A study examined the experiences of elementary teachers as they learned about the developmental nature of spelling, how to analyze student spellings, and ways to restructure their spelling program based on the needs of individual students. Nine teachers at two elementary schools volunteered to participate and expressed discomfort about current practices for spelling instruction. Surveys were completed and interviews were conducted. Inservice teacher education sessions over a 6-month period showed teachers how to administer and analyze the Qualitative Inventory of Word Knowledge (QWIK). Results indicated that: (1) at the beginning of the intervention period, most of the teachers' questions centered on issues of time, instructional organization, classroom management, and grading; (2) at the end of the period, teachers' questions shifted to a concern for how to refine newly adopted teaching strategies; (3) use of the QWIK enabled teachers to expand their understanding of their students as spellers by encouraging them to reconsider instructional grouping decisions and documenting patterns of errors in a systematic way; (4) teachers expressed frustration about the amount of time it took to conduct the QWIK analysis and about difficulties they experienced in doing the analysis; (5) teachers varied in the amount of change they instituted; and (6) the teachers expressed a strong desire for continued support to explore innovations in their spelling program. (Contains 16 references and 1 data table.) (RS)
Beyond Memorization, Lists, and Trial Tests: Exploring the Influence of Teacher Knowledge of Developmental Spelling On Pedagogical Decisions
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Beyond Memorization, Lists, and Trial Tests: Exploring the Influence of Teacher Knowledge of Developmental Spelling On Pedagogical Decisions

Since the early 1970's, a growing body of research has revealed a process of development of orthographic knowledge in children as reflected in their errors or invented spelling (Chomséky, 1970; Read, 1971, 1975). This process has been described as a continuum of increasingly complex inferences made by children of sound-symbol relationships and has been compared to the development of oral language. Henderson and his colleagues have described this development across five stages: preliterate, letter name, within word pattern, syllable juncture, and derivational constancies (see Henderson, 1990). That this process might be considered a linguistic universal is suggested by parallel research in spelling in other languages (Gill, 1980).

Researchers soon began to question existing approaches to spelling instruction in favor of practices supporting the child's naturally developing awareness of orthography (Henderson, 1981, 1990; Schlagal & Schlagal, 1992). Typical standard basal spelling lessons are characterized by weekly lists of words to be learned, written exercises requiring student memorization, and two weekly tests (trial and final). In contrast, spelling instruction informed by recent research involves wide reading and writing and is based on the developmental level of individual students as opposed to unitary placement in the grade level basal spelling book (Scharer, 1992a; Wilde, 1990). According to
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Schlegel & Schlegel (1992), "The instructional implications of this research on developmental word knowledge are interesting and varied, but they remain largely untapped" (p. 419).

There has been some documentation of the change process during implementation of literature-based reading programs (Scharer, 1992b) and extensive reporting of transitions from traditional writing instruction to a process writing approach (Calkins, 1986; Graves, 1983). None, however, have reported on the pedagogical shift to teaching spelling as a developmental process. This study examined the experiences of elementary teachers as they learned about the developmental nature of spelling, how to analyze student spellings, and ways to restructure their spelling program based upon the needs of individual students.

The following research questions guided data collection and analysis: What questions do teachers have about their current teaching practices in spelling? How do teachers respond as they learn to analyze spelling errors using a developmental perspective? What difficulties are identified as they examine student errors? Are there instructional changes from a traditional program of spelling instruction to one informed by the research on developmental spelling as teachers learn more about analyzing students’ spellings?

Methodology

This study began with an invitation by an elementary school
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principal for us to organize a series of inservice sessions focusing on language arts instruction and assessment techniques that could inform teachers' instructional decision-making. The inservice sessions were presented monthly to the 15 teachers in the two elementary schools served by this principal. Topics requested by the teachers (grades 1-5) at the initial meeting included spelling, literature-based reading, and the writing process. Spelling was an area of concern for all the teachers.

