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# Effect of Developmental Spelling Level on Spelling Achievement

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EFFECT OF DEVELOPMENTAL SPELLING LEVEL ON SPELLING ACHIEVEMENT

> BY KAREN FINN EDWIN



Submitted in partial fulfillment of the requirements for the Master of Arts in Education Degree Lindenwood College 07/31/91

Ed 99c 1991

Accepted by the faculty of the Department of Education, Lindenwood College, in partial fulfillment of the requirements for the Master of Arts in Education degree.

Tutor

Faculty

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#### ABSTRACT

# Purpose of the Study

The purpose of this study was to compare the developmental levels of spelling in first and second graders with measured performance in the classroom over a period of ten weeks.

It was the hypotheses of this study that children in first and second grade who were functioning at pre-Phonetic stages of spelling ability would have difficulty passing weekly classroom spelling tests. A second hypothesis was that students who were developmentally at higher levels would be able to achieve better on weekly spelling tests.

#### Procedures

In this study the spelling achievement of thirty-six first graders and thirty-six second graders at Garrett School in the Hazelwood School district was compared to their spelling developmental levels. Over a ten-week period, the number of words spelled correctly on tests was tallied and then compared to the developmental level of each participant.

Test scores of the students who were

iv

functioning at pre-Phonetic stages were examined to determine the percentage of students who were able to pass the weekly tests.

A Pearson <u>r</u> formula was used to determine if there was a correlation between developmental levels and spelling achievement.

#### Findings

Based upon the seventy percent of students functioning at pre-Phonetic stages who were able to pass the weekly spelling tests, this study does not confirm the hypothesis that students functioning at pre-Phonetic stages would not be able to pass weekly spelling tests.

Analysis of the data indicated that there was a positive correlation of .79 between spelling achievement and developmental levels.

#### Recommendations

Future research should be conducted to determine the influence knowledge of phonics has upon spelling achievement since the developmental levels are based on phonetic knowledge.

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#### CHAPTER ONE INTRODUCTION

Richard Hodges (1973), a professor at the University of Puget Sound, stated:

> Accurate spelling is regarded by most as an important attribute; for in many ways our society values written language even more highly than spoken language, perhaps because writing is a visible and permanent record of our language habits. And it may be for this reason that poor spelling habits have undesirable consequences in school, in the business world, and in society in general. Like careless habits of speech, incorrect spelling impedes communication by drawing attention from what is conveyed and toward subjective impressions of the writer. (p. 1)

Unfortunately, effective spelling instruction is an area that does not always get the necessary emphasis in primary school curriculums. The teaching of spelling is often confined to the rote memorization of words. Very often these words have little or no meaning or interest to the student so there may or may not be carry over in written work. Every area of study needs a purpose in order to be performed effectively and the whole point in learning to spell is to be an effective writer. Unfortunately, spelling is not a priority of many teachers or students and many teachers know little about how spelling abilities develop. Many teachers grade papers in spelling with little focus on error analysis (Henderson, 1985).

In most classroom settings spelling is taught to the class as a whole group. Each child is given the same list of words to learn to spell each week. The weakness with this approach is that individual learners are not always given the amount of time they need to tackle their own spelling difficulties. The whole class must move to another unit the next week and new words must be learned (Garber, 1987).

Frequently, even as early as first grade, students are given lists of words to learn to spell. Sometimes as many as 200 words are introduced before the child even has a solid grasp of written language skills. These spelling lists are typically derived from published elementary school spelling texts. Each child in the class is expected to be able to correctly spell the words presented with little or no regard for his orthographic (spelling pattern) knowledge. Spelling units are typically taught through such strategies as copying the word, using the word in a sentence, defining the word and completing workbook pages which may incorporate phonics

instruction and linguistic generalizations. The students are frequently given pretests on Monday and are usually given final tests on Friday to test for mastery (Graham, 1983).

Research in how children develop skill in spelling shows that young people's writing moves through clearly defined stages which parallel the earlier stages of language development (Beers & Henderson, 1977). Like oral language, spelling proceeds from simple to more complex activities, with a reshaping of cognitive structures at each level (Gentry, 1981).

