

# A Behaviorist Approach To Spelling

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July 30, 2001

## **Learning Problem:**

In the primary grades students are encouraged to use phonetic spelling. Phonetic can be defined as relating to speech sounds. These students are then expected to build on their phonetic foundation by applying the basic rules of spelling to the words they write. Yet, some elementary students continue to spell phonetically through upper elementary grades and even beyond without abiding by the rules of the English Language.

## **Goal of the Study:**

The goal of our study is to uncover the reasons why some elementary students are unable to graduate from phonetic spelling. We will examine the current practice of spelling instruction to investigate whether the method of instruction directly relates to this persistent learning problem. The information gathered will then inform the design using the Behaviorist approach that will help elementary students successfully progress hierarchically through the domain of spelling.

## **Background:**

*While working at Score Learning Inc., I interacted closely with students who had difficulty spelling. A common problem I experienced involved fifth and sixth grade students who could not grasp the basic rules of the English Language and reverted back to spelling phonetically.*

*I closely monitored these students' spelling progress by printing out progress reports. A progress report recorded the actual way a student misspelled each word - pleased for please, situation for situation, prejudis for prejudice. It was apparent and alarming that these fifth and sixth grade students were still relying on phonetic strategies to spell simple words. These students were consistent in their mistakes proving that certain rules and exceptions were lacking from their working knowledge of spelling. It was interesting because these students had adopted the attitude that spelling was not important-perhaps safeguarding their egos. After time spent at Score, these students did overcome their learning problem by building their foundation of spelling, step by step, as well as building their confidence.*

*Score's curriculum, Success Maker, enforces spelling mastery through practice, tutoring, and games. The focus is placed on practice rather than on memorization. Students are required to spell each word correctly ten times in a row before the computer recognizes mastery. The curriculum does not allow for invented spelling as many early elementary classrooms do. Immediate feedback is given to individual users so students learn spelling by association. Score takes a Behaviorist approach to teaching spelling and it proves quite successful. ~Lia Woo*

A key to the success of the Score spelling curriculum is that skills and patterns are segregated and mastery is required before the student can progress.

According to Gentry and Gillet (1993), the acquisition of spelling skills is a sequential process involving these five stages in progression.

1. Precommunicative: Spelling cannot be read by others, usually random strings of letters and numbers.
2. Semiphonetic or prephonetic: Knowledge of sounds of letters, only one or two letters used to represent an entire word.
3. Phonetic: Spelling of words does not conform to standard spellings, but an outsider can understand the work, and the spelling is close to standard spellings.
4. Transitional Stage: More words spelled correctly than incorrectly, with the student realizing that words cannot be spelled solely based on how they sound. End of first grade.
5. Conventional or Correct Spelling: Spelling more than 90% of words correctly.

In order to best address our learning problem with an appropriate design solution, we will focus on the transitional stage of spelling acquisition.

### **Needs Analysis:**

**To assess curriculum and teaching practice through observations and questions to the teacher.**

#### Classroom Environment and Practices:

- How is the classroom environment print rich? (word walls, word families, print rich, books, reading area, writing area)
- How are word walls used in the classroom?
- What kinds of workbooks are used for classwork? For homework?
- How is homework and classwork corrected?
- What kinds of feedback are provided to students? Verbal? Written? Physical gestures or expressions?
- How are the spelling words determined and tested? How does the teacher use class time to practice the spelling words?
- How often are students evaluated?
- What types of evaluations are used?
- What happens when there is poor performance either by an individual or the entire class?
- What kinds of rewards/reinforcement are provided for correct spelling? Incorrect spelling?

#### Curriculum:

- Are the spelling words derived from reading lists? Word lists? Other content areas?
- Do the spelling words follow patterns (b-e-d and word families ex. air, hair, chair)?
- Do the spelling words include words that are irregular? Sight words?
- How do students practice spelling words at school? At home?
- How are previously learned words reinforced throughout instruction?
- Are test results from state exams evaluated to determine curriculum needs?

**To assess whether students have mastered previously learned skills:**

#### Prerequisites:

- Is there a pretest that covers the letters and sounds? Blends? Endings?
- How are students held accountable for previously studied words?
- What happens if a student does not know his/her sounds when assigned spelling words?

- Do students receive phonics drill practice with the aide? Peer tutor? Computer? If so, how frequently and which students?
- What kind of reward is provided for the 'above average' speller? More advanced words? Free time?
- What kind of support is provided for the 'below average' speller? Aide? Peer tutor? Computer? Individualized expectations?

### **Design:**

After our preliminary investigation, we will hopefully understand the current state of spelling skills for the elementary students we studied. In addition, we hope to recognize the methods of spelling instruction we observed that are weak in teaching students the necessary components of the English Language. From these observations and information we will be able to design a more effective method of spelling instruction that incorporates the following design principles.

### **Feedback and Reinforcement:**

There are many types of **feedback** that can be given to students related to the spelling skills students demonstrate. Feedback can be simply an "OK" or "X" written on a paper to indicate if the spelling is correct or incorrect. The feedback can be made more specific, with giving the correct answer, explaining the correct answer, or explaining what is wrong about the answer. (Draper, 1999) Feedback can be immediate, as immediate as providing feedback after each response on a spelling test. Feedback can also be delayed, such as not providing a graded spelling test until the next day or week. We suggest providing immediate feedback whenever possible, and a chart of the student's progress throughout the term to provide long-term feedback.