Participants

Nine of the 15 teachers volunteered to participate in this study. (See Table 1) All expressed discomfort about their current practices for spelling instruction and were anxious to discuss issues related to spelling instruction in their classrooms. A first-grade teacher (D), for example, explained that

...they [students] are still missing those words in their writing that they may get right on a spelling test. That is when you think, "All that time that you are spending on it and all the time the parents are spending at home just isn't really worth it."

A second-grade teacher (E) had experimented with her weekly schedule of spelling assignments by requiring her students to use the spelling words in sentences with correct punctuation. She soon abandoned the practice as she observed that "It was too much
torture." She was anxious to change her spelling program explaining that, "I have a lot of questions. I think it goes back to not knowing any better, so you just do it that way."

Data Collection and Analysis

During the first meeting, all teachers completed a survey instrument with questions about knowledge of current spelling research; descriptions of their present instructional approach including materials, activities, and schedule; students' current achievement levels; and methods of determining student achievement. Survey data is displayed in Table 1 for the nine participants in this study. Teachers were then interviewed to clarify and extend the survey data before the second inservice session.

Inservice sessions over the next six months began with learning to administer and analyze the Qualitative Inventory of Word Knowledge (Schlagal, 1982) in ways that would inform spelling instruction. The QIWK consists of word lists containing increasingly complex spelling patterns related to developmental stages. Student's accuracy scores and error patterns may be used to determine an appropriate instructional level.

Classroom demonstrations of alternative instructional techniques were also provided for individual teachers upon request. Additionally, three informal forums were held in which teachers shared both struggles and successes experienced as they implemented new spelling strategies. A second round of
interviews followed the last inservice session. All interviews and forums were audiotaped, transcribed, and entered into a computer program, Ethnograph, (Seidel, Kjolseth, & Seymour, 1988) to facilitate coding, analysis, and retrieval.

Data were analyzed inductively through multiple readings resulting in 24 coding categories (Bogdan & Biklen, 1982). These categories were then clustered in ways to inform each research question. For example categories QINK, TESTING (general assessment), TESTWK (weekly tests), and ERRORS (student errors in writing) were clustered to discern patterns of responses informing the second research question: How do teachers respond as they learn to analyze spelling errors using a developmental perspective?

Results

Teachers' Questions

At the beginning of the study, most of the teachers' questions centered on issues of time, instructional organization, classroom management, and grading. A fourth grade teacher (G) asked, "How do I organize this so that I don't feel like I am losing control of what they are learning as far as spelling is concerned?" The teachers also questioned how to assign grades on the report card and how to communicate students' development to their parents. Regarding grades, for example, a second grade teacher (E) said, "My only way of doing this [giving grades] was to give a test." Due to a strong tradition of spelling grades
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based on weekly tests over a single word list, teachers were concerned about parents' responses to changes in spelling assessment which did not rely exclusively on a weekly test score.

At the end of the study, teachers' questions shifted to a concern for how to refine newly adopted teaching strategies. For example, they wanted to know specifically how to get words for the word sorts, what to do with word cards after instructional activities, whether students should keep individual sets of word cards from their word sorts, and how word study notebooks should be utilized. Teachers still had questions about management issues, but these questions were also more specific such as how to manage individual and small group spelling instruction.

Impact of the QIWK

The use of the QIWK enabled teachers to expand their understanding of their students as spellers in three ways. First, as they scored the tests teachers were surprised by their students' instructional levels as well as the range of student's scores in their class. The teacher of learning disabled students (I), for example, had previously tested her students using the Brigance Diagnostic Inventory of Basic Skills and reported, "My kids were pretty close to the same [scores]...at a third and fourth-grade level." Consequently, she established two instructional groups using third- and fourth-grade materials, but reported, "I saw in the first several weeks that it wasn't going to work. There were some kids who weren't getting the spelling
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test. By using the QIWK, she learned that these students were functioning at a much lower level which encouraged her to reconsider the level of difficulty for instruction. After using the QIWK, a fifth-grade (H) teacher expressed her surprise that the ability range in her class spanned from level 2 to level 8. Similarly, a second grade teacher (E) concluded

I need to get better at recognizing what levels they are at. It only makes sense that if kids are at different reading levels, they will also be at different levels in their spelling. I don’t know why I didn’t recognize this before.