The results of a study by Beers, Beers, & Grant (1977) indicated that:

> The child who is learning to talk constantly omits words, mispronounces words, or even puts words in the wrong order. Similarly, a child learns to spell by reading and writing. He misspells many words when he first begins to write...Given enough opportunities over an extended period of time, he will learn to spell. (p. 242)

A close look at published elementary spelling programs, past and present, reveals that the spelling words children must learn, increase in complexity across the grade levels. Along with these grade-level differences in the difficulty of spelling words, one also finds spelling ability or aptitude differences among individual children who are in the same grade (Morris, Nelson, & Perney, 1986).

A longitudinal study by Beers & Henderson (1977) ploneered the way in charting this notion of developmental spelling. They analyzed spelling strategies in first grade students over six months. The findings suggested four spelling patterns that progress from primitive attempts to the correct form of the word.

The developmental nature of spelling has been substantlated in the longitudinal studies of Gentry (1982). Gentry found that "learning must be treated as a complex developmental process that begins at the preschool and primary levels" (p. 199). He recognized five developmental stages that a child progresses through in order to be able to spell accurately. Gentry concluded that as teachers realize that spelling skills are developing, they must engage pupils in the kinds of cognitive activities that lead to spelling competency. Gentry established guidelines for teachers. Primary teachers should provide purposeful writing experiences in the classroom and have pupils write frequently. He stressed that teachers need to de-emphasize correctness. writing mechanics, and memorization. Pupils

should be helped to develop a spelling consciousness so that they will be intrigued by correct spelling and not bored by it. Finally, Gentry stressed a need for teachers to be aware of the changing developmental levels of their students. Teachers should analyze writing samples and be aware of "changing spelling strategies, application of skills taught, and general progress toward spelling competency" (p. 199).

This researcher's proposal is that those individual differences are not being addressed in a manner that will allow students who are developmentally slower at mastering spelling stages to experience success. This researcher contends that too often these students are given falling grades for spelling words that they are developmentally not able to spell.

This study compared the developmental levels of spelling in first and second graders with measured performance in the classroom over a period of ten-weeks.

#### Hypotheses

 Children in first and second grade who are functioning at pre-Phonetic stages of spelling ability will not be able to pass weekly classroom spelling tests.  The higher a student's developmental level, the better he will achieve on weekly spelling tests.

# Null Hypotheses

 There is no difference between the weekly spelling grades of students who are functioning at pre-Phonetic stages and those functioning at higher stages.

 There is no significant positive correlation between spelling achievement and developmental spelling levels. б

#### CHAPTER TWO REVIEW OF THE LITERATURE

#### Historical Perspective

At the turn of the present century it was the belief that learning to spell was a matter of continual drill. That words need to be studied, then reviewed, then rereviewed, and never dropped until they had become part of the child's permanent memory bank (Mississippi State Department of Education, circa 1905, as cited in Hodges 1982).

According to Hodges (1982) during the first half of this century, spelling research and practice was mainly guided by a view that learning to spell is dependent upon learning the spellings of independent words. The aim of researchers and curriculum specialists was to discover and design the most efficient ways of learning the thousands of words needed in daily writing. As a result, the major questions to be answered revolved around what methods would speed the memorization task. This rationale has dominated the teaching of spelling throughout much of this century. However, with the emergence of descriptive linguistics in the 1950s, research in the last twenty or so years has presented another view as to how spelling should be taught. Hodges (1982) pointed out that:

> Today, with advances in linguistic and psychological knowledge about the nature of English orthography and its acquisition, we are more keenly aware of the language base underlying spelling and that spelling ability is very much a consequence of complex functions that develop over time. (p.288)

#### Developmental Spelling

In a study of how children develop the skills necessary to be good spellers, Gentry (1978), found that "long before children enter school, they learn the fundamentals of language. Long before formal instruction, preschool children learn to use grammar to string words in sentences. During these years and later, language development proceeds from the simple to the complex" (p. 88). Gentry determined that young people's writing ability progresses through developmental stages which are similar to the earlier stages of language development.

