodgood, 1991; Henderson, 1981; Morris, 1992).

In the main, however, developmental studies have been interpreted as proof that systematic spelling instruction is not necessary. That is, the developmental nature of orthographic learning has been advanced as a chief rationale for incidental, opportunistic approaches to spelling. From that point of view, then, spelling should be handled only as is necessary and always in the context of reading and written communication, and particularly during the editing and

proofreading phase of writing (Wilde, 1990). Learning to spell, it is argued, extends from rich and guided involvement with written language, not in formal practice and study. Or as is stated by the Chairman of the North Carolina State Board of Education and the State Superintendent in an official guide designed to assist teachers in transitioning from “textbook spelling to spelling in use: The best medium for teaching spelling is in the context of students’ reading and writing and discussions of reading selections from literature, content material, informational texts, and practical texts.” Interestingly, a good number of earlier spelling studies examined the issue of incidental and opportunistic learning and found them wanting.

Certainly, there is no denying that the practice of reading and writing and proofreading have an impact on spelling development. That students learn to read new words through reading and learn how to spell many of them in the process is evident (Henderson, 1981). Yet such indirect or incidental learning may be quite temporary unless direct study serves to fix it more permanently in memory (Henderson, 1981; Horn, 1969). In other words, the ordinary practice of reading appears to sensitize readers to the spellings of the words read; but without some explicit attention to and practice with those words, their spellings are soon lost. None the less, despite the superiority of direct versus incidental teaching (Fitzgerald, 1951; Horn, 1950; McKee, 1939; Wallin, 1911; Winch, 1916), experts have advocated a *combined* approach, concluding that *efficiency in spelling is obtained from both direct and incidental learning* [our emphasis] and that a “well-planned course of study in spelling will consider direct and incidental methods for teaching and learning spelling...” (Fitzgerald, 1951, p. 28). Or as Thomas Horn (1969) stated,

It is very probable that spelling ability is best developed and maintained in the long run through stimulation of, and careful attention to, the writing that children do. On the other hand, there is as yet no field-tested substitute for direct instruction on the basic core of high-frequency words needed in child and adult writing. (p. 1285)

Having found the incidental and opportunistic approaches alone inadequate to their needs, many contemporary teachers have moved to create formal contexts for spelling study. By contriving a context--a paragraph or set of sentences in which to study a set of target words--teachers feel that the teaching is more “authentic” because the words are presented and learned in a context and not in isolation; and they are presenting words in a way distinctly different from the rejected spelling basal. Interestingly, studies beginning in the 1920s have repeatedly demonstrated that students learning to spell words from lists consistently performed better than those learning them from context (Hawley & Gallup, 1922; Horn, 1967; Horn & Otto, 1954; McKee, 1924). The use of lists (as opposed to contexts) serves to highlight the spellings of words apart from the distractions and complexities of meaning, syntax, punctuation, and handwriting (Fitzgerald, 1951). In fact, the use of context appears to be advantageous *only* when the meaning of words is in question, as when homonyms are being taught (Graham, 1983).

Nor does proofreading appear to be a good method of teaching spelling. As Thomas Horn (1969) points out, early studies found that students are not typically very good at proofreading. And they are also less able to identify errors in their own compositions than in others’. They can, however, make improvements in their proofreading skills with sustained instruction and regular practice (Hildreth, 1955), though it remains a challenging task, as any professional proofreader

can attest. Given the basic difficulties inherent in proofreading, it would appear that this valuable activity should be pursued on its own merits--but not as a means for teaching spelling.

Currently the use of curriculum based content vocabulary words to form spelling lists is a fairly common alternative to the traditional spelling list. Because such lists are drawn from meaningful subject areas and are thematically organized, they are taken to be superior to the “less meaningful” core frequency lists used in the traditional speller. But again research has not supported this approach. Conversely, familiarity with spelling words being taught is essential to helping students master the linguistic principles of English spelling that underlie the orthographic structure of individual words (Henderson, 1990; Schlagal & Schlagal, 1992; Templeton, 1991). Content vocabulary words are by their very nature low-frequency words; they are likely to embody challenging concepts; and they are introduced into the content curriculum without respect to orthographic patterns since their primary purpose is to advance ideas and not to teach orthography. Not only do such content lists present unusual challenges (like our middle school’s Greek and Latin derived lists) but they fail to present the patterning from which spelling principles may be learned. Each word must be memorized as a separate item. Further, time spent memorizing such a list falls under the law of diminishing returns. That is, by focusing instruction on low frequency words, students--should they master and retain these words--are learning the spellings of words for which they will have very little use in the demands of ordinary writing (Horn & Otto, 1954).