Thus, using the QIWK encouraged teachers to reexamine how grouping decisions were made and to reconsider their practice of posing a single word list for their class.

A second way the QIWK increased teachers' knowledge about spelling resulted from analyzing the QIWK in two ways. First, the accuracy percentage of individual students for each list of the QIWK was generally used to identify students' instructional level. Next, teachers closely examined student errors within each list for insight into qualitative changes in student's errors which demonstrated achievement over time. A first-grade teacher expressed concern that the accuracy percentage scores for her students in May did not reflect an upward movement in levels when compared to January scores. However, when she compared
characteristics of the errors students made on the two tests, she concluded that over half of her students were, indeed, moving from letter name stage to within word stage.

Thirdly, as teachers learned to administer and interpret the QIWX, they noticed changes in the ways they examined students' spelling errors in written assignments and stories. Rather than circling spelling mistakes, teachers began to document patterns of errors in students' writing assignments in a systematic way that was informed by their work in analyzing errors from the QIWX.

Difficulties

Although the close analysis of student errors both in the QIWK and in their writing enabled teachers to raise their level of knowledge about students' spelling achievement in significant ways, teachers expressed frustration about the amount of time it took to conduct the analysis and about difficulties they experienced in doing the analysis. They identified the need for more practice analyzing errors, additional inservice opportunities, more time to talk with their colleagues about their observations of student errors, and more time to plan instruction based on those observations. Teacher (E), for example, shared the following: "What scares me is the diagnostic part of this. Making sure that I know enough so I do a good job at this." In addition, as teachers increased their recognition of individual differences, this awareness heightened feelings
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about inadequacy for providing appropriate instruction to support the multiple needs of their classes.

Instructional Changes

Teachers varied in the amount of change they instituted during the course of this study. One first grade teacher (C) reported that she had made few changes during the six month inservice period explaining that "I am going to do it differently next year, but I didn't want to change in the middle." Other teachers began to make a variety of changes in their approach to spelling. One change involved rethinking the criteria for choosing words for weekly lists. Teachers who were using teacher-selected lists at the beginning of the study began selecting words misspelled in their students' writing which were appropriate developmentally rather than using vocabulary from books the students were reading. Spelling instruction also began to be linked to writing through mini-lessons based on observed errors in students' writing and coaching in self-editing and peer editing strategies. Teachers began moving away from activities which supported memorization to activities which involved the children in comparing and contrasting word features (word sorts) in both large and small group settings. Word hunts and word study notebooks were also being used to extend and record students' developing word knowledge.

Concerns about grading and reporting to parents led to the development of a rubric to inform grading decisions. The rubric
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included: participating in instructional activities, recognizing relationships among words, increasing grapho-phonetic knowledge, applying skills in purposeful writing, engaging in self and peer editing, and using available resources to spell conventionally in final drafts. Using the rubric reduced teachers' concerns about how to assign grades in spelling beyond weekly test scores. Parents responded favorably to the rubric and agreed that it was more informative than a single letter grade on a report card.

Discussion

As we worked with these teachers and talked with them about their progress, questions, and concerns, it was clear that the instructional shifts they were attempting were being facilitated by their personal discomfort with past practices, their participation in the inservice sessions, their interactions with each other, and the support provided by their principal. However, we were also struck by the pressures they identified working against their attempts to change which included lingering concerns about parents' reactions, perceptions of colleagues who were not implementing changes, and personal feelings of inadequate expertise. In a sense, these teachers traded one set of frustrations for another. Was it worth it? First grade teacher (A) stated:

I am glad that I had the opportunity to change because I would have done it like it had always been done. I would have felt in
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my heart that it wasn't right. This is so much more pleasant. You can see growth, what more could you ask for?