The results of a study by Beers, Beers and Grant (1977) on the vowel misspellings of children Indicated that children acquire their own systematic strategies for spelling in a

developmental way. Two main conclusions were drawn from their study. The first conclusion is that, regardless of the type of instruction, children use three clearly defined spelling strategles when trying to spell vowel sounds in words. The first is a letter-name strategy which consists of a heavy reliance on pronunciation of letter names to represent vowel sounds. The second strategy involves the addition of an Incorrect vowel after a correct vowel. The third strategy is the incorrect substitution of one short vowel for another short vowel. The second major conclusion is that "even though children have demonstrated an ability to use more advanced strategles with words they know, they revert to a more primitive strategy when confronted with words they do not know" (p. 41).

Beers and Henderson (1977) did a longitudinal study in which they analyzed spelling strategies of first graders over a period of six months. Over that period of time, changes in spelling were noted, and the researchers were able to identify spelling strategies used by the children. They observed that these spelling strategies occurred in a systematic, sequential order. The spelling pattern sequences suggested that children seem to

develop a "highly sophisticated knowledge of English phonology" (p. 146). They concluded that "children appear to be able to realize those concepts that govern orthography. They seem to move from one spelling level to another by adding additional information about words to their own spelling rules" (p. 148).

Beers and Beers (1980) studied first and second graders to determine how written words developed in beginning readers and writers and whether youngsters are able to apply their knowledge about familiar words to the writing of unfamillar words. In the study, seventy-flve first graders and seventy-one second graders of average or above-average intelligence were asked to spell a list of twenty-four words. The list was comprised of two high and two low frequency words from six vowel categories. The list was randomly ordered for each of five test administrations that occurred monthly during the second half of the school year. The results of that study suggested that children move through a "series of spelling strategies over an extended period of time, regardless of instructional procedures employed in their classroom. . . . How the children spelled and the time at which their

spelling changed was attributed to their varying degrees of cognitive development" (p. 170). It was not until second grade that most children were able to apply their knowledge of familiar words to the writing of unfamiliar words.

We cannot assume that Just because a child is in first grade that he or she will be able to spell words in a first grade speller. For some children formal spelling using word lists should probably not be started until second grade. Beers and Beers (1980) suggested that children could be easily frustrated when they were expected to deal with words on a higher level than that for which they were conceptually ready. They noted that "some children will require more time, and more opportunities to examine words in order to develop a complete understanding of how they are written" (p. 170).

In 1977, Gentry (cited in Gentry, 1978, 1981) studied the spelling strategies of kindergartners, first and second graders. He did a longitudinal study in which he administered a spelling list to see how children spelled. He charted the children's spelling development over a period of six months and compared their different levels of reading achievement to their levels of spelling

development. He found that children's spelling ability develops sequentially through five developmental stages, with each representing a different conceptualization of English orthography.

"Altogether, the evidence suggests that learning to spell, like learning to speak, is not a matter of habit and practice. Rather it involves, indeed demands, the active, systematic, and progressive formulation and testing of rules and strategies" (Zutell, 1978, p. 847).

#### Spelling Stages

Several developmental spelling studies (Gentry, 1978, 1981,1982; Henderson & Beers, 1980; Beers, 1980) have identified the stages a child progresses through to become a correct speller.

The first stage is the Precommunicative Stage. The child demonstrates some knowledge of the alphabet by randomly ordering letters that can be produced from recall. There is no awareness of letter-sound correspondence. At this stage the speller may include numbers as part of the spelling of a word and upper and lower case letters may be used. This stage is usually apparent in kindergarten and early in first grade.

At the Semi-phonetic (second) Stage the child develops an awareness of words. The child produces one, two. or three letter spellings which resemble a primitive concept of the alphabetic principle that letters are used to represent the sounds in words. The left to right sequential arrangement of letters begins to emerge. The child begins to master letter formation and alphabet knowledge. This usually occurs in the first grade and may last only a few weeks in some children. (Refer to examples in Appendix A).