### **Summary of Historic Research**

Before passing on to some consideration of contemporary studies which integrate developmental perspectives into the use of basal spellers, let us review the basic principles and practices established by an earlier era of research and teaching:

1. Learning to spell words from lists is more efficient than learning them from context.
2. Creating spelling words from frequency lists (rather than from content vocabulary) guarantees the usefulness of the words for most writing demands. Words learned from the 4000 most commonly used words (accounting for nearly 98 per cent of words used in ordinary writing) provide a “security blanket” leading to greater fluency in writing.
3. Controlling the difficulty of lists by relative frequency and by word length successfully differentiates task difficulty.
4. The organization of spelling lists should highlight linguistic principles of English spelling (e.g., phoneme-grapheme, sound-to-pattern, and meaning-to-pattern principles) to promote the development of *orthographic concepts*.
5. Organizational principles introduced should have reasonable generality.
6. Orthographic patterns taught should be introduced in relation to documented developmental trends.
7. Words and patterns taught should be subject to periodic review.

8. Study of spelling words should be distributed in small amount across the week, rather than concentrated in large but less frequent amounts.
9. Pretests should be used prior to a teaching unit, and children should self-correct their errors, copying them over correctly *no more than three times*.
10. A study method should be taught and practiced (“look, say, cover, write, check”).

In addition, the following recommendations have been strongly advanced from within the traditional model of spelling instruction:

11. Students should have ample opportunity to practice and apply growing skills through abundant writing.
12. Opportunities for incidental spelling instruction should be exploited to better meet individual needs, broaden understanding, and assist students in application of the spellings and principles taught.
13. Students should be able to *read* the words they are being asked to spell.
14. Students should be guided in understanding words by their spoken and written patterns.

### **Contemporary Research on Spelling Instruction**

While some contemporary spelling series have made an effort to apply insights drawn from developmental research into the organization and presentation of word patterns, one consideration which has not been effectively addressed is that of differences in individual development. While some efforts have been made to allow for differences in development--largely in the form of recommendations advanced in teacher’s editions--spelling books remain relatively fixed in their design. That is, spelling books are produced for a given grade level of instruction, and, despite recommendations to do otherwise, teachers use a single grade-level list to teach all children in their classes, regardless of varied levels of instructional need.

To effectively individualize instruction for every student in class would be a difficult, time-consuming task, requiring a great deal of formal knowledge both of our English orthographic system and how children develop within it. And such an approach would require remarkable administrative gifts. An alternative way to address differences in development is offered through adjusting instructional levels. Following up on a study by Schlagal (1982), Morris, Nelson, and Perney (1986) explored the concept of “spelling instructional level” through an analysis of error-types and found that there was a strong correlation between the quantity and the quality of a student’s errors. More particularly, they found that there was a marked deterioration of the quality of students’ errors when they were scoring less than 30 per cent on a grade level spelling test. This finding lends support to the notion that there is an empirically optimal level of instruction. Morris and his colleagues concluded that the low achieving students in their study

appeared not to have established sufficient knowledge of spelling patterns to benefit from instruction offered unfortunately at their frustration level.

In a later study Morris, Blanton, Blanton, and Perney (1995) tracked instructional and frustrational third and fifth grade students (as defined by scores on a curricular pretest) across a year of instruction in traditional spelling books. Students working at their instructional level learned and retained the bulk of the words they were taught and were able to use their knowledge of grade level words to effectively spell words of similar difficulty they had not studied. Students working at their frustration level--those scoring less than 40 per cent on the curricular pretest--did well on end-of-week tests but very poorly on pretests for the six week review units (a strong measure of retention). Note that these students might be described as ones who "know the words on Friday, but have lost them on Monday." Not only did the frustration-level students retain significantly less than the instructional-level students (less than 50 per cent), they were also far less able to transfer what they had learned to similar words they had not studied. Morris and his colleagues conclude that for students taught at their instructional level, traditional spellers such as the ones used in their study provide an effective, developmentally appropriate instructional tool. Students taught at their frustration level, however, are unlikely to master the words they have been taught or internalize the patterns that underlie them.

