How do my teaching actions influence my students’ learning?

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This action research was conducted in a public elementary school in a southeastern state. The school is diverse, serving 316 students. The student body was composed of 53% African American, 40% Caucasian, 6% Hispanic, and 2% Asian. The second grade classroom in which this investigation occurred was made up of 19 students including seven boys and 12 girls. The classroom’s students were of African American, Caucasian, Asian, and Middle Eastern heritages. The structure of the classroom was very student-centered. The students were seated in groups of four or five and categorized by table numbers which made transition flow smoothly. The classroom was organized and student-friendly, promoting independence among students.
Statement of the Problem and Research Question

I do not know many effective strategies to teach spelling. The classroom utilized Word Study to teach students patterns in words so they will be able to decode them easily. The students had a list of words to study each week. There were several students who struggled with their Word Study words and had trouble with their spelling tests at the end of each week. I wanted to explore if there is a more effective way to teach spelling and word patterns to improve student learning. So, my research question was, How will the use of tactile manipulatives to teach spelling enhance my instruction and student learning?

Review of Literature

The term “learning styles” refers to the individual’s mode of gaining knowledge, especially a preferred method. Every learner is completely different, and they learn in diverse ways (Pashler, McDaniel, Rohrer & Bjork, 2008). All learners prefer to learn and absorb information in a certain way. There are auditory, visual, and kinesthetic/tactile learners. Children and adults will, if asked, express preferences about how they prefer information to be presented to them (Pashler, et. al.).

What is a tactile learner?

Tactile is an adjective relating to the sense of touch. Tactile or kinesthetic learners are those who learn through experiences by doing things. They like to experience the world and act out events in a hands-on manner (Fleming, 2010; Cleaver, 2014). A tactile learner is one who builds models, benefits from using manipulatives, and learns best by doing.

“Hands-on learning is an educational method that directly involves the learner, by actively encouraging them to do something in order to learn about it. In short, it is learning by doing” (McKee, 2010, p. 3). It is a common argument that doing something is the best way to learn about it. Students often remember more information if it is presented to them using a hands-on approach. They often retain three and a half times as much as opposed to just sitting in a lecture room (Otis, 2010). Hands-on, creative, and artistic activities promote students retention of knowledge and help students stay focused (Otis, 2010; Cleaver, 2014). A few of the tactile spelling strategies that have proven to be beneficial include writing with clay, sand writing, use of letter and sound tiles, pipe cleaner letters, and edible letters. Tactile learning strategies have numerous advantages such as helping students retain knowledge, become independent, and develop critical thinking skills. However, there are also a few disadvantages. Tactile learning can be expensive because of the need for materials. It also can fail to develop ideas to a higher cognitive level. “Some things simply can’t be taught using hands-on learning” (McKee, 2010, p. 4).

Tactile learning does not only benefit regularly developing students, but it also strongly benefits students with special needs. Children with special needs deserve an appropriate education. If a special needs student prefers to learn using tactile methods, then those should be made accessible
to that child. Every child is different, so it is important to take the time to study the information that is available to best educate the child.

Children with special needs often require some type of tactile learning. This simply means that they learn best when they are touching and manipulating objects rather than the traditional paper and pencil learning that is still common in the school system (Educating Children with Special Needs, 2009, p. 1).

The use of hands-on learning makes the concrete concepts, such as spelling, become much clearer for the child, usually in much less time. Every child learns differently so learn what the child’s ultimate potential is, give them manipulatives for basic learning, and they are will thrive in the classroom (Educating Children with Special Needs; Eneriz, 2011). It is important to be cautious when employing manipulatives with special needs students. Some children are very picky about the feeling of many different manipulatives, so it is possible that they will react negatively to a certain hands-on object (Educating Children with Special Needs).

Spelling is an aspect of learning that many students struggle with in lower and upper grades. “Spelling is primarily a sensory-motor habit. The correct spelling of a word is both learned and recalled by repeated motor reactions to certain sensory stimuli” (Adams-Gordon, 2010, p. 7). Once again, it is crucial to remember that each student has a predominant learning style, but we all learn through all of our senses. Spelling instruction should include skill-building activities that appeal to the students, including hands-on and tactile strategies. The spelling period should be limited to active, meaningful work that enables each student to focus upon his or her own problem words for at least 15 minutes each day (Adams-Gordon, 2010).

The advantages of tactile and hands-on learning strategies strongly outweigh the disadvantages. Students learn in many different ways, but every child uses all of their available senses. Tactile learning strategies can be utilized throughout every subject, but using the hands-on approach to teach spelling to a tactile learner, has been shown to positively affect spelling performance.