At the Phonetic (third) Stage, which is prevalent among first graders, children show a far more complete understanding of letter-sound correspondence. There is almost a perfect match between letters and sounds. All sound features in each word are represented according to the child's hearing and articulation. Sounds are recorded in the same sequence in which sounds are articulated when the word is spoken. (Refer to examples in Appendix A).

At the Transitional (fourth) Stage vowels are included in every syllable and familiar spelling patterns are used. Words look like English though misspelled. Invented words are mixed with words spelled correctly. Common patterns such as oo,

lgh, and ek appear in words. Inflectional endings are spelled uniformly, for example the "ed" ending ls spelled correctly. A visual memory of spelling patterns is apparent. This stage is prevalent among second semester first graders and first semester second graders. It is at this stage that Gentry (1981) feels that formal spelling should be introduced. "If children are not well into the stages of Phonetic and Transitional spelling, formal instruction will likely lead to frustration and little success"(p. 380). (Refer to the examples in Appendix A).

At the Correct (flfth) Stage the majority of the words are spelled correctly. The correct speller is able to demonstrate growing accuracy in the use of prefixes, suffixes, contractions, as well as irregular spelling patterns.

Data collected by Beers & Beers (1980) revealed that children appeared to proceed through many of these spelling pattern sequences at different rates. Some children would pass through the initial step of a particular sequence more rapidly than others, while other children would appear to skip an initial step as though they were more advanced in spelling a particular orthographic configuration. It was found,

however, that the sequence of steps for the spelling patterns examined appeared constant for most of the children.

According to Gentry (1981) teachers should be aware of two factors that enable children to progress through stages of language acquisition. The first, informal learning, suggests that learning via opportunities to test and generate spelling patterns is a necessary aspect of learning to spell. A second factor in both learning to speak and learning to spell is the immersion of the learner in a language environment. Saturation in print and frequence of story writing provide the raw material and dynamic activity required for growth in spelling. Gentry believes that good spellers are those who form a spelling consciousness through purposeful and frequent writing.

#### Summary

The developmental spelling scheme presented In this study has progressed through five stages. Gentry (1982) has determined that children move through these stages gradually and that as they progress to more advanced stages they do not regress into earlier stages. Development proceeds

from very simple to complex and from concrete to abstract. Gentry stated that "knowing the stages of spelling development can help teachers guide children to spelling improvement, consciousness, and competency"(p. 378).

According to Gentry (1982) :

Progression through the developmental stages helps establish a sound knowledge base upon which to extend spelling skills through formal instruction. It may be necessary for young or slow-to-develop spellers to advance through the developmental stages before the competency acquired through formal study can be adequately applied. When children establish a solid developmental base, formal instructional intervention often has a significant positive effect. (p. 52)

Formal spelling instruction utilizing word lists frequently begins in first grade with little or no regard for a child's developmental level. This study was conducted to investigate the relationship between spelling achievement as measured by weekly spelling tests and developmental spelling ability.

The first hypothesis of this study was that children in first and second grade who are functioning at pre-Phonetic stages of spelling ability will have difficulty passing weekly classroom spelling tests. A second hypothesis was that there is a high positive correlation between a student's developmental level and spelling achievement on weekly spelling tests.

### CHAPTER THREE PROCEDURE

#### Plan and Organization

The purpose of this study was to compare the developmental spelling levels of first and second graders to the scores received on weekly spelling tests of word lists. First and second grade students at Garrett School in the Hazelwood School District were invited to participate in this study and parental permission letters were sent home (see Appendixes B and C). Thirty-six first graders and 36 second graders agreed to participate. Over a ten week period, the number of words spelled correctly on tests was tallied and an overall percentage score was calculated and then compared to the developmental level of each participant.

The words used were taken from the Merrill Spelling Program, "Spelling for Writing" and from the Hazelwood School District Minimum Skill list. Tests consisted of isolated words and not sentence dictation. One point was scored for each word spelled accurately.