In a follow-up to the previous study, Morris, Blanton, Blanton, Nowacek, and Perney (1995) tracked low-achieving spellers for a year, half of whom were placed at their instructional level and half of whom were taught in grade-level (frustration level) spelling books. The results revealed significant gains for the intervention group in mastering the instructional level word lists. However, retention in the comparison group--low spellers taught at grade level (frustration)--was poor, mirroring the findings of previous study. Interestingly, students taught in below grade level texts not only made solid gains at their instructional level but also scored no worse than their peers on the grade level posttest consisting of words on which the intervention group had not been instructed. What is more, the intervention group scored significantly better than the comparison group on a transfer test of grade-level words neither had studied. How they made gains in grade-level words was not a question asked in the study, but the authors suggest that by solidifying their knowledge of the spelling system at a lower level of complexity, students were better able to learn something about grade-level words through incidental reading and writing.

Morris and his group concluded that spelling achievement can be improved by having students study words at an appropriate difficulty level. Or said differently, some children may have insufficiently developed word knowledge for a given level of words; and study at that level will produce minimal learning. If teachers can provide instructionally appropriate lists for their weakest students, then significant gains can be made.

The rationale for adopting a spelling instructional level finds support in studies of the English spelling system which show that, like any other system, it is a rule-ordered whole (Cummings, 1988). Descriptions of this structure are plentiful (Chomsky, 1971; Chomsky & Halle, 1968; Dixon, 1977; Hanna, et al., 1966; Venezky, 1967). Learning to spell, however, involves years of schooling and occurs at different rates for different students. Henderson (1990) has argued that these developmental differences in rate of learning are determined by children's



orthographic knowledge. That is, the relationship between a child's orthographic knowledge and the complexity of the orthographic structures being taught will predict how much can be learned, retained, and generalized. In addition, there are substantive dimensions of English spelling which are hierarchically organized (Cummings, 1988). Cummings identifies two types of spelling rules in English. "Tactical rules" are spelling rules that deal with strings of sounds and letters; "procedural rules" are rules that deal with the way morphological elements are combined to create written forms. A learner who stabilizes structural principles at a primary level (often tactical rules) can more effectively control principles at a complex level (often procedural rules). For example, a speller of English who understands and controls the tactical rule governing long versus short vowel distinctions (bat, bake) can better understand and control the procedural rule governing the doubling of consonants when adding a suffix (batting, baking). Good spelling instruction, therefore, may be the search for an appropriate match between a child's current state of word knowledge and the orthographic structure she is called upon to study.

Trathen, Morris, and Schlagal (1995) conducted a study in which they tested the effectiveness of matching spelling instruction to students' knowledge of the orthographic system. That is, the study examined whether for individual students there is an optimal level of spelling difficulty (orthographic complexity) that maximizes learning.

Students in their intervention group represented a wide range of orthographic knowledge independent of grade placement. These students were categorized as high, mid, and low levels of orthographic knowledge. Spelling instruction centered around major structural elements in the English spelling system and progressed in difficulty each of four weeks. For example, the first week of instruction dealt with the tactical rule of short vowel versus long vowel with an *e*-marker. The next week of instruction built on the previous rule and extended it into the procedural rule for doubling consonants when adding *-ing* to maintain the integrity of the short vowel in the stem (e.g., tap to tapping). It further involved the dropping of the *e* marker when the stem contained a long vowel (e.g., tape to taping). For the third week of instruction, the doubling rule was extended to the environment of bound morphemes and syllable juncture--a more complex application of the previous rule (e.g., happen). For the final week, the instructional focus was on the combination of the two versions of the procedural rule applied in a single word (e.g., happening). Weekly spelling instruction followed the traditional plan described above. In addition, word sorting activities were used to highlight target patterns (Bear, et al., 1996; Henderson, 1981; Morris, 1992) The critical element in this instruction was the manipulation of the complexity of the words across the intervention.