Method

In this action research study, I implemented tactile learning activities to teach spelling words and word patterns to a focal student. The focal student had been struggling with the weekly assigned Word Study words. The student also struggles with motor skills. The method for this action research study utilized tactile activities to increase spelling ability, as well as motor skill development. The action research study was planned for a nine day period, in three day increments.

The first three days, no action was taken. I used the student’s Word Study test from the first week of the study to gather baseline data. In the second week, I used tactile activities in a one-on-one setting on Wednesday and Thursday. Friday was used for Word Study testing again to gather more data. Activities during the second week used sugar and a cookie sheet and a whiteboard and markers. The student wrote the word study test in the sugar and used the markers to write the words on the whiteboard in various sizes and colors. In the third week I used
shaving cream on Wednesday, sugar and a cookie sheet on Thursday, and the whiteboard on Friday. Then, on Friday, the student and I completed a tactile activity before the Word Study test for reinforcement.

The study’s timeline was as follows.

**Day 1-3:** No change, gather data

**Day 4:** Use the dry-erase whiteboard and allow the student to write words in various sizes and colors.

**Day 5:** Use the sugar and cookie sheet by calling out a word to the student, asking the student to say the word, spell the word, then write the word in the sugar with a finger.

**Day 6:** Give the student the Word Study Test

**Day 7-8:** Use shaving cream and a cookie sheet for the student to write Word Study words and practice motor skills.

**Day 9:** Use the dry-erase whiteboard, allowing the student to write words in various sizes and colors.

**Day 10:** Use the sugar and cookie sheet calling out a word to student, asking student to say the word, spell the word, then write the word in the sugar with a finger. Give student the Word Study test and collect final data.

**Results**

For this action research, I chose to use a case study design collecting data from one focal student. I chose this focal student because the student has been struggling with the weekly Word Study tests, as well as fine motor skills. The data were collected using the scores from the weekly Word Study tests out of 40 points. See Table 1 and Figure 1.
Table 1

Word Study Test Scores

<table>
<thead>
<tr>
<th>Day of Activities or Word Study Test</th>
<th>Raw Data</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1-3 No activities, Pre-test</td>
<td>27/40</td>
<td>68%</td>
</tr>
<tr>
<td>Day 6: After 2 days of tactile activities, Word Study Test</td>
<td>32/40</td>
<td>80%</td>
</tr>
<tr>
<td>Day 10: After 3 days of tactile activities, Post Test</td>
<td>38/40</td>
<td>95%</td>
</tr>
</tbody>
</table>

Figure 1. Focal Student Word Study Test Scores

After looking at the data from the focal student’s test scores, I noticed the scores increased with each test administration. The data indicate that the tactile activities may have had a positive impact on the student’s Word Study Tests scores. The student’s test scores increased by at least five points each time the test was administered. After the first two days of tactile activities, the student’s test score increased 12% from the post test. After three more days of tactile activities, the student’s test score increased 15% from the previous test and 27% from the first test.
Conclusions

After thinking about and analyzing the results of my action research, I believe my method was effective because the focal student’s test scores improved. My action research investigation produced the results that I predicted. My predictions were that the focal student’s test scores would improve and that the student’s fine motor skills would improve. However, I have no data to gauge whether or not the student’s fine motor skills improved, although my cooperating teacher and I both noticed a slight improvement of motor skills. There are not enough data to conclude that improvement occurred.

I was surprised when I noticed an improvement in the student’s motivation to practice and learn the weekly Word Study words. Before conducting the study, the student showed no emotion towards the results of the Word Study tests. The student was always excited about completing the hands-on and tactile activities. During the study, the student would ask me every day if we were going to practice and was always anxious to know what the test performance was.

After conducting this study and carefully analyzing the results, I would use this methodology again. Not only did the student’s test scores improve, but the motivation of the student increased as well. I am always searching for ways to increase student motivation, and the tactile activities seemed to work for this particular student. I do plan on implementing the method for a longer period of time to see if the student’s results continue to increase, as well as implementing it into my own future classroom as it appears to have potential. If I were to use this methodology in my own future classroom, I would conduct the study on multiple students. I would allow all of my students to participate in the tactile learning activities to see if all students show benefits. I know all students learn in different ways, and expect not all of my students may show improvement. Use with multiple students would clarify the extent of effect, if any, on a larger sample of students and perhaps help me better match teaching strategies to students.

References