#### Determining the Developmental Level

Prior to beginning the weekly spelling tests, a developmental spelling assessment was administered to each student participating in the study. This spelling assessment was developed by J. Richard Gentry (Fall, 1982). The students were tested in small groups or 2 or 3 students to allow the tester to observe such behaviors as directionality of print, verbal rehearsal of sounds, and/or attempts to break down words.

The developmental spelling word list and accompanying sentences consisted of the following:

- monster-Frankenstein is a monster.
- 2. united-The couple was united in marriage.
- 3. dress-The girl wore a pretty dress.
- bottom-We could see the bottom of the pool.
- 5. hiked-The boys hiked up the hill.
- 6. human-People are all human beings.
- 7. eagle-We saw an eagle flying in the sky.
- 8. bird-The small bird made a nest.
- 9. traded-The boys traded baseball cards.
- 10. eighty-Grandfather is eighty years old.

As instructed by Gentry, before the test began, the children were provided a paper numbered 1 to 10. The examiner then explained the objective of the test: "This is an activity to see how you think words are spelled." It was explained to the children that they were not expected to know how to spell all of the words correctly.

The examiner attempted to provide a relaxed and challenging atmosphere to the testing situation by assuring the students that this was not a test that they could fail. They were encouraged to invent spellings for words they were not sure how to spell.

When the students were ready to begin, the examiner said, "This is a 'hard' word that many pupils find difficult to spell. How would you spell \_\_\_\_\_?" This procedure continued by calling out each word, using it in a sentence and then repeating the word a second time until all ten words had been given.

Each set of responses was analyzed according to Gentry's guidelines (see Appendix D). The words were scored according to the developmental level used to spell each word. The developmental category receiving the highest percentage of spelling was determined to be each student's current developmental level.

In cases where the developmental level could not be determined solely through the use of this measurement because two categories on the observational/assessment task received equally

high percentages, the examiner checked spelling errors in independent writing done in the classroom.

After the ten-week period the children were given the ten word developmental spelling assessment test again to determine whether a stage-change had occurred. Those children who had changed levels were scored as being at a mid-point level. For example, a student who changed from level one to level two was scored as being at a 1.5 level.

#### Scoring of Spelling Tests

Three first grade teachers and three second grade teachers participated in this study. Each week the teachers in the study taught formal spelling instructions using the Merrill Speller. On Friday they administered word list tests from the speller and words from the Hazelwood Minimum Basic Skill list. Students' scores were recorded on a record keeping sheet. The form consisted of the teacher's name at the top and each student's name listed alphabetically along the left side. The form was divided into 12 columns vertically; one column for each of 10 weekly test scores, a column for the total words spelled correctly, and a column for the percentage of total words spelled

correctly. The teachers were instructed to give each student one point for each correct response. At the end of the ten-week period the student's total number of correctly spelled words was added. The first graders were tested on a total of between 65 and 80 words and the second graders were tested on a total of between 124 and 141 words depending on which teacher each student had. Students were tested on all words listed in the assigned text book but teachers also had the option of including words from the Hazelwood School District Minimum Skill list. For this reason, each student's total number of words spelled correctly was converted into a percentage score for comparison purposes.

## Methods of Statistical Analysis

In order to test the first hypothesis it was necessary to determine the number of students who were functioning at pre-Phonetic stages who were not able to pass the weekly tests. A passing grade was defined according to the Hazelwood School District standard of 65 percent or higher.

To test the second hypothesis in this study, it was necessary to determine if there was a significant positive correlation between the spelling developmental level and total weekly spelling grades of students in the study. A significance level was set at  $\underline{p} = .05$ . A Pearson  $\underline{r}$ was used and individual scores were plotted on a scattergram. Developmental levels ranging from 1.0 to 5.0 in intervals of .5 were plotted on the x-axis and percentages of total words spelled correctly were plotted on the y-axis.