At the end of the study, all of the participants indicated an intention to continue to explore innovations in their spelling programs. They expressed a strong desire for continued support including inservice opportunities, provision of professional reading materials, and opportunities to observe and meet with other teachers. Fourth grade teacher (G) said,

I am not sure exactly where I am going to go yet...It is going to take a lot more reading and development on my part. I am just headed in that direction somewhere. I don't want to let it drop by the wayside.

The results of this study raised additional research questions. What are the long range implications of changes in teachers' pedagogical decisions which have been informed by knowledge of developmental spelling? What are the effects on students' attitudes and achievement during the change process? Is there any evidence of a ripple effect or impact on other areas of instruction such as reading and writing when teachers move away from a traditional spelling program?
Bibliography


Spelling


Table 1

Spelling Program: the Beginning of the Study

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Grade</th>
<th>Minutes each week (Teacher-Directed)</th>
<th>Source of Weekly List</th>
<th>Use of Weekly List</th>
<th>Materials</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Transitional</td>
<td>First 100</td>
<td>Teacher-selected</td>
<td>Single list for whole class</td>
<td>magic slates, letters &amp; chart, overhead projector</td>
<td>Sing letters in order, write using magic slates or shaving cream</td>
</tr>
<tr>
<td>B</td>
<td>First</td>
<td>50</td>
<td>Teacher-selected high frequency words</td>
<td>Multiple lists for small groups</td>
<td>paper &amp; pencils, magnetic letters, magic slates</td>
<td>Write words, 4x each, scrambled word list, put words in sentences</td>
</tr>
<tr>
<td>C</td>
<td>First</td>
<td>150</td>
<td>Teacher-selected CVC patterns</td>
<td>Single list for whole class</td>
<td>paper &amp; pencil</td>
<td>Write words and illustrate</td>
</tr>
<tr>
<td>D</td>
<td>First</td>
<td>30</td>
<td>Teacher-selected words misspelled in student writing, high frequency words, student-selected challenge words</td>
<td>Individual lists</td>
<td>individual spelling notebooks, paper &amp; pencil</td>
<td>Write words 4x each, practice with a partner, add to individual dictionaries</td>
</tr>
<tr>
<td>E</td>
<td>Second</td>
<td>105</td>
<td>Basal speller</td>
<td>Single list for whole class</td>
<td>paper &amp; pencil, flashcards</td>
<td>Discuss patterns, write words for handwriting grade, spelling games</td>
</tr>
<tr>
<td>F</td>
<td>Second</td>
<td>95</td>
<td>Basal speller and Teacher-selected words</td>
<td>Single list for whole class</td>
<td>paper &amp; pencil</td>
<td>Write 4x each, use words in sentences, alphabetize in small groups</td>
</tr>
<tr>
<td>G</td>
<td>Fourth</td>
<td>115</td>
<td>Basal speller</td>
<td>Single list for whole class</td>
<td>textbook, paper &amp; pencil</td>
<td>Write words in sentences, practice in teams, work with dictionary, games, board drill, alphabetize, unscramble</td>
</tr>
<tr>
<td>H</td>
<td>Fifth</td>
<td>15</td>
<td>Teacher-selected from reading books or themes</td>
<td>Single protest. Students select 10 words to learn from errors</td>
<td>paper &amp; pencil, spelling dictionaries</td>
<td>Students choose 10 words missed on protest to practice with spelling monitors (students with perfect pretest papers), final tests given by monitors</td>
</tr>
<tr>
<td>I</td>
<td>LD</td>
<td>30</td>
<td>Student-selected from reading book</td>
<td>Individual lists</td>
<td>paper &amp; pencil, spelling dictionaries</td>
<td>Write in dictionary, write 4x each, alphabetize, write in sentences, practice with partners</td>
</tr>
</tbody>
</table>