Several criteria are available to decide when to provide **reinforcement** such as effort, absolute performance (criterion reference), relative performance (norm based), and improved performance. Types of reinforcement are praise, symbolic rewards, grades, material rewards, public recognition, privileges, and responsibilities. (Stipek, 1993)

Low performing students should be evaluated and reinforced based on their individual improvement on past performances. For these students, the teacher can shape a child's behavior by giving positive feedback and reinforcement when the child approximates a correct answer. For example, if a student who has consistently been unable to write any letters of a spelling dictation test begins to write the first letter sound of the dictated word, praise should be provided to that student. The teacher can then increase the criteria for the reinforcement so that only correct answers will be rewarded. (Stipek, 1993) In addition to the teacher, a computer can provide auditory and visual feedback. The computer can provide immediate individualized feedback.

### **Drill and Practice:**

**Drill and practice** will ensure that previously learned concepts are not forgotten and new concepts will be learned. Learning needs to be reinforced and practiced so that forgetting past information is reduced and new information is learned. The following aspects of the behaviorist view support these assertions:

<b>Theory</b>	<b>Description of theory</b>	<b>Application</b>
<ul style="list-style-type: none"> <li>Stimulus-Response</li> </ul>	<ul style="list-style-type: none"> <li>Learning something based on a connection</li> <li>Extensive practice to achieve a response from a stimulus</li> </ul>	<ul style="list-style-type: none"> <li>Positive reinforcement for phonemic and phonetic representations and correct spelling.</li> <li>Homework-- practice writing words at home. Ex. 5 times each daily.</li> <li>Workbooks-- complete exercises that reinforce spelling words.</li> <li>Spelling lists-- include words that follow regular/irregular patterns and sight words.</li> <li>Drill-- through flashcards, writing words, letters, and computer programs. Daily repetition.</li> </ul>
<ul style="list-style-type: none"> <li>Chaining</li> </ul>	<ul style="list-style-type: none"> <li>Connect together in a sequence two or more previously learned concepts</li> <li>"Increasing the number to be learned does not change the basic nature of the learning process, but it highlights the effects of another process-- forgetting" (Gagné, 1970)</li> </ul>	<ul style="list-style-type: none"> <li>Testing-- give weekly tests on new words. Include sentences that include previously taught words.</li> <li>Word wall-- available in class, to be practiced and used by students and teacher.</li> </ul>
<ul style="list-style-type: none"> <li>Verbal Association</li> </ul>	<ul style="list-style-type: none"> <li>A coding connection</li> </ul>	<ul style="list-style-type: none"> <li>Associate pictures with the words to increase the verbal connection.</li> <li>Addressing different learning modalities of kinesthetic, auditory, visual through writing in sand, matching the words on cards, saying the words aloud. In this way, students will have lots of repetition.</li> </ul>
<ul style="list-style-type: none"> <li>Discrimination Learning</li> </ul>	<ul style="list-style-type: none"> <li>Acquire multiple discriminations by first acquiring a few. Keep the information committed to memory.</li> </ul>	<ul style="list-style-type: none"> <li>Testing-- give weekly tests on new words. Include sentences that include already taught words.</li> <li>Hold students accountable for correct spelling of previously learned words throughout curriculum.</li> </ul>
<ul style="list-style-type: none"> <li>Rule Learning</li> </ul>	<ul style="list-style-type: none"> <li>To learn the rule, a student must have learned the concept first.</li> <li>"Bad instruction if a student can say the rule without being able to do it." (Gagné, 1970)</li> </ul>	<ul style="list-style-type: none"> <li>Practice-- homework, workbooks, classwork, multi-modal activities, computer drill.</li> <li>Assessments: periodically determine whether grade level words have been learned, sight word lists.</li> </ul>

## **Prerequisites/sequences:**

Spelling is an intellectual skill that is effectively learned in a linear sequence. "Following a pre-planned sequence, then, and thus avoiding the omission of prerequisite capabilities along any route of learning, appears to be a highly important procedure to adopt in achieving effectiveness for instruction." (Gagné, 1970) Spelling is taught in a general pattern. In accordance with Gentry's five stages of spelling development, students first learn basic letter identification and the basic phonics, letter-sound relationships. Secondly, students learn to apply phonic generalizations to words in a process called decoding. Students learn, in order of complexity, letter combinations, consonant sounds, short and long vowel sounds, vowel digraphs, and syllable generalizations. Often phonic generalizations are learned in isolation and then students learn to apply these rules to text. For students that continue to spell phonetically, an examination of the student's prior knowledge needs to be done to understand where the sequence is weak. In this way, a new program of study can be created to suit the student and reinforce weak components.

By approaching spelling from a Behaviorist view, mastery of spelling can be accomplished by decontextualizing skills and segregating skills to ensure understanding. In spelling, given the nature of prefixes, suffixes, and affixes, knowing how to spell one word can help spell many words. Knowledge of the basic rules and exceptions of spelling as well as practice applying these rules will enable students to spell new words.

## **Conclusion:**

Through our study we hope to reduce the learning problem so that students can spell with regard to the rules of the English Language. We will achieve our goal by redesigning the curriculum and methods of instruction with a behaviorist perspective. We will include immediate feedback with reinforcement, extensive drill and practice, sequential instruction, and continual assessment to determine that prerequisites have been acquired.

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