#### CHAPTER FOUR RESULTS

### Percentage of Students Falling Spelling

There were 26 first-graders and one second-grader functioning at pre-Phonetic stages as determined by the guidelines (see Appendix C). The overall percentage of words spelled correctly by each student was calculated and it was determined that thirty percent, or eight of the 27 students. were not able to achieve a passing grade of 65 percent on the weekly spelling tests (according to the Hazelwood School Board standard). Thirty-seven percent. or ten of the 27 students. passed with below average scores (65%-74%). Only seven passing students scored average grades (75%-84%), and two students scored above average grades (85% or higher).

The first null hypothesis, that there is no difference between the weekly spelling grades of students who are functioning at pre-Phonetic stages and those functioning at higher stages. was accepted because 70 percent of the students were able to pass the tests.

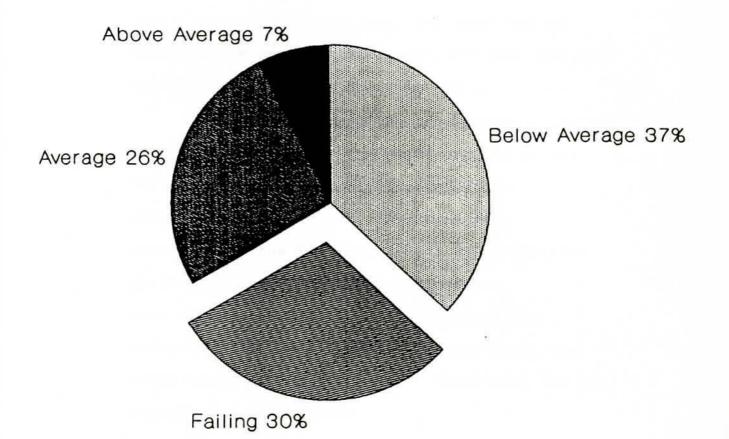


Figure 1. Percentage of students at a Pre-Phonetic stage failing weekly spelling tests.

### Pearson Correlation

The Pearson Correlation Formula was used to test the following null hypothesis: There is no significant positive correlation between developmental spelling level and spelling achievement on weekly spelling tests.

Based upon the spelling developmental levels of the 72 students in the study and the overall percentage of words spelled correctly a correlation coefficient was determined. According to the Pearson <u>r</u> there was a positive correlation coefficient of .79 between developmental spelling levels and spelling achievement on weekly spelling tests which was significant at the .01 level. Therefore, the null hypothesis was rejected.

#### Summary of Results

Thirty percent of those students functioning at pre-Phonetic stages were not able to pass the weekly spelling tests. Thirty-seven percent scored below average and only thirty-three percent were able to score average or higher on weekly tests. Because 70 percent of the students were able to pass the weekly tests, the results were not considered to be significant. There was a positive correlation of .79 between developmental spelling level and spelling achievement on weekly spelling tests which was significant at the .01 level. This indicates a fairly strong direct relationship between developmental levels and spelling achievement.

A line. as shown in figure 3, was drawn to illustrate the best fit of the correlation.

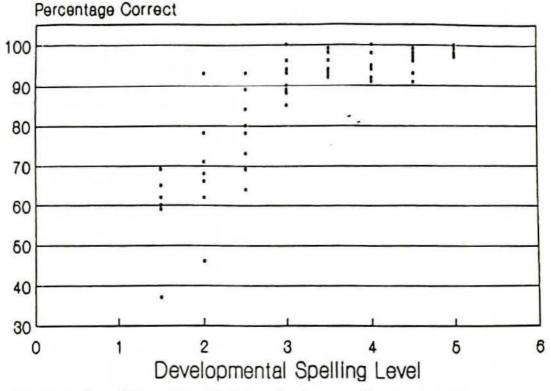


Figure 2. The correlation between the percentage of total words spelled correctly and developmental spelling level.