Comparing across the levels of orthographic knowledge for the treatment group, the data revealed that students' prior knowledge of orthography affected learning of new orthographic information. That is, low level spelling group's scores topped out after the first week of instruction, indicating that the levels above were too difficult. The mid level group topped out after the second week of instruction, and the high level group after the third week. These patterns were evident on posttests given at the end of the 4 weeks' instruction and again after a period of 6 weeks. These results provide support for the notion that the demands of spelling are hierarchical and that what students have learned about orthography will directly affect what they can learn from spelling instruction. In fact, scores on the initial diagnostic spelling inventory were a better predictor of learning than age or grade level. It seems reasonable to conclude that

teachers can improve students' learning of English orthography by matching instruction to students' level of knowledge--that is, through instructional groupings that honor students' particular levels of development.

To further test the effectiveness of instructional grouping, Schlagal, Trathen, Mock, and McIntire (1998) compared spelling instruction in four sixth-grade classes in four schools; two of the classes received regular spelling instruction and two grouped students for instruction, based on spelling assessment scores. The schools were matched on SES and achievement scores; the students were matched on knowledge of English orthography. Grouping in the two classes resulted in three levels for instruction with matching material--6th, 5th, and 3rd/4th grade. The lessons lasted about 20 minutes and used instructional strategies similar to the Trathen, Morris, and Schlagal study (1995). Analysis of posttest data revealed that students in classes with leveled instruction scored significantly higher, especially the lower knowledge level spellers. In general, lower ability spellers in leveled spelling instruction gained at least a year in spelling, unleveled low spellers made no such gains. Mid level spellers showed moderate gains with leveled instruction, but high level spellers performed the same regardless of group and spelling instruction. In comparison to non-grouped spellers, lower and mid ability spellers in leveled spelling instruction showed significant gains on reading performance as evidenced by word recognition and IRI scores (Woods & Moe, 1981).

### **Discussion**

Results of the instructional level studies reported here offer a cogent developmental explanation for the familiar teacher complaint that some students "know their spelling words for Friday's test, but have forgotten them by Monday." According to these findings, this phenomenon is not effectively explained by the conclusion that traditional spellers "just don't work." Rather, a better explanation is that the students in question have been taught above their instructional level. Teachers can test the hypothesis that these students are placed over their heads by giving a pretest of the weeks' spelling words to students that have not studied for the test. Problem spellers are likely to demonstrate insufficient orthographic knowledge--both quantitatively and qualitatively--to support learning from grade level lists. (Students scoring around 30% or below are at their frustration level.)

Moving children out of their frustration level and into words more appropriate in difficulty appears to change the pattern of low-group learning. When placed in more developmentally appropriate lists, low achieving spellers respond to instruction like their high achieving peers; that is, they profit from the instruction given them, retaining the majority of what has been taught and at the same are able to generalize patterns and principles learned to similar words not studied.

### **Conclusion**

This review of both historic and contemporary spelling research sheds new light on the role that systematic spelling instruction can and should play in the classroom. While a variety of

teachers (and school systems) have experimented with spelling instruction by replacing spelling textbooks with incidental and opportunistic approaches to spelling, most have returned to some kind of direct instruction. And this direct instruction commonly involves lists of words--class generated or content vocabulary lists--for study and testing. Again, such approaches are not innovations but spontaneous regenerations of methods tried in the past and replaced over time by the research-based methods reported in the first part of this paper.

Research into developmental orthographic learning has provided the field with important new insights. Specifically, the finding that children move from concrete letter-sound matching to increasingly pattern and meaning driven strategies gives additional weight to the practice of careful, linguistically controlled presentations of spelling words. The introduction of spelling patterns may now be coordinated with norms drawn from developmental research. And these in turn may be coordinated with the increasingly detailed descriptions of the hierarchy of English spelling. Further, there is sufficient developmental variation in any classroom to call into question the traditional use of spelling words drawn from a single corpus of grade level words. If spelling instruction is to meet varied developmental needs, then the use of multiple lists at the necessary developmental levels will have become part of ordinary instruction. Results from recent studies investigating the effectiveness and practicality of teaching from multiple lists have been quite promising. We now know enough to profit from both the older and the newer traditions in spelling research; and coupled with an informed knowledge of the system of English spelling, we should be able to offer optimal instruction to every child. Referring to a judicious combination of these things, the late Edmund Henderson remarked over a decade ago that, "we now understand both the language and the stages that children move through on their way to its mastery. That is why I am convinced that, *if we teach them*, all normal children *can* learn to spell English" (1990, 206).

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