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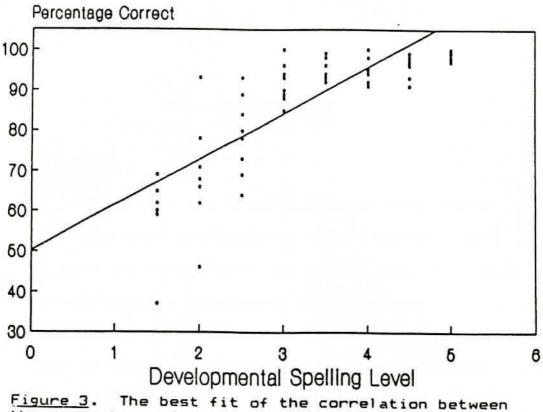


Figure 3. The best fit of the correlation between the percentage of total words spelled correctly and developmental spelling level.

### CHAPTER FIVE CONCLUSIONS

# Findings

Based upon the seventy percent of students functioning at pre-Phonetic stages who were able to pass the weekly spelling tests, this study does not confirm the hypothesis that students functioning at pre-Phonetic stages would not be able to pass weekly spelling tests. It should however be noted that of the 19 students passing the tests, only nine were able to do so at a level considered average or above average by the Hazelwood School District standard (75% or above).

The results of this study confirm the hypothesis that developmental spelling level and spelling achievement on weekly tests are related. Based upon the Pearson <u>r</u>, there is a significant positive correlation between developmental spelling level and spelling achievement on weekly spelling tests among first- and second-graders. In this study the correlation between these two factors was .79 which was significant at the .01 level, therefore indicating a strong direct relationship.

#### Limitations

Because the developmental spelling test is so easy to administer, this is a study that could reliably be replicated in any first- or second-grade classroom with little cost in teacher time or effort. However, it is important to point out some possible limitations of this study:

 There were only 27 students functioning at pre-Phonetic stages. A similar study done with a larger number of students could shed more light on the ability of those students to pass weekly spelling tests.

2. All six teachers added Hazelwood Minimum Basic Skill words to their weekly tests but not necessarily the same number of words or the same words. A repeat study could be done using only the words listed in the spelling textbook, thus increasing the reliability of the test data.

3. Teachers may have unconsciously stressed spelling test mastery more than they normally would because they knew that the grades they gave students would be recorded and turned in to this researcher.

#### Future Research

New information regarding how spelling develops has led to better understanding of the individual differences influencing spelling achievement. However many guestions remain to be answered concerning the teaching of spelling.

Future research could be conducted to answer these questions:

 How much influence does the knowledge of phonics have on spelling achievement since the developmental levels are based on knowledge of phonetics?

2. Should spelling be taught in isolation or can it play an integral role in all forms of written expression?

3. Should children who are functioning at varying degrees of spelling ability be taught spelling as a whole class activity or should instruction be individualized?

4. Would it be beneficial for teachers to analyze the developmental level of spelling ability of each child at the beginning of the vear. and then set realistic goals for the coming year? 5. Should students be given weekly spelling tests or should spelling be graded according to a child's performance during written activities?

6. Should students who are functioning at pre-Phonetic stages of spelling development be graded on their errors?

It is interesting to note that one month after this study was approved and begun, the Hazelwood District changed their grading system for first graders. First grade students are no longer given spelling grades on their report cards during the first semester of the school year even though formal instruction is introduced within the first month of school.

### Implications for Teaching

The purpose of this study was to compare the developmental levels of spelling in first and second graders with measured performance in the classroom. It was the belief of this researcher that students were being introduced to formal spelling instruction before they were developmentally ready and before they were capable of passing word list tests. This study supports the hypothesis that as each student's developmental level increases so does his achievement on weekly tests, however, some

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students were able to pass tests even though their developmental level was at a pre-Phonetic stage.

In conclusion, it is clear that the appropriate spelling levels of students can be determined using a developmental spelling test and this seems to be a minimum responsibility for anyone attempting to improve spelling. This researcher believes that teachers should accept children's early misspellings in the same spirit that parents accept the early mispronunciations in children's oral language. Research indicates that spelling growth operates on a similar principle. Just as children need exposure and opportunities to interact with language in order to construct speech. they need free, ungraded, writing experiences to construct the complex bases in English spelling. A child who is constantly corrected as he tries to speak may hesitate to speak for fear of being corrected. This researcher believes that the same fear of being corrected can thwart the chlid's attempts at learning to spell.

# Appendix A

Examples of	misspelli	ngs at var	lous develo	pmental
		stages		
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
1. btBpa	mtr	monstr	monstur	monster
2. IdMit	u	unitid	youmlghted	united
3. LicBa	dr	dras	dres	dress
4. IGc	btm	botm bitm	botum bodum	bottom
5. T19 <del>s</del> 3	ht	hikt	hicked	hiked
6. dkew	um	humn	humun	human
7. k451sdk	el	egl	eagul egul	eagle
8. dkw1321	bd	brd	berd brid	bird
9. ere	chad trd	chadld tradid	traldid tradded	traded
10.bDwxl	a	ade	eightee eigthy	eighty

An example sentence for the third stage might read ADE LAFWTS KRAM NTU A LAVATR for eighty elephants crammed into an elevator.

#### Appendix B

### Letter to parents

Sept. 21, 1990

Dear Parent:

I am currently conducting a research study. I will be looking at individual developmental levels and school performance in the area of spelling. The completion of this study will partially fulfill the requirements for a Masters Degree at Lindenwood College.

I will use first and second graders in my study. I would like very much for your child to participate in this study. The participation of the student will not determine or affect classroom grades. Weekly spelling test scores will be provided to me by the classroom teachers. In addition, a ten word pretest and post-test will be administered to determine each child's developmental level. Your child's name will not be used for the purposes of this study.

In order for your child to participate, you must return the enclosed permission letter by September 28.

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Your cooperation is appreciated. I would be glad to answer any questions you might have concerning this study. I can be reached at Garrett School, 739-4041 or at home, 739-1523.

Sincerely,

Karen Edwin Special School District Resource Room Teacher Garrett School

### Appendix C

# Letter from Principal to parents

Sept. 21, 1990

Dear Parent:

The spelling research study explained in the enclosed letter is not connected with or sponsored by the Hazelwood School District.

If you would like for your child to participate, please return the bottom portion of this letter to Garrett Elementary School by September 28, 1990.

> Janet Hickerson, Principal Garrett Elementary School

\_\_\_\_I give permission for my child

\_\_\_\_\_ to participate in the spelling research study.

\_\_\_\_\_No, I do not wish for my child to participate in the spelling research study.

Parent or Guardian Signature

Date

# Appendix D

#### Guidelines

Stage 1 Precommunicative spelling is characterized by:

- Lack of knowledge of letter-sound correspondence.
- 2. Lack of left-to-right progression.
- Indiscriminate use of upper and lower case letters.
- Number symbols may be injected into words.

Stage 2 Semi-phonetic spelling is characterized by :

- Recognition that letters correspond to the sounds in words.
- Abbreviated mapping of the sounds in a word.
- One-, two- or three-letter spellings of words are typical.
- 4. Beginning sounds are usually correct.
- Left to right directionality is likely to be intact.
- Stage 3 Phonetic spelling is characterized by:
  - A total mapping of letter-sound correspondence.
  - Spelling is predominantly phonological.
  - Letters are assigned strictly on the basis of sound without regard for conventional aspects of English spelling.
  - Vowels in every syllable, marking conventions such as silent -e, and frequent English letter sequences are commonly absent.
  - Phonetic spelling is remarkably systematic.

Stage 4 Transitional spelling is characterized by:

- Heavy reliance on morphological forms and visual memory, not just phonics.
- Adherence to basic conventions of English spelling.
- Vowels in every syllable.
- Reversals of letters in an otherwise correct spelling.
- 5. Common English letter sequences are used

Including liberal use of vowel digraphs like ai, ay, ee, and ow.

- Stage 5 Correct spelling is characterized by:
  - Correct spelling of most words on the list.
  - Silent and double consonants are handled with increasing accuracy.
  - Mastery of uncommon alternative patterns (e.g., ie and ei), words with irregular spellings, and morphological structures such as Latinate forms.
  - 4. Awareness when words "do not look right".

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